



LISTED INFRASTRUCTURE

An Attractive Investment Alternative

Thematic Report by
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In the current global scenario where traditional asset classes no longer assure stable returns, listed infrastructure is attracting investors in a big way. In 2015, investors have largely been cautious about the equity markets due to expectations of stable growth in the US and the likely interest rate hike by the US Federal Reserve (Fed) amid declining jobless claims and improving consumer sentiment. However, inconsistent economic indicators, the Greek crisis and a slowdown in China impacted returns. Even amid concerns about the global economy, bond yields were at their lowest in most developed economies, making fixed income investments unattractive. Moreover, the continued fall in gold prices more than eroded the safe-haven appeal of the precious metal.

Global fund managers consider real estate an alternative investment avenue for stable returns on their investments, as real estate assets are likely to witness substantial price appreciation. Listed infrastructure, an upcoming segment of the real estate sector, is gradually gaining traction among fund managers due to its monopolistic nature, price inelasticity, stable predicted cash flows, and inflation hedging characteristic. Although these assets are also traded in the form of equities, the underlying asset is immune to default risks due to strong government backing. Furthermore, these equities act as defensive plays during the downturn.

Listed infrastructure assets are largely government or quasi-government owned. The sovereign backing makes ongoing infrastructure projects less likely to default compared with other privately held real estate asset classes. These assets work in a cost plus model; hence, profitability is already hedged. Also, listed infrastructure assets typically enjoy monopoly due to entry barriers set by the local governments, thus maintaining stable cash flows. Demand for these assets is often inelastic to price changes, such as electricity, water, toll, as people continue using these utilities despite tariff changes. Thus, this asset class provides stable returns even during an economic downturn. Although investment in infrastructure is capital intensive, the equity route makes it cheaper, investor friendly and keeps transactions transparent.



WHAT IS LISTED INFRASTRUCTURE?

Listed infrastructure is a comprehensive and diversified asset class of largely state-owned or public-private partnership (PPP) companies that develop, manage, and own assets related to energy, communications, water, transportation, and other systems essential for an economy.

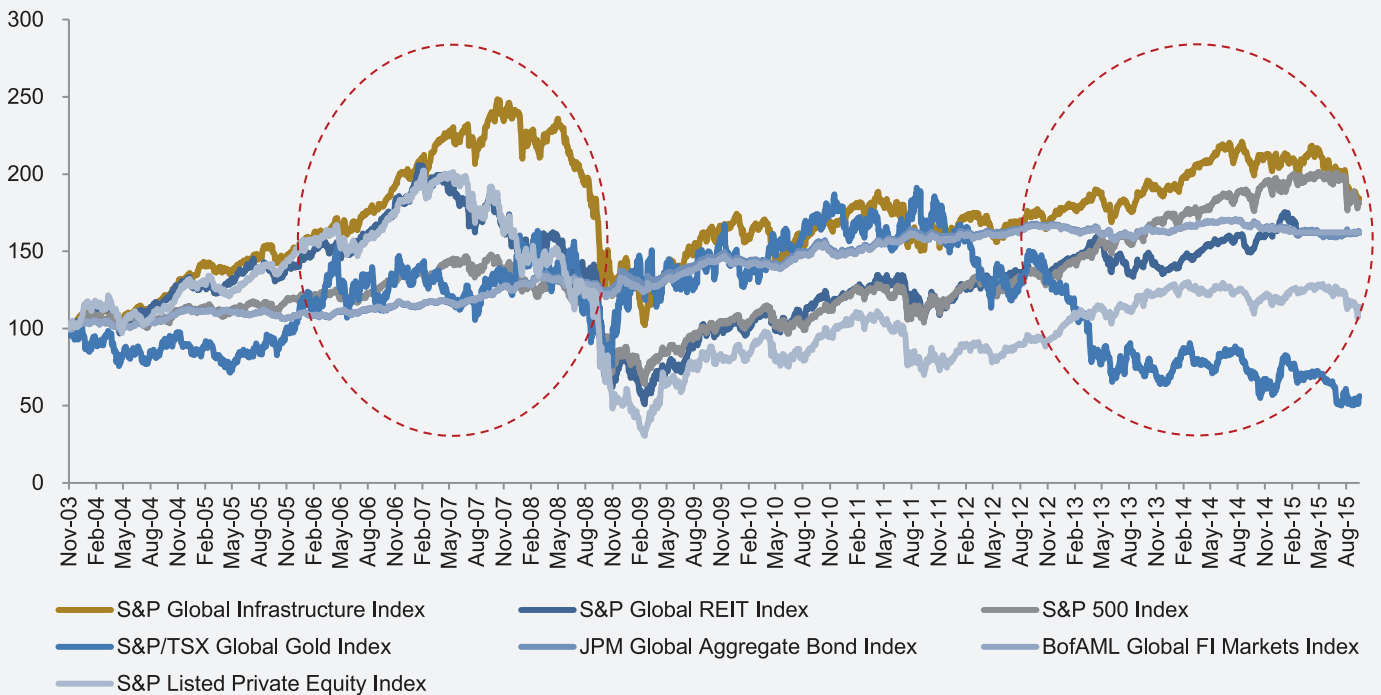
This asset class is segmented into small units and listed as equities on stock exchanges. Hence, the quantum of investment is lower than that of a direct investment in real estate. Furthermore, these equities act as defensive plays and protect investors during market corrections as they carry low default risk and are backed by sovereigns.

