



Investing in Infrastructure

LEGISLATIVE STUDY COMMITTEE ON PRIVATE PARTICIPATION IN TOLL PROJECTS

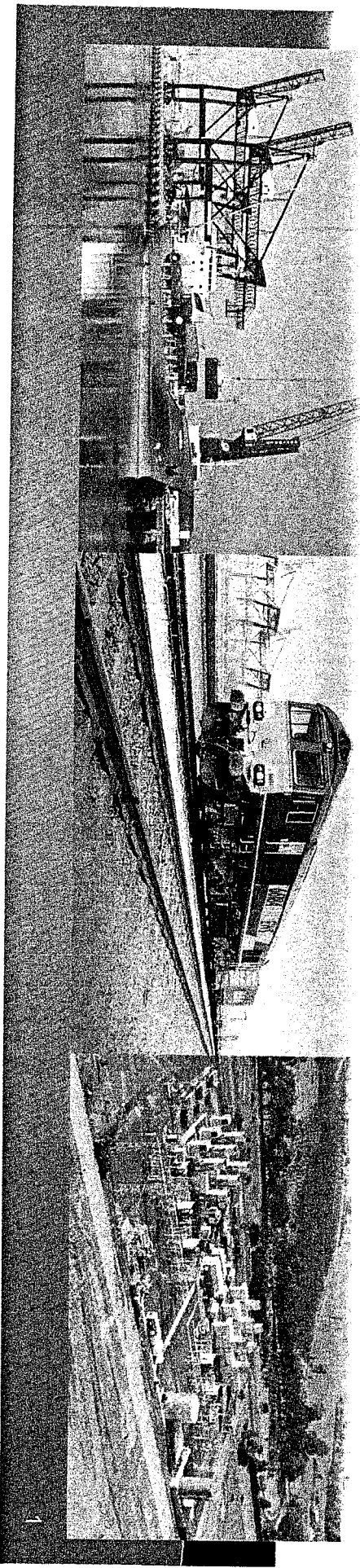
