Investing in Global Infrastructure

Infrastructure: Where Mega Trends Intersect

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SUBSTANTIAL GROWTH OPPORTUNITY

Developed and emerging markets are in need of new infrastructure to both sustain and unlock their economic growth potential. Global infrastructure investments are projected to average $3-$4 trillion per year, or ~3.5% of global GDP, through 2040\(^1\). This estimate may actually prove conservative as countries around the world try to meet United Nations Sustainable Development Goals (UN SDGs), which aim to ensure universal access to drinking water and electricity by 2030.

GLOBAL URBANIZATION DRIVING GROWTH

The migration of people from rural to urban areas is driving need for increased infrastructure investment. According to the UN, 55% of the world’s population lives in urban areas (as compared to 30% in 1950). By 2050, this total is projected to grow to nearly 70%, with India and China accounting for the majority of the increase.

MAJORITY OF NEW INVESTMENTS TO BE ON ROADS AND POWER GENERATION

Nearly three-quarters of the projected capital spend for new infrastructure is expected to be in Asia and the Americas (approximately 54% and approximately 22%, respectively). Approximately two-thirds of the spending is projected to be on building roads and electricity generation capabilities (with an emphasis on wind and solar power generation).

PRIVATE SECTOR HELP NEEDED TO FUND NEW INFRASTRUCTURE PROJECTS

For governments with limited economic resources, the privatization of infrastructure assets represents a possible solution for funding new projects. Infrastructure investing has been a fast-growing asset class for the private sector in Europe and Australia, and new opportunities are rapidly emerging in Asia and North America.

PRIVATE EQUITY VS. LISTED EQUITIES

Historically, investing in global infrastructure required access to high-cost private equity that locked-up investor capital for several years. However, the number of listed securities across numerous exchanges has grown in recent years largely due to increased privatization. Investors are now able to construct a diversified and liquid portfolio at a reduced cost.

DEFENSIVE CHARACTERISTICS

Listed infrastructure tends to exhibit lower volatility as compared to the broad equity markets with only modest correlation. Inelastic demand makes infrastructure assets less susceptible to economic downturns. These assets generate stable, inflation-protected cash flows. As a result, the listed equities have a high yield component making them attractive to a wide variety of investors.

\(^1\)Source: Global Infrastructure Hub (GIH) and Oxford Economics.
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Kayne Anderson Capital Advisors, L.P.

GLOBAL INFRASTRUCTURE 101

Infrastructure assets can be broken into three sectors that may include several subsectors:

Transportation
- Roads (includes bridges and tunnels)
- Railways
- Airports (includes terminals, runways, etc.)
- Sea ports

Utilities
- Electricity (includes generation, transmission, and distribution)
- Pipelines (includes crude oil, natural gas, and NGL-related assets)
- Water (includes collection, treatment, processing and distribution of water and sewage)

Telecommunications
- Physical infrastructure (includes cell towers, data centers, and small cell/fiber)

These assets often share a number of key attributes that make them attractive to investors seeking growth and income. These attributes include:

High barriers to entry: infrastructure assets generally operate in tightly regulated markets and tend to benefit from having high barriers to entry that prevent or diminish competition. Examples include government granted toll road concessions and legal monopolies for water distribution.

Inflation-protected revenues: infrastructure is a “real asset” that generates revenues through service concessions, tariffs, or other fees. These contractual arrangements typically provide inflation protections through regulated returns, contract escalators, and other mechanisms.

Stable, predictable cash flows: infrastructure assets have long operational lives. The contracts underpinning the services these assets provide tend to be long term, generating predictable revenue streams that match the long-lived nature of these assets. The ability to generate significant recurring cash flow enables infrastructure assets to regularly distribute a significant amount of this cash back to owners.

Counter-cyclical assets: owing to their high barriers to entry, monopolistic characteristics (pricing power), and inelastic demand, infrastructure assets are generally less vulnerable to economic cycles. Listed infrastructure tends to exhibit lower correlation with other asset classes, such as real estate or other public equities.

INFRASTRUCTURE SPENDING ON THE RISE

Within the real assets space, infrastructure investing has made headlines as world population is growing and infrastructure spending is needed in both developed and emerging markets. In the developed world, aging and deteriorating infrastructure needs to be replaced, while in emerging markets the need is for expansion of first-generation services, such as access to clean water and electricity, to meet the demand of rapidly urbanizing populations.

According to projections by the UN, the world population will reach 9.8 billion by 2050, up 2.2 billion, or 29%, from an estimated 7.6 billion people in 2017 (exhibit 1). The majority of the world’s population growth is expected in Africa and Asia, with increases of approximately 1.3 billion and ~750 million people, respectively. Africa and Asia will be followed by Latin America and the Caribbean, Northern America and Oceania, where growth is projected to be much more modest.

Exhibit 1: Population of the World and Regions, 2017, 2030, and 2050

<table>
<thead>
<tr>
<th>Region</th>
<th>Population (millions)</th>
<th>Growth 2017-2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>7,550</td>
<td>8,551</td>
</tr>
<tr>
<td>Africa</td>
<td>1,256</td>
<td>1,704</td>
</tr>
<tr>
<td>Asia</td>
<td>4,504</td>
<td>4,947</td>
</tr>
<tr>
<td>Europe</td>
<td>742</td>
<td>739</td>
</tr>
<tr>
<td>Latin America and the Carribean</td>
<td>646</td>
<td>718</td>
</tr>
<tr>
<td>Northern America</td>
<td>361</td>
<td>395</td>
</tr>
<tr>
<td>Oceania</td>
<td>41</td>
<td>48</td>
</tr>
</tbody>
</table>


The UN expects population growth to remain especially high in what it designates “least developed countries” (LDCs), including 33 countries in Africa. The concentration of population growth in the poorest countries will challenge government’s abilities to meet the UN SDGs and ensure that nobody is left behind.