If we compare the performance of the S&P Global Infrastructure Index with its peers over the pre and post economic crisis period, we can see that infrastructure clearly outperformed during the pre-crisis (2006–07) and post recovery period, i.e., 2012 onward.

The asset class outperformed during pre and post crisis period

During the recovery period (2010-2011), the asset class clearly outperformed equities (S&P 500 Index). The chart below shows that the asset class has remained superior to equity investments over 12 years and, hence, we can conclude that it offers better returns irrespective of the economic conditions.

Performances of Various Asset Classes Over the Last 12 Years



Source: Bloomberg

Most Attractive Features of Listed Infrastructure



Financial and Operational Performance

ACCESS

Direct exposure to global basic infrastructure facilities that are monopolistic.

LIQUIDITY

Liquid exposure to infrastructure investments, no issue with deal flows, and a fixed investment.

TRANSPARENCY

Access to existing and established infrastructure facilities, and no issue with blind pool investing.

LOW IMPACT OF REGULATORY CHANGES

Regulatory changes are managed by governments; as these assets are primarily government or PPP projects, the regulatory changes are likely to have low impact on them.

DIVERSIFICATION

Allows global investors to easily diversify their portfolio holdings as per the specific risk profile (e.g., geographic allocation, currency, level of gearing, and regulatory and political risks).

