INFRASTRUCTURE AS AN ASSET CLASS

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Joshua Zwick, Partner
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What is infrastructure?
Permanent facilities and structures that a society requires to facilitate the orderly operation of its economy

Transportation
- Airports
- Ports/terminals
- Roads
- Bridges/tunnels
- Rail

Utilities
- Distribution and transport/transmission
  - Electricity
  - Water
  - Natural gas

Social infrastructure
- Healthcare facilities
- Education
- Waste management

Power generation
- Renewables (e.g. solar, wind)
- Fossil fuels (e.g. coal, natural gas)
- Nuclear

Communications
- Telecommunications
- Broadcasting
- Wireless
- Satellites
Funding infrastructure investment
In the U.S., most infrastructure has been funded with municipal bonds— but that is changing

• While extremely successful in US, muni market is insufficient to fund maintenance of existing and building of required new infrastructure in the US
  – Fiscal tightening: Muni bonds adds directly to government debt and increasing fiscal pressures make increased issuance challenging¹
  – Revenue constraints: Lack of support for increases in user fees or taxes to support issuance
  – Concentrated holders: “Cross over buyers”, who cannot benefit from tax exemptions (including life insurance companies) are essentially excluded from market
• Combination of funding needs with inability of traditional muni market to fund all of it has led to rapid rise in alternative forms of financing
  – Public private partnerships (PPP)
  – Transportation Infrastructure Finance and Innovation Act (TIFIA)
  – Railroad Rehabilitation and Improvement Financing Program (RRIF)
  – Direct pay bonds (e.g., Build America Bonds)
  – Private activity bonds (PABs)

¹. Wall Street Journal, August 8, 2016
². Sources: Thomson Reuters (based on available data on July, 2016), Preqin, Oliver Wyman analysis
While the ultimate use of the funds may be similar, investing in privately financed infrastructure is a distinct type of investment

<table>
<thead>
<tr>
<th>Muni financed</th>
<th>Privately financed</th>
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</thead>
<tbody>
<tr>
<td>Risk driven more by fiscal health of government, less by performance of specific assets</td>
<td>Risk driven more by performance of specific assets/projects or strength of established infrastructure companies</td>
</tr>
<tr>
<td>Most attractive to investors that benefit from tax break</td>
<td>Attractive to investors that cannot benefit from muni tax break</td>
</tr>
<tr>
<td>Most AA-rated</td>
<td>When rated, most A-/BBB</td>
</tr>
<tr>
<td>Diverse market, but not idiosyncratic</td>
<td>Idiosyncratic market, but not as diverse</td>
</tr>
<tr>
<td>Institutional access to market through direct holdings</td>
<td>Institutional access to market through many different channels</td>
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</tbody>
</table>
Typical infrastructure project involves many parties
Insurers can be debt or equity investors depending on their particular risk, return and liability management objectives
Recap: Why infrastructure investment for insurers?

- **Long-duration** make them an excellent ALM match for insurers’ long-dated liabilities

- **Relatively illiquid** investments which insurers are naturally well-suited to hold given stable funding sources

- **Stable and secure cashflows** due to regulatory protections as well as monopolistic or quasi-monopolistic market positioning

- **Diversifying** investments driven by distinct risk drivers producing low observed correlations with other asset classes

- **Attractive risk-adjusted returns** compared to public corporates and equity investments
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