GLOBAL INFRASTRUCTURE INVESTMENT INDEX: MOVE FROM RISK TO REWARD

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AN ARCADIS COMPANY

CONTENTS

EXECUTIVE SUMMARY

- Singapore ranks as the most attractive location to invest in infrastructure assets
- Qatar, UAE and KSA's high ranking will result in parts of the GCC region becoming a hub for global international infrastructure investment due to high income per capita, low taxation and government support for large scale infrastructure programmes
- Core Western Europe markets such as the UK and France are becoming relatively less competitive due to regulation, tax, low growth expectations and political inaction
- High GDP growth BRIC regions rank lower down the index, implying a greater focus on risk management for revenues and capital programmes
- To succeed in the higher ranked regions, including parts of Asia, Middle East and North America, a greater focus needs to be on finding creative solutions to deliver value.

INTRODUCTION

What is economic infrastructure and why invest in it?

Economic infrastructure is the core internal facility of a country that makes business activity possible, such as communication, transportation, distribution, finance and energy supply. These assets are fundamental to society and economic growth. Due to the long term, inherently safe, typically large scale and stable income streams that they offer, it perhaps comes as no surprise that it is a rapidly growing investment class.

Infrastructure is becoming an important element of an investors' portfolio

Global investors are increasingly viewing infrastructure assets as an important element of their investment strategy and are actively assessing opportunities in both developed and emerging markets. Alongside this, governments recognise that to grow they must secure investment in infrastructure. For example, the UK is expected to invest approximately US$320 billion on infrastructure by 2020 and the Brazilian government is ramping up its own investment in infrastructure and is committed to invest US$596 billion up until 2014.

The location of infrastructure is important to the investment potential

Infrastructure is fixed and its performance is inherently linked to the country it serves. The investment in a country's infrastructure involves betting on the long term growth of the economy, the security of the investment and the ease of doing business in the location. Market conditions should balance a focus on the qualities of an asset with the investment and operational strategy, to select successful target investments.

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THE OBJECTIVES

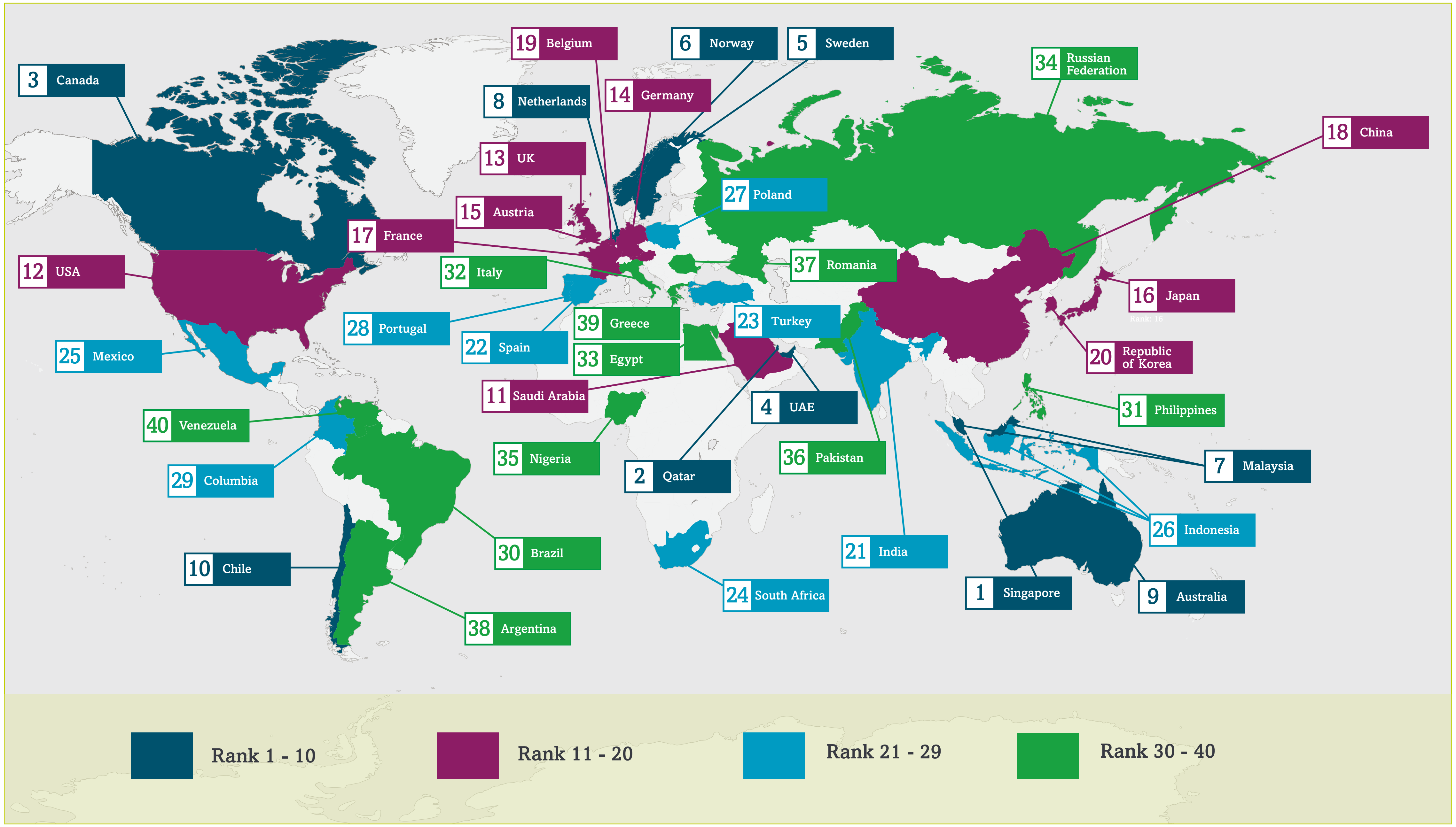
What does the Global Infrastructure Investment Index show?