COST

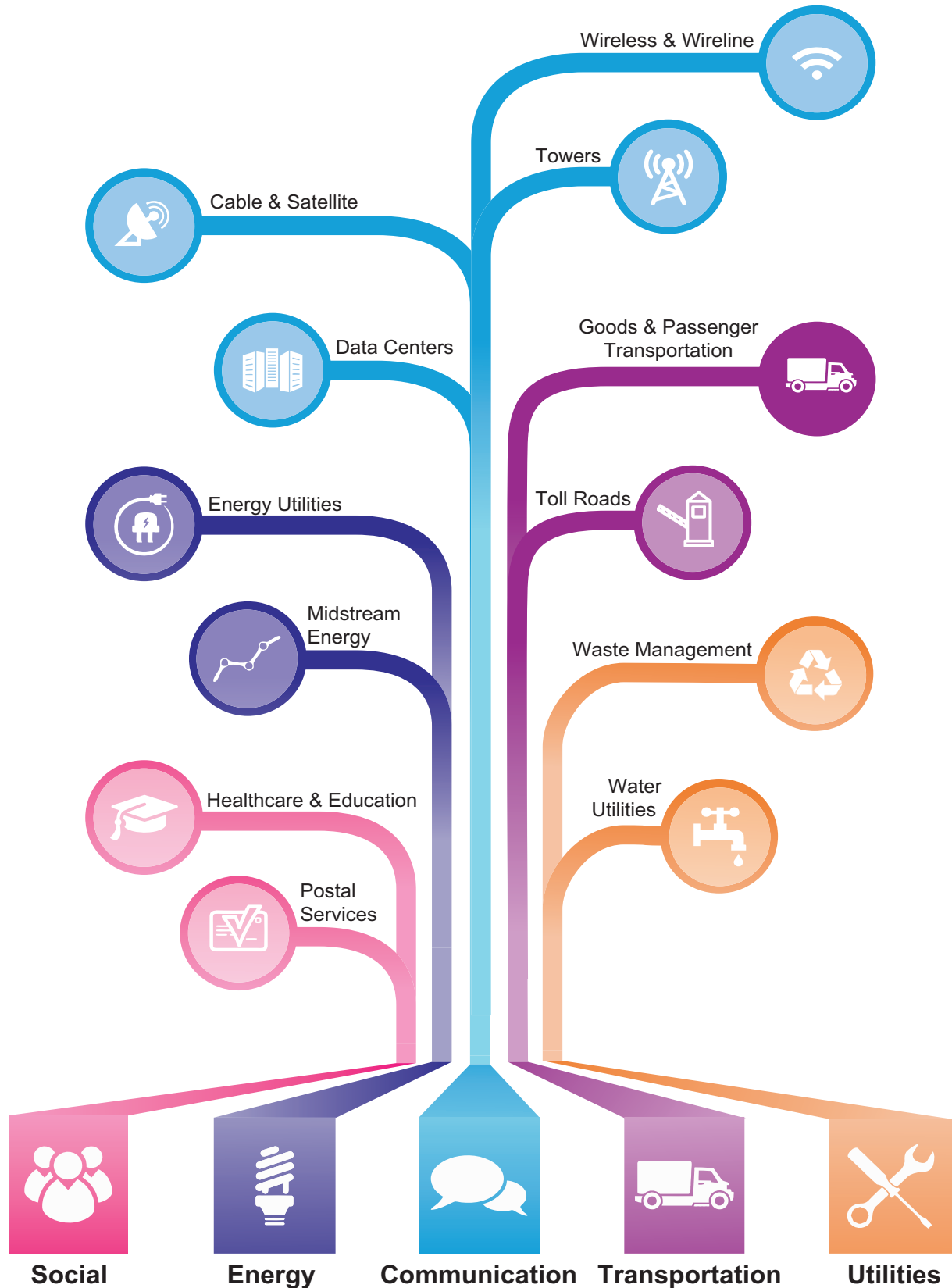
Cost is lower than unlisted infrastructure investments or direct buying/selling of properties.

LEVEL OF GEARING

Lower level of gearing than unlisted infrastructure and real estate firms, and primarily backed by government funding.



Classification of Listed Infrastructure



Source: Aranca Research



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Cash Generation and Return

HIGHER DIVIDEND

Dividend accounted for over 33% of the overall returns of the S&P Global Infrastructure Index in the last 10 years; average dividend growth outpaced average inflation.

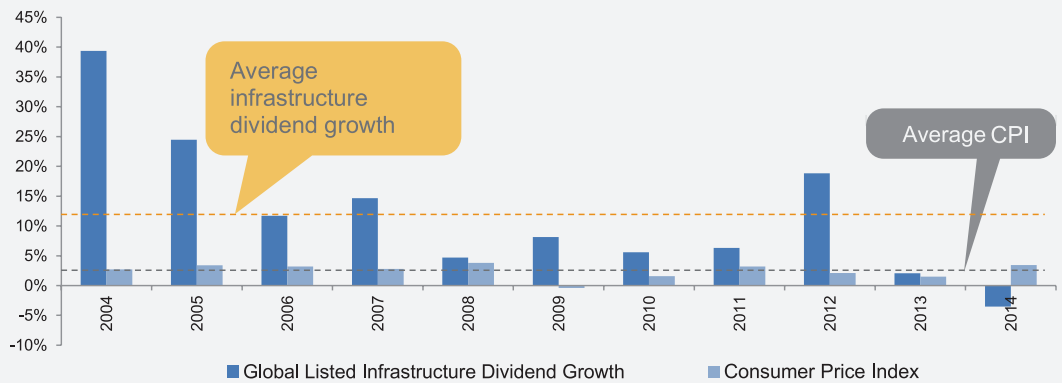
PREDICTABLE CASH FLOW

The assets work in a cost plus model; therefore, future profitability is secured.