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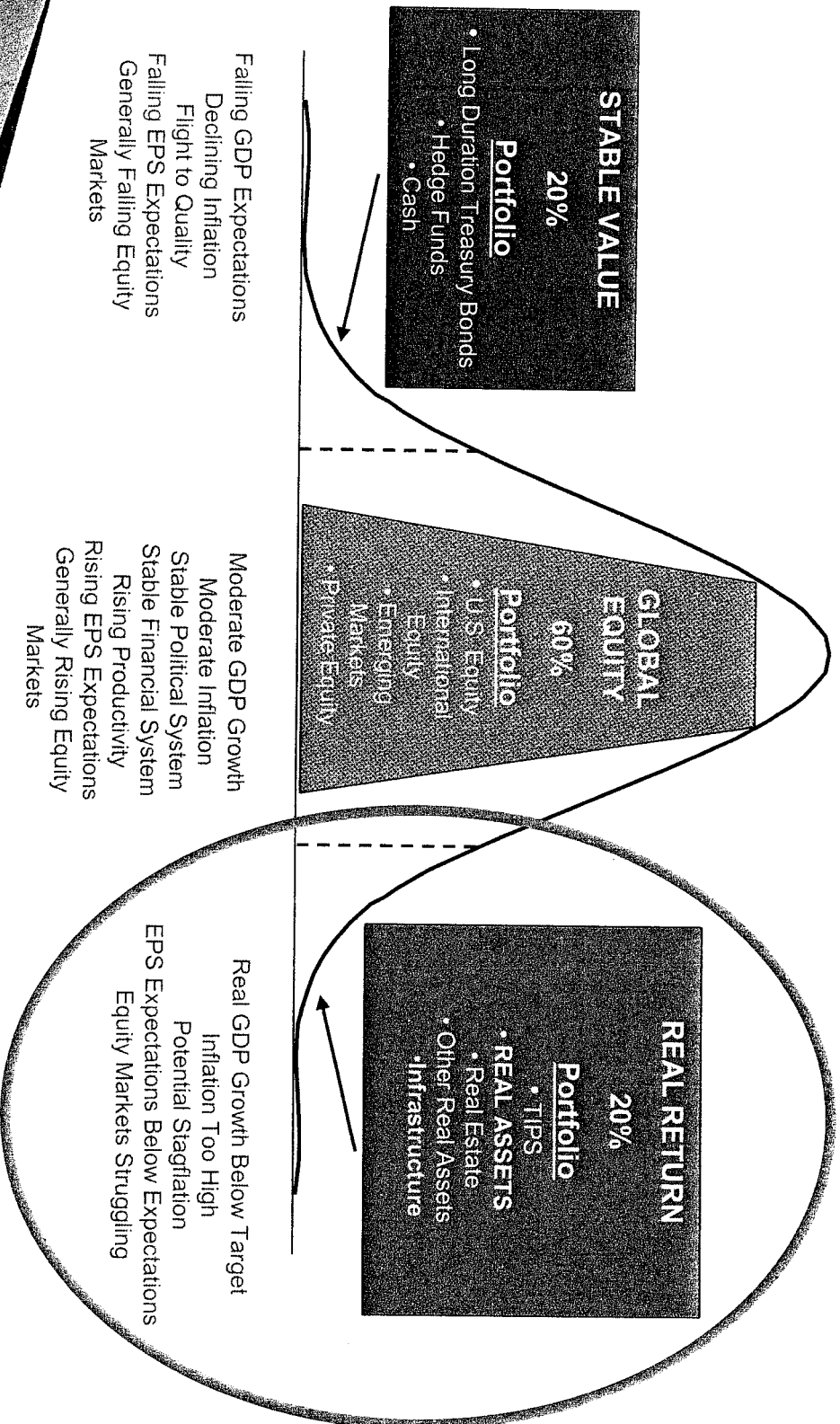
July 22, 2008