Investment in economic infrastructure varies dramatically across the globe. Consequently, investors and asset owners need to be wary of the differing risks and potential opportunities each market presents them with. Our Global Infrastructure Investment Index report analyses and ranks 40 countries according to their attractiveness as infrastructure investment locations, and can be used to evaluate the potential opportunities and risks associated with each country.

The index ranks the countries based on the following key criteria:

1. Quality of existing infrastructure
2. Economic environment
3. Ease of doing business
4. Political/social environment
5. Availability of finance/financial environment

24 individual criteria contribute to creating an overall country rank. Where a country is positioned on the index will depend on its score across each of the criteria. It is important to note that although a country may rank low in the index overall, it may well rank highly on an individual criteria. For example, a country with higher than average GDP growth rates, an improving taxation system and domestic market, will score well in several criteria. However, if that country has a difficult political/social environment, with a risk of political terror higher than the majority of other countries, its overall attractiveness as a place to invest in will decrease, resulting in a lower overall index score. It is in understanding the nuances of what makes a country an attractive or less attractive investment location, that can then lead to agreed approaches to eliminate risk, and develop well informed investment strategies to ensure a return on investment.



"Our Global Infrastructure Investment Index report analyses and ranks 40 countries according to their attractiveness as infrastructure investment locations and can be used to evaluate the potential opportunities and risks associated with each country."

Where are the opportunities for investment?

The research reinforces the maxim that investment in infrastructure in any country requires a tailor made approach that reflects the macroeconomic climate, which best responds to the individual challenges and takes advantage of the competitive edge within each market.

High rank: develop solutions to create value

For the higher ranked countries, where the risks are typically lower, there will be strong competition for the best assets, yields will fall and opportunities are driven by rapid growth and available funding. We recommend to investors an acquisition and ownership strategy that focuses on developing creative and innovative solutions to find value. This will typically involve developing new revenue sources or a focus on reducing costs for major capital programmes through a deeper examination of the long-term need for that asset.

Low rank: mitigate risks

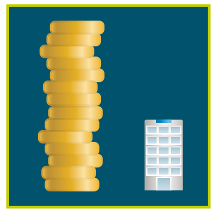
For lower ranked countries, where the attractiveness is relatively lower due to political interference or infrastructure policy transparency, we often find these are high growth GDP regions. This calls for an acquisition and ownership strategy that focuses on bringing greater certainty to the business plan. This might mean more thorough testing of the basis for growth and carrying out risk scenario modelling with more viable options.