INFLATION PROTECTION

Revenues of listed infrastructure companies are linked to inflation, thereby providing protection against it. (i.e. concessions permitting rent escalations linked to inflation, regulated price mechanisms that consider rate of inflation).

Growth in Dividend Per Share of Listed Infrastructure Companies vs. CPI



Source: Bureau of Labor Statistics, IMF, Bloomberg, Aranca Research

Operational Risks

DELAYS

Since these kinds of projects are majorly government owned, there are possibilities of delays in project execution; this could interrupt income generation from the project.

FINANCING

As many emerging market economies are facing funding shortage, there is possibility of slower disbursement of resources as well, as big funding organizations may not sanction adequate grants.

RECOVERY OF OTHER ALTERNATIVE ASSET CLASSES

Other asset classes could recover at a faster pace and make investment in listed infrastructure assets less attractive.

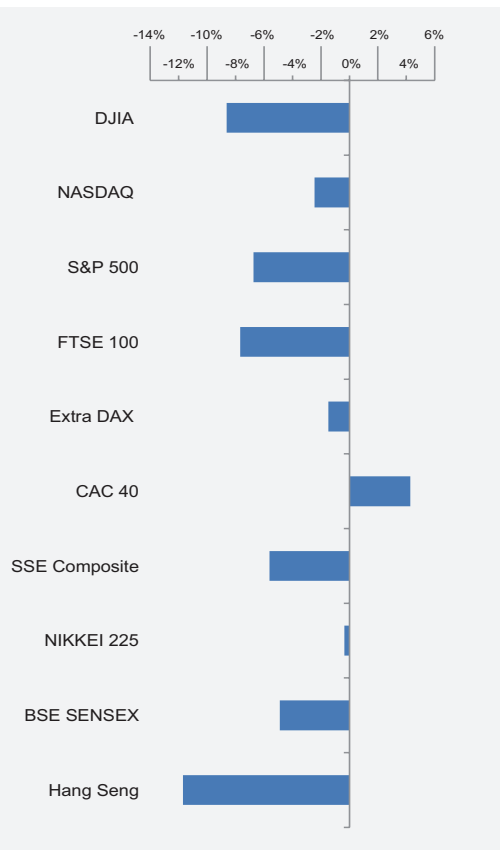


WHY LISTED INFRASTRUCTURE?

Since the beginning of 2015, global equity markets have witnessed significant volatility due to a series of global events. Slowdown in China's economy, declining GDP of Japan and the Greek debt crisis dampened investor sentiment. The Eurozone still has a long road ahead in terms of complete recovery. Amid a strengthening dollar, emerging economies such as China and India are not offering encouraging signs to equity investors. The US is the only market that has performed fairly well in 2015 compared with other geographies, supported by a bullish dollar and an expected rate hike by the US Federal Reserve later this year.

The ongoing volatility in oil prices have kept investors directionless. Oil prices witnessed a steep fall until mid-2015, primarily due to strong non-OPEC oil production forecast. The OPEC's refusal to reduce oil output worsened the situation. Furthermore, the withdrawal of sanctions on Iran after the nuclear deal exerted pressure on oil prices. The weak outlook for oil prices impacted the earnings of companies in the energy sector across the world, which consequently reflected in their stock prices. In addition, the ongoing drop in commodity prices affected investor sentiment across global markets. Separately, possibility of new drug pricing rules triggered negativity about biotech stocks, which was once considered the most defensive sector.