Overall population growth is also leading to increased urbanization. Today, more than half of world population is
living in cities and this is increasing at a rate of approximately 1.5% per year (exhibit 2). The migration of people from rural to urban centers is generally being driven by an expectation for better employment opportunities. By 2050, the UN is projecting that close to 70% of the world’s population will be urban, with India and China accounting for the majority of the increase. Countries classified as “high income” are projected to see close to 90% urbanization as compared to approximately 50% for “low income” countries.

Nearly three-quarters of the projected capital spend for new infrastructure is expected to be in Asia and the Americas (approximately 54% and 22%, respectively). In contrast, Africa is projected to account for approximately 5% of total projected global capital infrastructure spending. About two-thirds of total projected spending globally is to be on building roads and electricity generation capabilities (with an emphasis on wind and solar power generation).

Cash-strapped governments will be challenged to fund these investments, leading to possible investment gaps between what is needed and what is built. These funding gaps are projected by GIH and Oxford Economics to be relatively wide in the Americas and Africa (>30%), but less so in Asia where countries such as China have prioritized spending on these projects (exhibit 3). McKinsey Global Institute (MGI) came to a similar conclusion in 2017, calculating the total funding gap could be as much as $5.5 trillion by 2035.

Rapid urbanization coupled with population growth is changing the landscape of human settlement, and with it, the needs for infrastructure. Metropolitan areas need to provide basic, or “essential”, infrastructure services such as roads, electricity, clean water, sanitation, and telecommunications to support the livelihood of its citizens and local businesses. More investment is needed to keep up with the world’s demographic trends.

GIH and Oxford Economics, a G20 backed initiative, project global infrastructure investments to average $3-$4 trillion per year, or about 3.5% of global GDP, through 2040. Stated another way, the organization projects global infrastructure investment needs to be $94 trillion between 2016 and 2040, excluding oil and gas-related infrastructure spending. Meeting the UN SDGs for universal access to drinking water, sanitation, and electricity by 2030 increases this total by $3.5 trillion.

PRIVATE SECTOR HELP NEEDED TO FUND NEW INFRASTRUCTURE PROJECTS

For governments with limited economic resources, privatization and public-private partnerships (PPPs) of infrastructure assets may represent a possible solution for funding new projects. According to The World Bank, private investments in infrastructure have averaged approximately $100 billion annually since 2010, with about three-quarters of those investments having been directed toward building new roadways (approximately...
$20 billion annually) and power generation facilities (approximately $55 billion annually).

Infrastructure investing has been a fast growing asset class for the private sector in Europe and Australia, and new opportunities are rapidly emerging in Asia and North America. Last year, private infrastructure funds raised a record $85 billion, exceeding the previous record in 2017 by more than $10 billion (exhibit 4). Investors have been attracted to the stable growth and steady returns these investments typically offer.

Exhibit 4: Global Infrastructure Fundraising

![Bar chart showing the number of funds closed and aggregate capital raised from 2012 to 2018.]

Source: Institutional Investor and Preqin.

The global infrastructure listed core universe is comprised of approximately 250 companies with an aggregate market capitalization of close to $3 trillion. These companies range by subsector, geography, size, growth potential, and total return proposition. The universe of names is largely domiciled in North America, but has an expanding presence in Europe and Asia (exhibit 6). Power generation and water infrastructure make up nearly 50% of the investible universe. Transportation and energy infrastructure each account for about 20% of the opportunity set.

Exhibit 6: Global Infrastructure Universe Allocations

![Pie chart showing the distribution of global infrastructure companies by region.]

Source: Kayne Anderson.

The return profile for listed infrastructure is generally lower than investments in market-based, unregulated industries since these assets tend to operate in more demand-elastic environments with higher levels of contracting and regulation. Nevertheless, the sector has historically provided attractive risk-adjusted returns with an ability to generate current income (exhibit 7). Although return expectations by asset type vary, a portfolio capable of delivering annualized total returns approaching 10% is achievable.
The dividend yield for listed infrastructure may represent as much as 40-50% of the sector’s total return in any given year. Today, the average yield for the sector is close to 4%, or twice as much as the S&P 500 Index. Dividend growth is another hallmark of the asset class, partly due to the inflation-protected revenues that the underlying assets earn.

Listed infrastructure also provides diversification benefits arising from low correlations with other asset classes. This is due in part to infrastructure assets providing essential services, making them less susceptible to economic downturns. Exhibit 8 illustrates the relative volatility of global infrastructure as compared to various fixed income and equity benchmarks, slotting in between the two asset classes.

**CLOSING THOUGHTS**

Global infrastructure is an emerging asset class that is drawing increasing investor interest as a result of its multi-decade growth opportunity and its portfolio diversification benefits. Listed infrastructure arguably offers a preferred way to gain exposure to the sector since it provides liquidity in a cost effective manner.
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