The business plan for each infrastructure asset still needs to be fully tested in relation to the specific market, but the matrix provides investors and operators with a tool to assess the appropriate strategy to adopt in order to maximise return.

> *"Markets can be broadly classified into four groups for infrastructure investment, each of which demands a different investment strategy in order to secure a return."*

Four markets, many opportunities

Markets can be broadly classified into four groups for infrastructure investment, each of which demands a different investment strategy in order to secure a return.



1. Cash rich, asset poor

Where infrastructure is the enabler for new and growing economies to develop, these types of countries have historically been viewed as higher-risk countries to invest into. A good example is Qatar, which has a very high GDP per capita but assets are currently under development.

2. Cash poor, asset rich

These countries are typically suffering from ageing infrastructure that needs replacing, but due to economic constraints there are limited government funds available to do so. A good example is Greece; which has a poor economic outlook and limited government funding to help restore and invest into its current infrastructure.

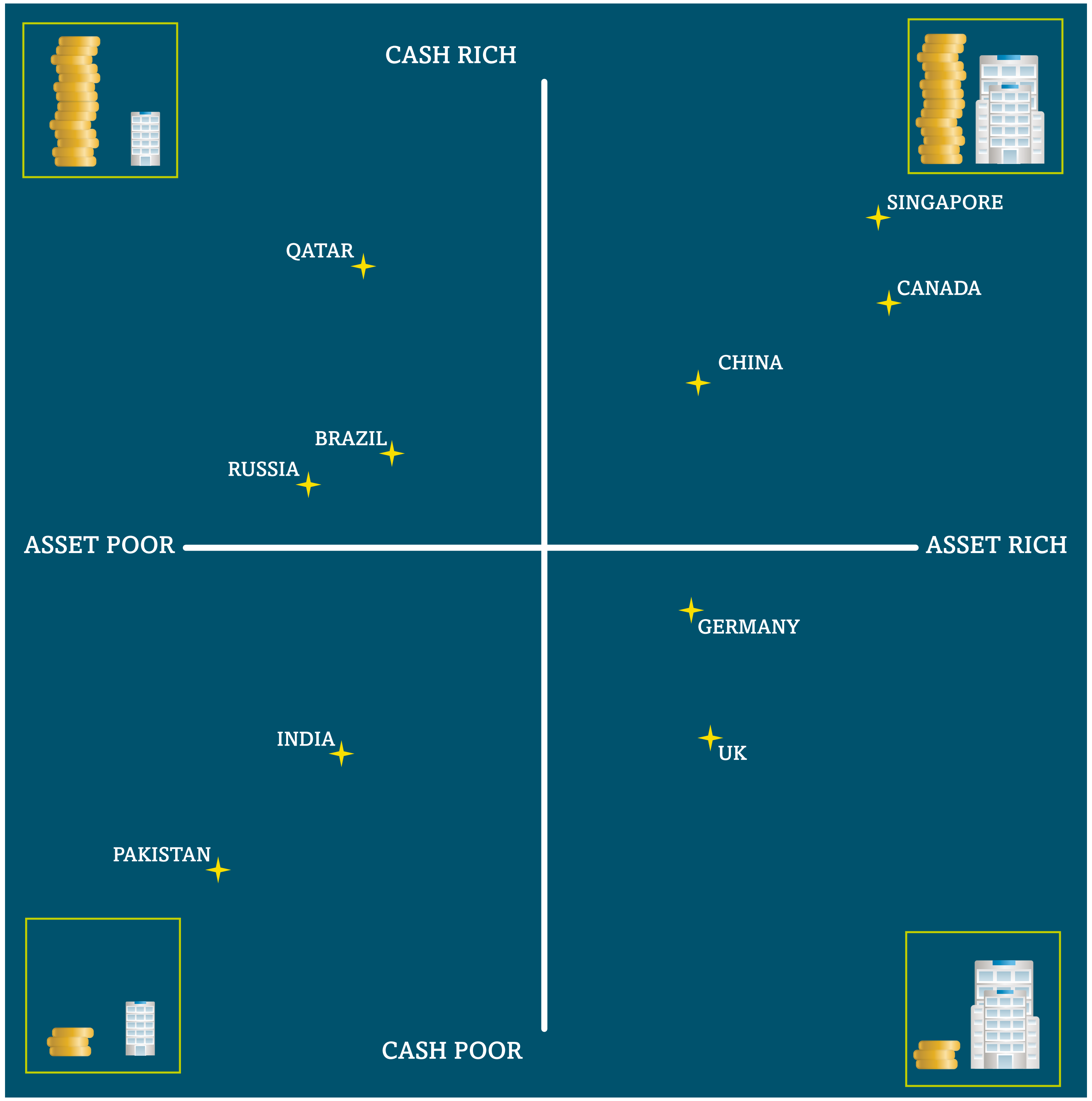
3. Cash rich, asset rich

There is much less risk involved when investing into countries that have good infrastructure, available cash flow and the outlook is deemed safe because of predictable income streams. A good example is Singapore; the current infrastructure is advanced and the future economic outlook remains positive.

4. Cash poor, asset poor

Countries suffering from the burden of both poor infrastructure and poor economic outlook are often viewed as a higher risk investment. A good example is Pakistan, where investing in current infrastructure would be viewed as a high risk, in part influenced by its poor economic outlook, but also by its low levels of government transparency and lack of investor protection within the legal system.

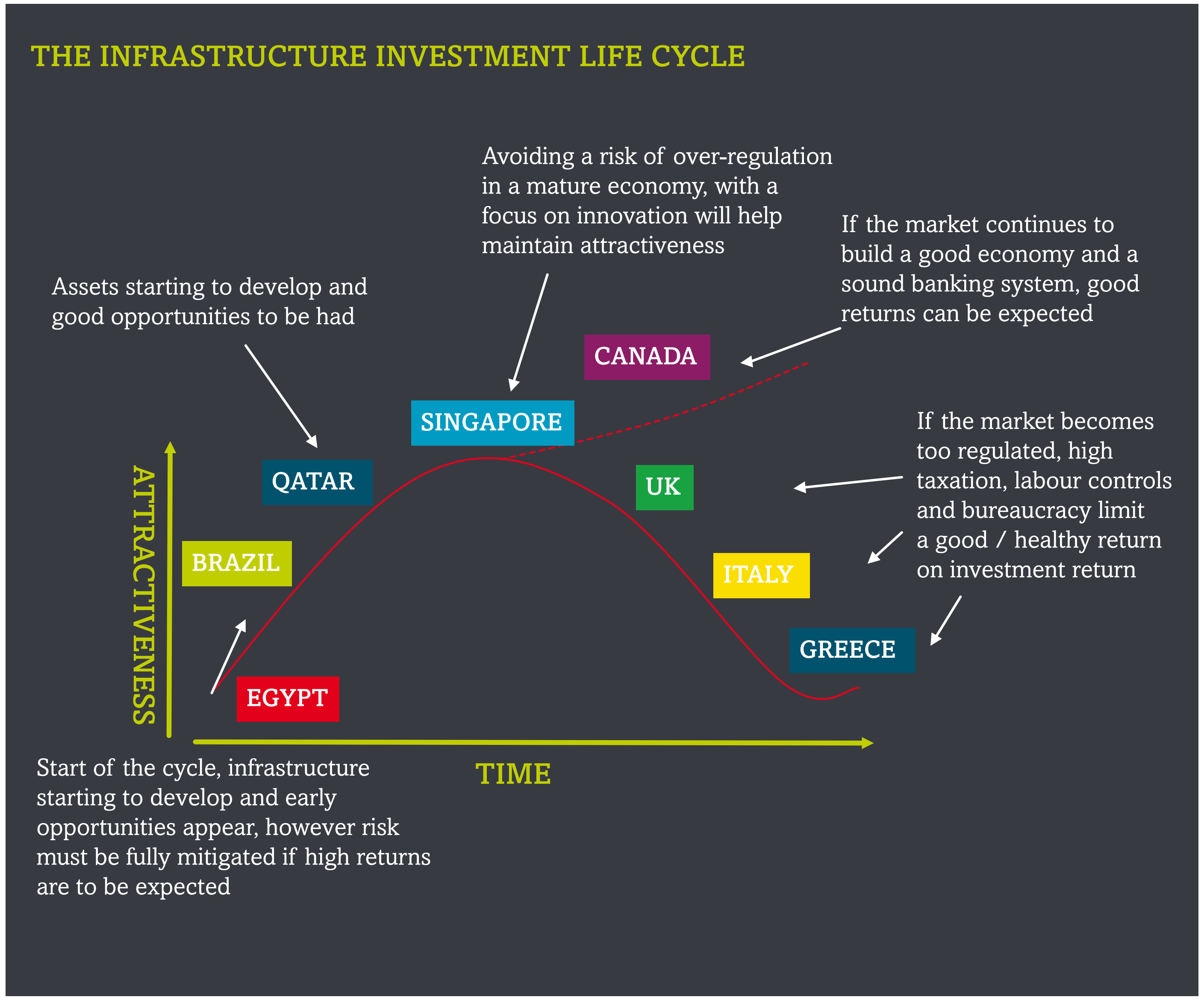
The matrix identifies what strategy may be used in which country/market to ensure maximum return on investment.