Performance of Major Global Equity Indices (2015 YTD)



Source: Bloomberg

Among the investment options available, portfolio managers prefer fixed income (FI) or bonds, real estate investment trust (REIT), bullion, and listed infrastructure to create a balanced portfolio. Bond yields globally are already under pressure and reached their all-time lows in January 2015 (US 30-year Treasury yield at +1.7%, UK 10-year gilt yield +1.4%). Moreover, any increase in the rates, especially a rate hike by the US Fed, would make them an unattractive investment option. With regards to gold, a sharp drop in its prices has severely impacted its safe-haven status. With continued decline in commodity and gold prices, the bullion price is expected to remain under pressure in the near term. Real estate is another alternative that provides higher capital gains; however, it is capital intensive and, hence, represents higher risk.



In such a scenario, where most of the sectors are underperforming, a defensive play with stable returns and moderate risks is likely to gain attention of the global fund managers. Listed infrastructure is an asset class with all the above mentioned qualities. It offers high returns as well as steady income and assured capital benefits. The equity route makes it less capital intensive

and provides benefits of the bull-run during positive economic scenario. Furthermore, this asset class is inflation protected. The inflation-linked nature of revenue from infrastructure businesses enables an automatic hedging against any rise in interest rates, thereby providing listed infrastructure an edge over other investment options.

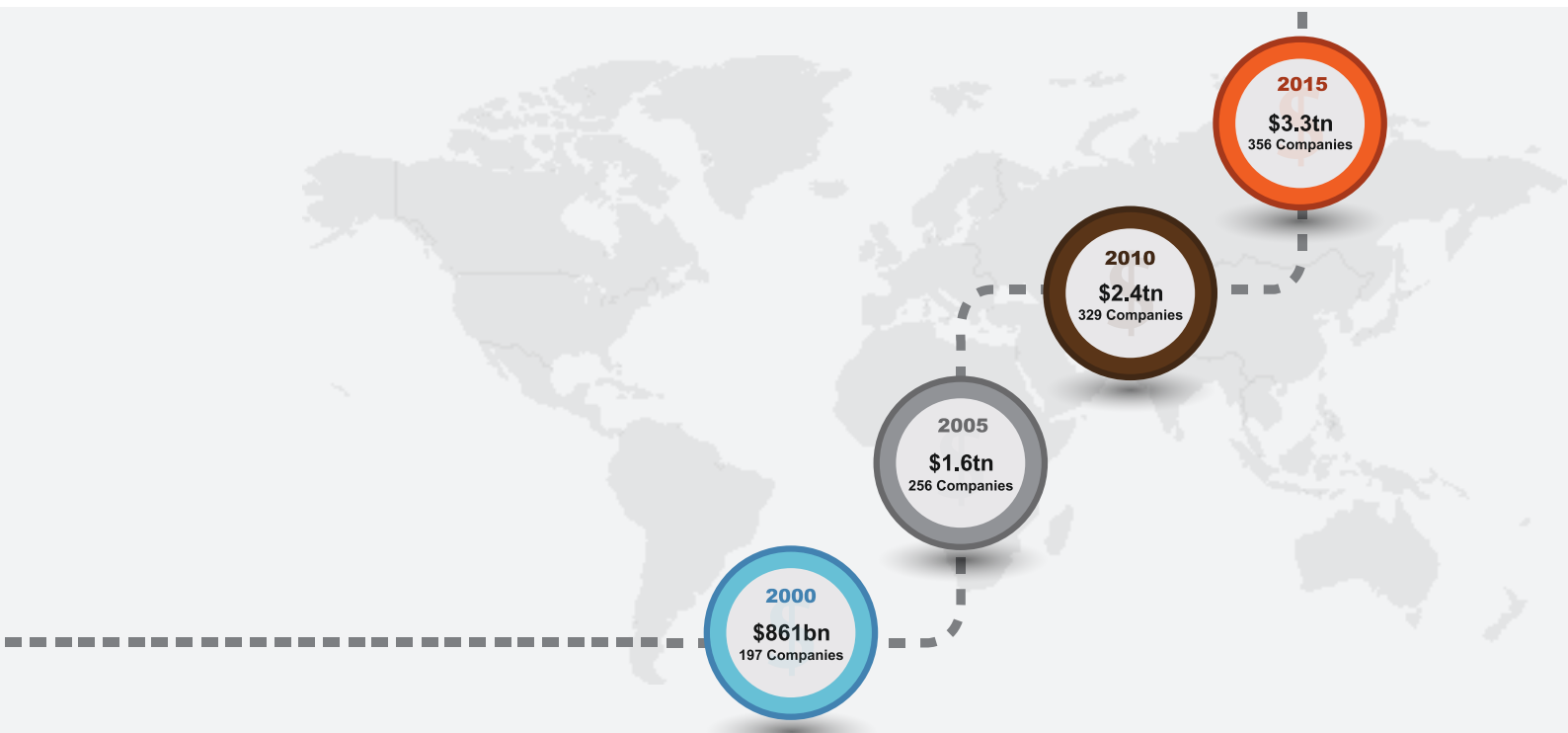
Market Size of Listed Infrastructure Assets to Rapidly Increase