Topics

- **Where Infrastructure Fits in the TRS Portfolio**
- **How TRS Defines Infrastructure**
- **Infrastructure Opportunity**
- **Infrastructure Approach**

Where Infrastructure Fits in the TRS Portfolio



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So...What is Infrastructure?

Infrastructure refers to assets that:

Provide essential services to communities, businesses and governments that have inherent competitive advantages (if not a monopoly) because of high barriers to entry or regulatory concessions.

Infrastructure

- is a Real Asset;
- is a Fixed Asset;
- has Long-term predictable Cash Flows;
- provides Inflation Protection

Investment Characteristics

Characteristics	Benefits
Provides Essential Services	Low volatility and correlation with other assets
Barriers to Entry	Low risks
Real Assets	Inflation linked
High Cash Dividends	Current returns and lower "J curve"
Long Lived Asset	Good match for long-term liabilities of pension funds

All Taken Together

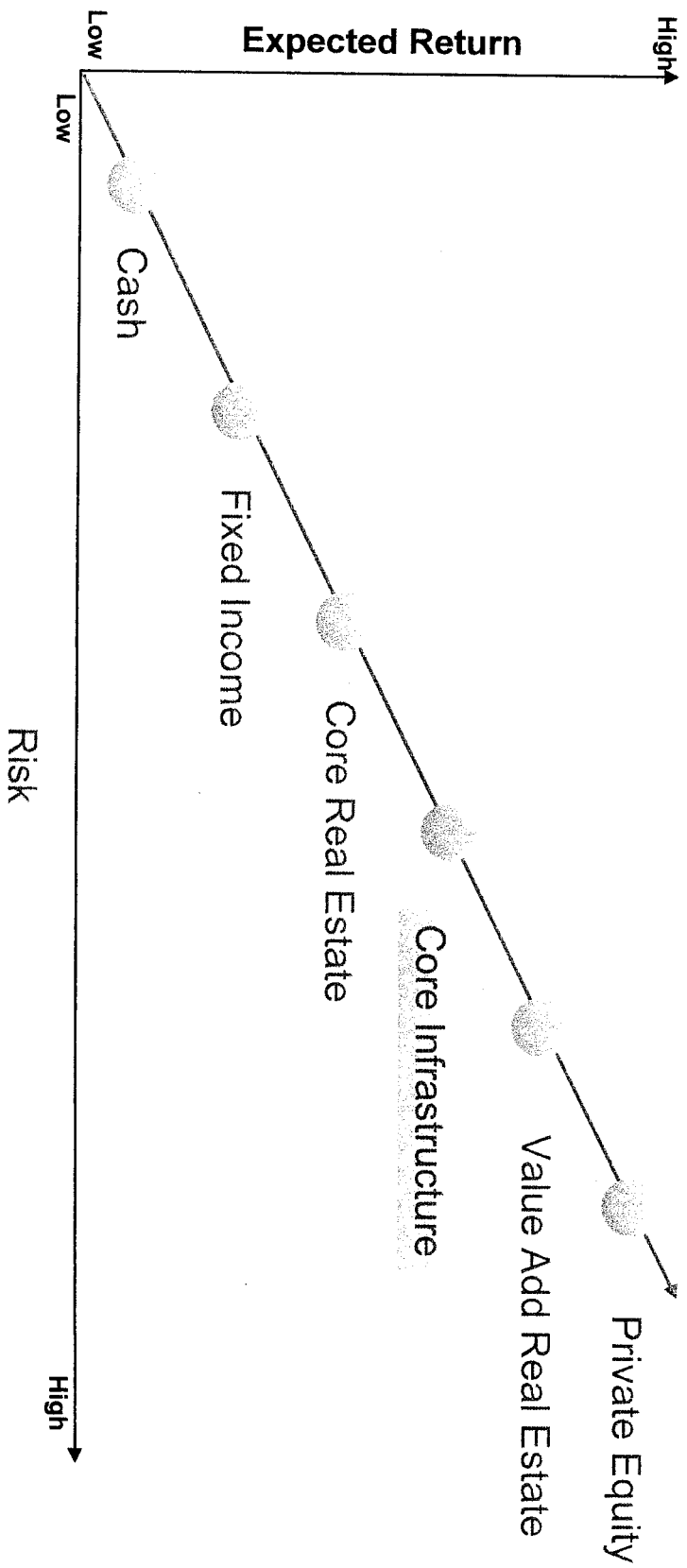
Stable and predictable Cash Flows

Predictable Returns

And ultimately this means.....

$$\begin{aligned} & \text{Stable predictable cash flows} \\ & + \\ & \text{Predictable expenses} \\ & + \\ & \text{Capital intensive (low labor costs)} \\ & + \\ & \text{Long-term fixed rate debt} \\ & = \\ & \text{Predictable returns} \end{aligned}$$

Infrastructure Vs. Other Assets



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Not All Infrastructure Is Created Equal

- Infrastructure assets vary widely in expected return, risk, and correlations depending on:
 - Sector or Type of Asset
 - Degree of Barriers to Entry or Regulation
 - Maturity of Asset
 - Geography
 - Size of Asset
 - Complexity of Management and Operations
 - Condition of Asset

Types of Infrastructure

Throughput *	Regulated	Contracted	Social	Related
Roads	Electricity Distribution	District Energy	Hospitals	Parking
Bridges	Electricity Transmission	Power Generation	Aged Care	Telecom
Tunnels	Gas Distribution	Comm. Towers	Schools	Satellite
Airports	Water Distribution		Courthouses	Directories
Rail			Prisons	Lotteries
Seaports				
Risks				
Volume/Velocity	Regulatory	Counter-party	Political	Inertia

*Roads, bridges, airports, seaports are often together referred to as transportation infrastructure.