The infrastructure investment cycle

The infrastructure investment cycle indicates at what stage the infrastructure may expect to be at in terms of development, and the potential returns it could deliver. Dependent on time and current attractiveness, countries enter a cycle of investment and this can determine the type of strategy an investor will deploy to get the most out of the investment.

At the start of the cycle a country, such as Egypt, is just starting to develop their infrastructure. The likelihood of gaining a good return at this stage of investment is very slim as the opportunities are few and far between and the risks are very high. As countries start to move up the curve, their governments have started to invest into their infrastructure and they start to become much more attractive and more opportunities can be sought if risks are mitigated appropriately. The peak of the curve is a country that is typically at its highest level, whereby a safe return can be expected. As countries continue to invest in their infrastructure and as some continue to invest into their economy, they maintain their attractiveness, such as Canada. However, for those countries where the economic outlook is deemed difficult and regulations are restrictive and bureaucratic controls are hard to overcome, investment returns are less certain.



THE HIGHLIGHTS

The top 10 most attractive countries for infrastructure investment:

Global Ranking	Country
1st	Singapore
2nd	Qatar
3rd	Canada
4th	UAE
5th	Sweden
6th	Norway
7th	Malaysia
8th	Netherlands
9th	Australia
10th	Chile

Singapore: most attractive country for infrastructure investment

Singapore is ranked as number one on all indices of the index apart from the economic environment criteria where it came seventh. The key to Singapore's success, is its historic role as a trading nation, its investment in human capital and commitment to innovation, alongside a government working with international partners and developing long term strategic goals (World Bank). Singapore has good quality infrastructure and will remain a dynamic market. Its GDP per capita is currently high, albeit this may dip, but lower predicable levels of growth will remain over the long term.

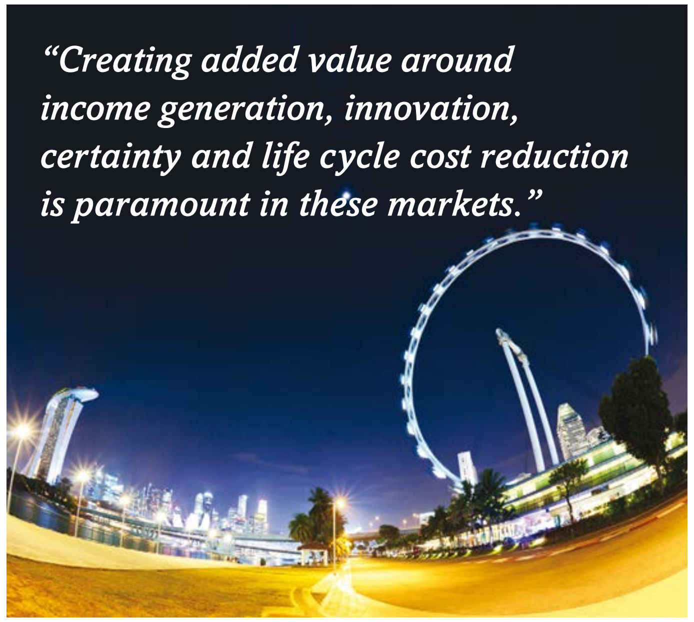
Alongside this, it is relatively easy to do business in Singapore, as it has transparent government policy-making, an efficient legal framework for settling disputes and is free from corruption. As with any country it is not totally immune from political terror or political instability but compared to other countries it is very low risk and while its inflation rate is not the lowest, it is very well connected and has effective protection for investors.