According to McKinsey Global Institute, infrastructure investment of around USD57 trillion would be required to achieve the projected global GDP by 2030, accounting for 3.5% of the expected global GDP in 2030. Furthermore, the Organization for Economic Co-operation and Development estimates a required global investment of USD40 trillion in new and existing

infrastructure projects by 2030. With such large infrastructure spending, opportunities in listed infrastructure are expected to substantially increase.

Market capitalization of listed infrastructure assets has increased to USD3.3 trillion in 2015 YTD as compared to USD861 billion in 15 years ago.

Market Capitalization of Global Listed Infrastructure



Source: Aranca Research



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The advancements in the global listed infrastructure market have enabled easier access to an asset class that has been traditionally illiquid. Historically, the global listed infrastructure market has performed robustly irrespective of the market scenario. This asset

class offers higher returns at moderate risk. Currently, in addition to several smaller-sized funds, six major global funds are operating in this segment, with a combined asset size of USD4 billion.

Some major players in the listed infrastructure segment that hold investments from top global fund managers

Companies	Sector	Geography
Transurban Group	Toll Roads	Australia
Kinder Morgan Inc.	Energy	US
Atlantia SpA	Toll Roads	Italy
Enbridge Inc.	Long-Haul Pipelines	US
The Williams Companies Inc.	Midstream Pipelines	US
National Grid PLC	Electricity and Gas	UK
China Merchants Holdings (International) Co. Ltd.	Transportation Infrastructure, Energy	China
TransCanada Corporation	Energy Infrastructure	Canada
American Tower Corp.	Communications	US
Snam SpA	Long-Haul Pipelines	Italy
Union Pacific Corp.	Rail	US
Abertis Infraestructuras SA	Toll Roads	Spain

Source: Fund fact sheets, Aranca Research

The S&P Global Infrastructure Index comprises 76 companies, with a combined market capitalization of nearly USD1.2 trillion. The top 10 companies account for a large portion of the market capitalization. In terms of sector classification, Industrials accounts for 40.7% of the total index weight, followed by Utilities

(39.3%) and Energy (20.0%). The key index players attract higher investments from global fund managers.

Larger players attract major portion of investments in listed infrastructure

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S&P Global Infrastructure Index

Country	Number of Constituents	Index Weight (%)
US	22	35.1%
Canada	7	7.9%
Australia	4	7.8%
Italy	4	7.1%
UK	4	6.9%
France	3	6.9%
China	8	5.9%
Spain	2	5.2%
Japan	4	4.1%
Germany	2	2.7%
Singapore	3	2.6%
Mexico	2	2.3%
New Zealand	1	1.3%
Switzerland	1	1.3%
Brazil	3	1.1%
Chile	2	0.7%
Austria	1	0.4%
Hong Kong	2	0.4%
Netherlands	1	0.3%

Source: Index fact sheet



Listed Infrastructure - An Attractive Alternative Investment in the Current Scenario

Listed infrastructure assets have high potential for steady returns, low volatility, diversification, higher income, longer duration, and abundant capacity. Such investment options were traditionally considered off-market activities; however, listed infrastructure is an upcoming and promising real estate investment alternative, and is likely to be widely accepted globally.