Characteristics by Type

Asset Type	Risk	Capital Appreciation	Inflation linkage
Toll Roads	Low - Medium	Limited	High
PPPs / PPPs	Low - Medium	Limited	Medium -High
Regulated Assets	Low - Medium	Limited	Medium -High
Railroads	Medium	Yes	Low - Medium
Airports	Medium -High	Yes	Medium
Toll Roads -Greenfield	Medium -High	Yes	Medium
Power	High	Yes	Low - Medium
Average	Medium	Modest	Medium

Deal Size and Leverage

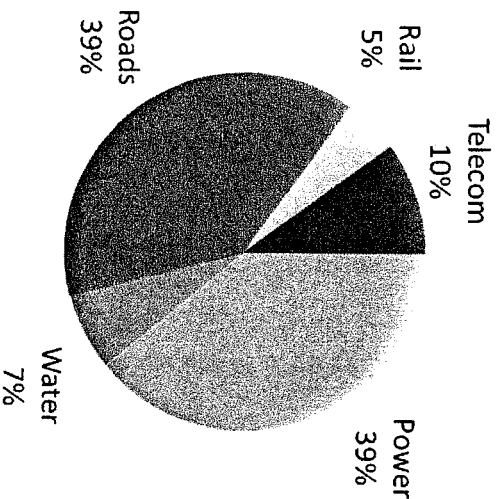
- Smaller deals tend to have higher returns, larger deals lower returns, due to the following reasons:
 - Less competition for small deals
 - Less interest
 - Tough to access, need large well connected team to find and analyze
 - Smaller projects are usually in earlier stages of development

- Infrastructure projects are generally highly leveraged and can be as high as 90% depending on the projected cash flows and project type; although this level of leverage is extremely rare.
 - Leverage is usually in the 50%-70% range.
 - It is important to remember that additional leverage is only as risky as the volatility in a project's underlying cash flows.

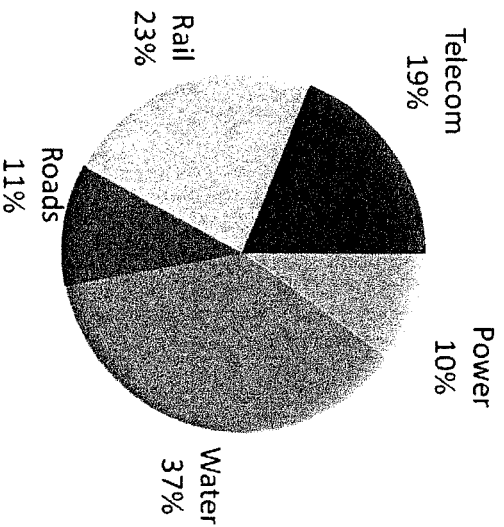
Global Market

- Infrastructure, as an asset class, has an estimated global value of US \$17 trillion.
- Only a small fraction of infrastructure investments currently utilizes private sector capital.
- The OECD expects total expenditures requirements for infrastructure to be \$27 Trillion US through 2030.