What are the opportunities for investment into Singapore?

Clearly Singapore, as with most in the upper quartile, is a high performing country with regards to infrastructure assets and investment and is considered a safer long-term investment in comparison to those at the lower end of the table. There are many opportunities currently happening in Singapore including; the Downtown MRT rail line, which will be opened in stages from 2013 - 2017, the Marina Coastal Expressway which is due for completion in 2013 and Changi Terminal 4, due to be operational by 2017.

The upper quartile

Countries in the upper quartile of the index are more attractive to invest in as they are typically countries with good growth prospects, are relatively easy to start a business in, have a supportive business environment, and represent low financial risk. They present us with a relatively safe long term investment option. There are opportunities for those looking to invest in improved asset performance and asset utilisation by unlocking value as well as for those looking to maximise greater efficiency from their current and new build infrastructure assets. Creating added value around income generation, innovation, certainty and life cycle cost reduction is paramount in these markets.



Investment opportunities in the GCC (Gulf Corporation Council) region should be grasped NOW

In the GCC region, Qatar and UAE are second and fourth in the index, Saudi Arabia is just outside the top ten at 11th position.

Qatar does not have the biggest domestic market and household consumption is marginal compared to European and North American countries, but GDP per capita is very high and it has strong long-term growth prospects. With a US$100 billion infrastructure programme due to be implemented by 2022, it will see vast infrastructure developments. Alongside Qatar, Saudi Arabia and the UAE offer a good economic environment; while Saudi Arabian households consume more, the UAE has greater GDP per capita and greater population projections. Their current infrastructure is very good and both have similar levels of government transparency and legal frameworks for settling disputes. However, the UAE does have a more open and regulated government and benefits from lower levels of political and social instability compared to Saudi Arabia, hence putting it in to fourth place.

What should investors look out for when investing in Qatar?

Qatar presents us with some issues around the ability to deliver infrastructure, including the logistics of importing materials and access to labour. However, infrastructure creation is happening and there is much potential if logistical risks are managed and well thought through and appropriate strategies are put in place from the outset to help mitigate these risks. One potential concern is an inflation rise, which will inevitably increase as more investment is made into the market. This can be mitigated if it is built into the investment plan from the outset.

New build investments are prevalent here, such as; Doha Port, the new international airport, the National Rail project and the Doha Metro, all of which show there is a real flow of investment into this economy over the coming years. The Qatar Investment Authority (a sovereign wealth fund) leads in investing locally and internationally, in order to diversify the economy. In addition, Qatar is currently stable and is favourably encouraging private investment, including foreign capital.

As the population rate continues to grow in Qatar it becomes heavily reliant on infrastructure investment. Reportedly the Qatari Government has allocated 40% of its budget between now and 2016 to infrastructure projects alone. At the same time the country is increasingly recognising the value of private investment in infrastructure assets and the size of Qatar's infrastructure investment is projected to exceed from US$140 billion to US$200 billion over the next 10 years.

If these potential risks can be worked through appropriately Qatar could provide a promising return on infrastructure investment as it does have good investor protection.

The middle range of the index

Mid-table countries present diverse investment opportunities and no single strategy will fit in these markets. As might be expected, some countries at the bottom of the range have a greater risk of political or social instability. However, generally mid-table countries are not the most difficult locations to start and run a business, but economic outlook and potential for growth can vary on a country to country basis. Similarly the existing infrastructure in place can vary, for example France and Belgium have good existing assets that are ageing, while others, like Mexico and India, are judged to have poor quality infrastructure, but have large new asset development plans in place.