We believe the asset class is not overvalued and is trading at a fair projected 12-month P/E of 8.05x (P/E of S&P Global Infrastructure Index) compared with 15.2x P/E of S&P 500, offering significant opportunities for investors. Emerging investment opportunities

in the water, communications and transmission, transportation, and distribution sectors are expected to substantially influence the listed infrastructure segment, driving growth in this segment and attracting long-term investors.

Upgrading infrastructure is expected to become one of the key focus areas for governments of emerging economies. Demand for electricity, water, and sanitation would significantly increase due to higher population growth and urbanization. Hence, despite the recent drop in commodity prices, resource-rich governments would continue investing significant capital into infrastructure investments.

Key Drivers of Listed Infrastructure Assets Across the World

GLOBAL POPULATION GROWTH

According to the IMF projections, the global population is expected to grow over 8 billion by 2020. Increasing population requires additional housing and power supply, public transport, clean water, healthcare, and education facilities, which would further increase demand for public spending in the infrastructure sector.

INCREASING WEALTH

With per capital income growing in developing countries, the population would start expecting world-class infrastructure facilities.

ECONOMIC EXPANSION

Economic expansion in Brazil, Russia, India, and China (BRIC nations) and Southeast Asia would boost government spending on social infrastructure.

URBANIZATION

With growing urbanization in the developed as well as developing countries, demand for road transportation, telecom, and energy utilities is expected to significantly rise.

CLIMATE CHANGE

Allows global investors to easily diversify their portfolio holdings as per the specific risk profile (e.g., geographic allocation, currency, level of gearing, and regulatory and political risks)

Key Drivers of Listed Infrastructure Assets Across the World

LIMITED SUPPLY

Roads, airports, and pipelines can only operate up to a fixed maximum capacity, beyond which additional assets are required. As emerging markets develop, governments typically focus on ensuring the transport infrastructure is sufficiently robust to support growth.

SHIFT IN FINANCING

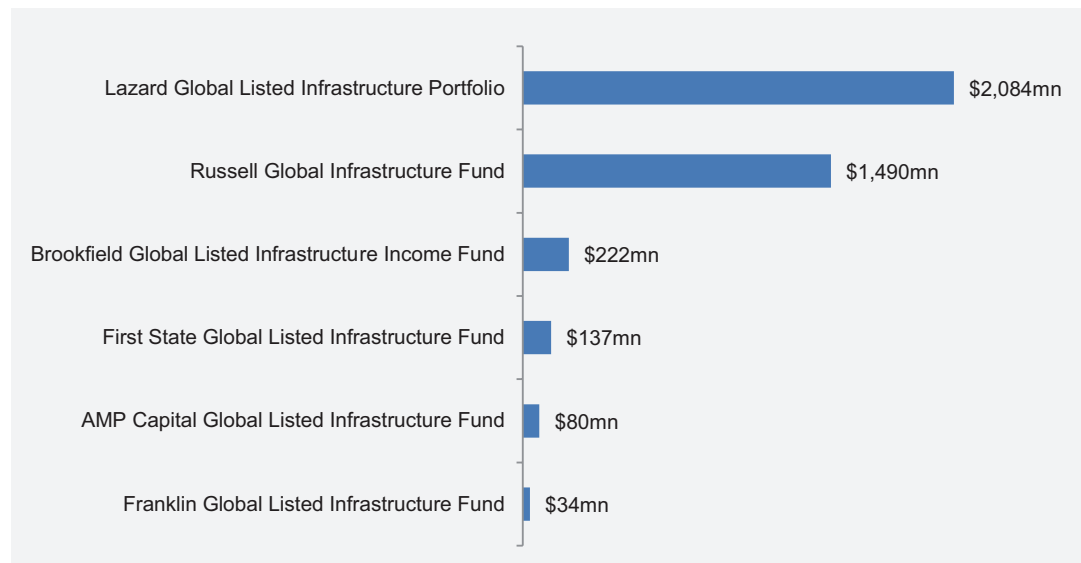
As governments worldwide increasingly face fiscal constraints, particularly in the developed world, the private sector is expected to be involved greatly in construction responsibilities through the PPP route. The private sector is actively involved through PPP into listed infrastructure projects in Australia, Europe, Canada, and the US, and this trend is expected to continue.