Global Infrastructure Assets in 2005
\$17 trillion



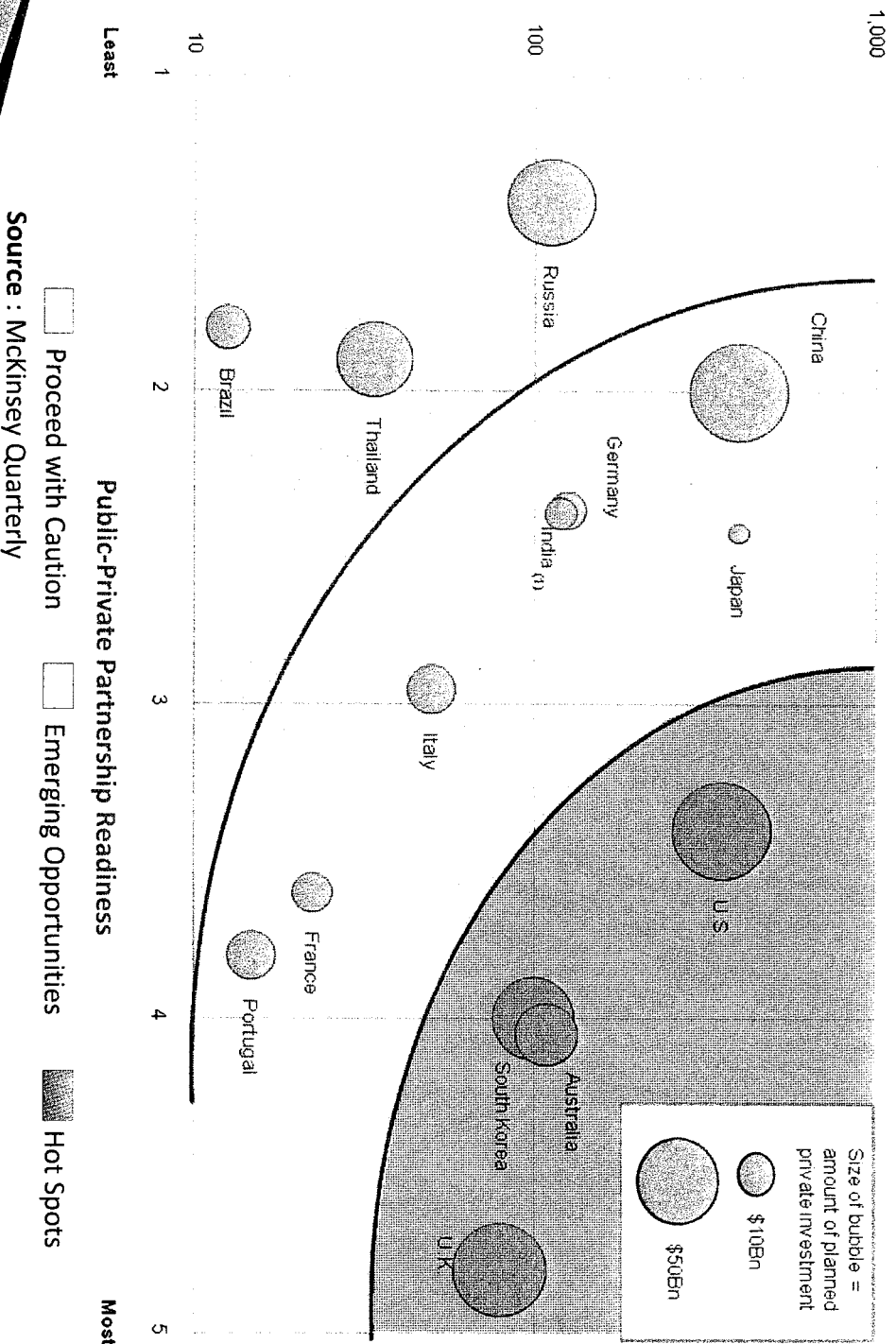
Global Infrastructure Assets
Investment Estimates through 2030
\$27 trillion



SOURCE: ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Global Demand for Infrastructure Investment

Country Attractiveness
Planned Infrastructure Spending (Public and Private) 2005–2010 (US\$ Bn)