Within the middle range of the index are; eight of the 12 European countries, three of the four MINT countries (Mexico, Indonesia and Turkey) and two of the BRIC countries (India and China).

The middle range of the index

Global Ranking	Country
11th	Saudi Arabia
12th	USA
13th	UK
14th	Germany
15th	Austria
16th	Japan
17th	France
18th	China
19th	Belgium
20th	Korea (Rep of)
21st	India
22nd	Spain
23rd	Turkey
24th	South Africa
25th	Mexico
26th	Indonesia
27th	Poland
28th	Portugal
29th	Columbia

Europe: decrease in attractiveness

Eight out of the 12 European countries are located in the middle of the index. These countries are typically cash poor, asset rich and currently experiencing an economic downturn, with limited long-term GDP growth forecasts. They tend to have large domestic markets but low population growth rates. The challenge for investors in these areas is to ensure a return on an ageing asset, navigating the regulatory frameworks and levels of government investment in infrastructure.

Investors need fewer barriers to enter in Europe

These countries need to find avenues to get the most out of infrastructure assets and find additional sources of income or value. For example, the UK is 13th on the index; while the country has a lot of opportunity and a relatively mature market and track record, the index recognises the difficulties now faced in making infrastructure investments attractive to private investors. It has a reasonable sized domestic market, with an ageing population and a relatively high per-capita wealth. Alongside this, it has a lower population growth forecast than some other countries in the index, and the ageing infrastructure cannot meet future demands.

The political and economic environment should be ripe for attracting alternative investment (availability/access to finance in the country scores very well), as this is a key tactic to stimulate grow in employment, and the economy in general. The UK has campaigned to attract finance over the past few years, in an effort to tackle the infrastructure investment deficit. The government set a target of investing around US$320 billion into the UK's infrastructure by 2020. However there is a significant gap between the political intent and the economic reality.

The planning process encumbers progress in the UK; typically developments are hindered due to regulatory / policies constantly changing and halting the ease of investment. To secure upfront capital there needs to be a commitment to sustaining long-term policy levers that will make these schemes bankable. Unfortunately, this type of consensus is all too lacking in the UK, with the public squabbling over the upcoming Energy Bill and the on-going paralysis around expanding Heathrow airport, two examples of how weak leadership is threatening to undermine the UK's future competitiveness. Unless concerted steps are taken to provide greater policy certainty, get the right regulatory balance, and speed up the planning process, investors will continue to look at other markets with fewer barriers to entry and the UK will continue to fall down the index ranking in terms of attractiveness.

The lower quartile countries

Countries that appear in the lower quartile present us with the greatest risks to mitigate and manage. All lower quartile countries have relatively volatile political structures, which are likely to make certain types of investors wary. However, they can potentially lead to greater returns, and provide the opportunities to engage with business leaders and governments to tackle the barriers and ease of investing.

Global Ranking	Country
30th	Brazil
31st	The Philippines
32nd	Italy
33rd	Egypt
34th	Russia
35th	Nigeria
36th	Pakistan
37th	Romania
38th	Argentina
39th	Greece
40th	Venezuela

The BRICs show potential for new infrastructure investment

Brazil, Russia, India and China have a promising economic environment that is attractive to investors if the business and financial risks are managed effectively. These countries show poor infrastructure on the whole and present investors with great potential to invest in new assets. Of the four countries, China and India present less direct risk and sit middle of the index. Their growing market size, increasing household consumption levels, their physical need to invest in new infrastructure assets and good long term GDP growth rates help keep them mid-table. However, if judged on government transparency and ease of doing business alone, they would slip down the ranking. As China increases its global competitiveness and improves its system for protecting investors, it could rapidly move up the ranking table, particularly as it starts to increase the range of opportunities available for private investment.

As these emerging markets continue to grow, urbanisation continues and therefore infrastructure investment is vital. China announced in November 2012, that it is expected to spend an extra US$127 billion on infrastructure, including subway lines in Shanghai, the central city of Taiyuan and the southern business center of Guangzhou. The projects are expected to have an average construction time of 4.6 years, with local governments providing 40% of the funding. This is in addition to the US$650 billion invested in infrastructure since 2008.