Performance of Two of the Largest Listed Infrastructure Funds

Country	Number of Constituents						
	2Q15 Performance	3 Months	YTD	1 Year	3 Years	5 Years	Since Inception
Lazard Global Listed Infrastructure (USD Hedge)		-4.36	3.68	7.99	21.24	16.73	8.74
Russell Global Infrastructure Fund – Class S		-1.64	-1.64	-4.60	11.13	-	9.20
Reference Index Performance							
MSCI World Index (Local)		-0.69	4.14	8.41	17.01	13.79	5.15
Citigroup World Government Bond Index All Maturities (Local)		-2.67	-0.61	3.67	3.36	3.56	4.01

Source: Fund fact sheets

Major Listed Infrastructure Funds and Their Asset Size



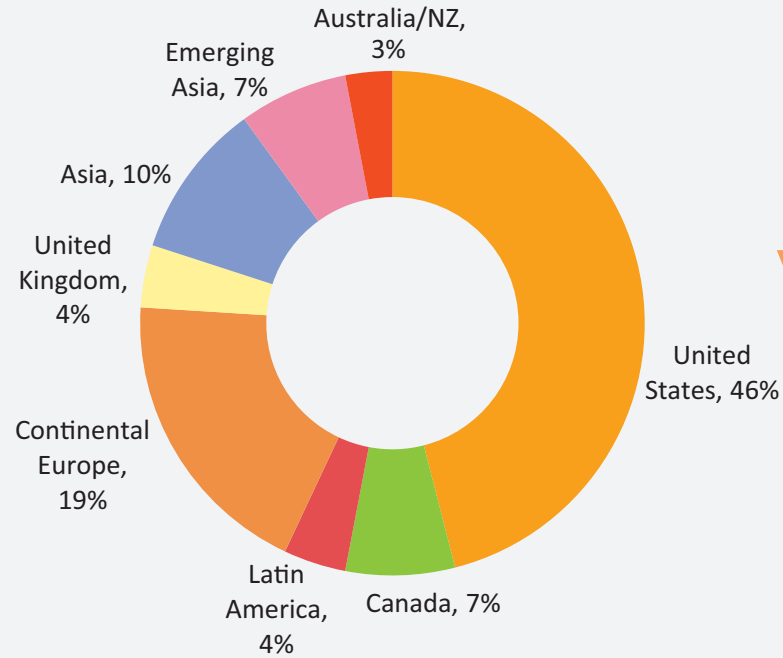
Source: Fund fact sheets, Aranca Research



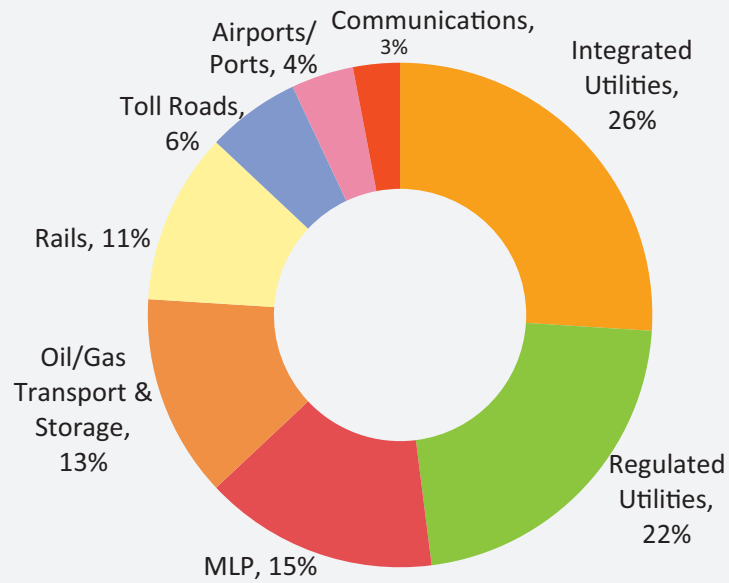
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Breakdown of the Listed Infrastructure Investment Universe



By Region



By Sector

Source: Aranca Research



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