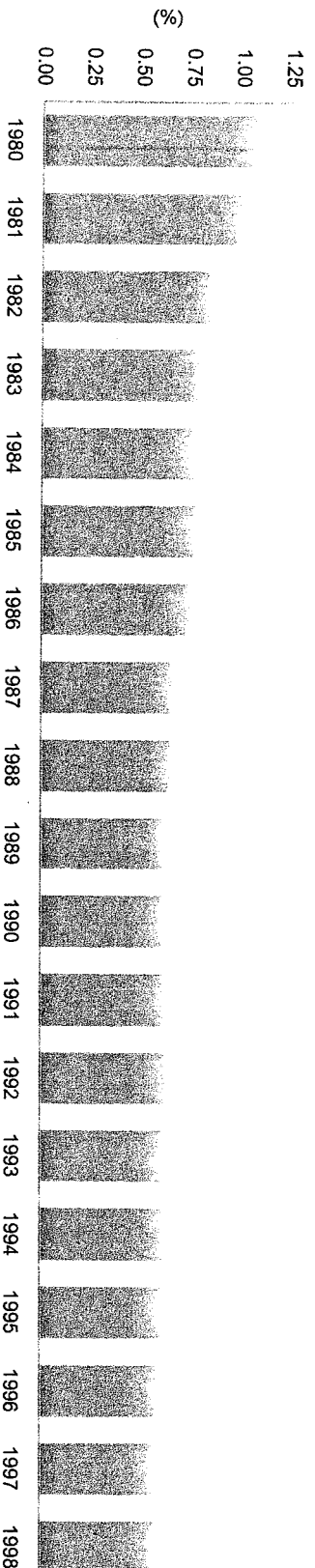
Source : McKinsey Quarterly

- Proceed with Caution
- Emerging Opportunities
- Hot Spots

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U.S. Market

U.S. federal infrastructure spending as a percentage of U.S. GDP



Source: U.S. Congressional Budget Office

- In real terms, U.S. federal infrastructure spending was flat between 1980 and 1998 and declined as a percentage of U.S. GDP
- The American Society of Civil Engineers estimates that over the next five years the U.S. will require approximately \$1.6 trillion of infrastructure investment
- The Chicago Skyway, Indiana Toll Road, Penn Turnpike transactions are early examples of private investments in toll roads, but it is expected that increasing amounts of the funding requirement will be met in this way

Recent Market Events in U.S.

Toll Roads	Ports	Utilities	Airports	Parking	Lotteries	Other Assets
<ul style="list-style-type: none"> • \$1.8BN Chicago Skyway (1/05) • \$3.9BN Indiana Toll Road (6/06) • \$522MM Pocahontas Parkway (6/06) • \$603MM Northwest Parkway (5/07) • \$12.8 BN Pennsylvania Turnpike (5-08) 	<ul style="list-style-type: none"> • Associated British Ports bought by Goldman Sachs-led group for \$6BN (5/06) • DB RREEF buys Maher Terminals (3/07) • ALG purchases P&O ports for rumored \$1.3 BN (3/07) • ALG acquires AMPORTS (4/07) • ALG acquires MTC (5/07) • Goldman Sachs acquires 49% of SSA (7/07) 	<ul style="list-style-type: none"> • Macquarie buys Thermal Chicago for \$164MM (6/04) • Macquarie buys Aquarion Company for \$860MM (2/06) • Babcock & Brown bids \$2.2BN for Northwestern Company (4/06) • Macquarie buys Duquesne Light for \$3.2BN (6/06) • Macquarie consortium buys Puget Energy for \$3.5 Bn (10/07) 	<ul style="list-style-type: none"> • FAA approves long-term lease of Chicago Midway Airport under airport privatization pilot program (9/06); Midway issues RfQ 	<ul style="list-style-type: none"> • Icon Parking bought by Macquarie for \$630MM (11/05) • City of Chicago's +9,000 parking space system purchased by Morgan Stanley Infrastructure Partners for \$563MM (10/06) • Sale by 3i of National Car Parks to Macquarie for \$1.5BN (3/07) • VINCI Park's acquisition of 50% stake in LAZ Parking (11/07) • Sale of Ideal Parking (operates 53,000 parking spaces) to VINCI Park (2/08) 	<ul style="list-style-type: none"> • States of Indiana and Illinois both issued RfQs for long-term lease of state lottery • Being considered by several other U.S. states 	<ul style="list-style-type: none"> • <u>Rail</u> — Fortress acquires Florida East Coast Industries for \$3.5 Bn (5/07) • <u>Communications Assets</u> — Macquarie acquires Global Tower Partners from Blackstone for \$1.425BN (7/07) • <u>Hospitals/continuing care facilities</u> — Carlyle acquires Manor Care for \$6.3BN (7/07)