Brazil has potential

Brazil sits at 30 on the index mainly due to its poor infrastructure, its potential propensities to inflation changes, and social and political instability. However, with its large domestic market, good long-term growth prospects and foreign ownership being active in the country it does have the potential for excellent returns. These could be possible if the risks are mitigated and rigorously demonstrated on business plans.

CONCLUSION

How can you get the most out of your infrastructure assets?

In any market, to maximise return on investment, it is vital that you know your asset. Infrastructure investment is very capital intensive, with a history of unpredictable performance in construction and the scale of varied performance can have a dramatic impact on return.

Know your asset

Through the intrinsic knowledge of how the asset operates, we can ensure that the most value can be created. For example, one of the major challenges for more mature aviation assets, in those countries looking to get more from their existing assets, is to reduce operational expenditure by improving airport efficiency and reducing delays. This is largely dependent upon improving the flow of information between the airlines, airport operators and air traffic services providers. Statistics from EuroControl, show that a reduction in the sector time of five minutes to 50% of schedules would result in a global saving of US$1.3 billion per annum.

How can risk be managed?

When entering high risk markets, where there are lower levels of political stability and poor infrastructure, it is vital that potential risks involved are mitigated and identified beforehand so that investment strategies are developed accordingly. The challenge for the mid to lower quartile countries on the index is to secure a safe return. The top four strategies that investors and asset operators should deploy to minimise risk are:

1. Model risk

Financial models combined with asset knowledge will be the most reliable step to deliver predictable returns in a potentially uncertain market. Through an independent audit and review, potential investments can be modelled on possible worst case scenarios and evaluated on potential returns.

2. Understand restrictive government policy

Understanding how to make a return from heavily regulated environments and government policy is vital in these markets but takes time and cannot guarantee the right outcome for the investor. When you consider the legacy assets, the relative lack of innovation and use of technology, there are many opportunities to create more affordable solutions and run efficient operations in markets where historically they have depended on domestic funding, served largely by a domestic supply chain. International investment can act as a catalyst for new thinking and learning's from elsewhere in the World.

3. Think like a banker, think independently

Even in countries of high risk, when you eliminate risk and work around restrictive government policy it is possibleto model asset performance across different markets and highlight the risk premiums being paid. These markets are often relatively immature in terms of identifying the latest solutions and developing an efficient supply chain to reduce risk.

Thinking independently and understanding how the credit committee assesses risk and opportunities, is vital to securing investment. Credit committees are seeking quick returns and need to know that all risks are mitigated / taken into account. Demonstrating a business plan that clearly shows that risk has been mitigated and how, is key to presenting a bankable asset.

4. Focus on the entire life cycle of the asset

Understand how to create, plan, operate and redefine your asset through all stages of the lifecycle. Dependent on where the asset is on the asset lifecycle will determine what and how you get the most out of your investment. If the entire lifecycle of the asset is taken in to account before investment is made, risks can be identified and eliminated before it is too late and potential opportunities can be realised upfront.

METHODOLOGY

The EC Harris Global Infrastructure Investment Index used data sourced from The World Bank, The World Economic Forum, The Heritage Foundation and other global indexes.

Countries were selected using a multi-layered approach, which took into account a range of factors, such as current and future GDP growth rates. The aim was to get a good mix of OECD and non OECD countries, with 40 countries selected for inclusion.

Five key themes frame the index, encompassing scores from 24 individual indicators. Each indicator was weighted to reflect its importance as a decision making tool for infrastructure investors. The themes were economic, infrastructure, business environment, risk and financial environment.

The indicators we selected were chosen to build our conceptual model of what an 'attractive location' for investors interested in infrastructure looks like. Working closely with our Lender and Investors colleagues and Infrastructure Asset Managers, indicators were selected to represent market dynamism, freedom of business development, supportive country systems and procedures, and risks associated with setting up and developing a profitable infrastructure asset.

This report is intended for general information only, for bespoke advice please contact EC Harris.

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For further information on how we can help you get the most out of your infrastructure investments, please contact:

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