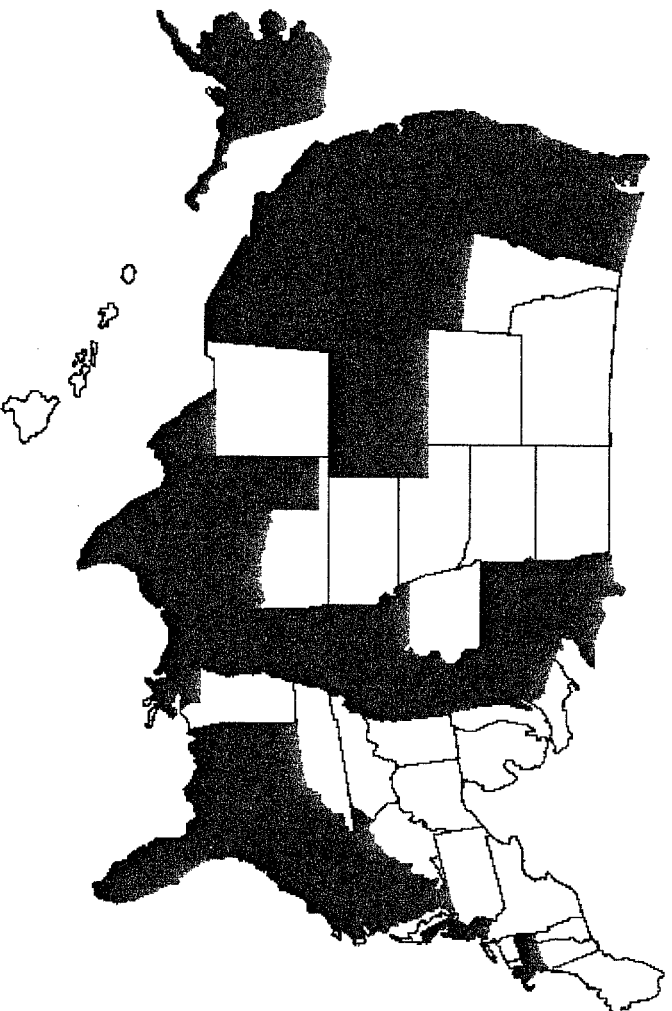
Source: Morgan Stanley

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United States Opportunity

- Public to Private Partnerships (PPPs)
- Public Finance Initiatives (PFIs)
- Energy
- Corporate Sales of Non-Core Assets
- Greenfield

26 states and Puerto Rico have already passed PPP legislation. (States marked in blue)



Approaches to Infrastructure Investing

- There are 4 routes to access infrastructure investments:
 - Private Infrastructure Funds
 - Direct / Co-Investment
 - Public Infrastructure Funds
 - Master Limited Partnerships

Private Funds in the Market

There are over 25 funds in the market raising money for infrastructure totaling over \$50 billion in equity capital.

Offerings include:

Alinda Infrastructure Fund II	Lehman Brothers Global Infrastructure Partners L.P.
Alternia Core Capital Assets Fund	Macquarie European Infrastructure Fund III
Macquarie Infrastructure Partners II	The American Infrastructure MLP Fund
Babcock & Brown Infrastructure Fund NA	Morgan Stanley Infrastructure Partners
Citigroup Infrastructure Partners	Pantheon Infrastructure Fund
FAF Advisors Global Infrastructure Strategy	Santander Infrastructure Fund II
Global Infrastructure Fund	Standard Chartered IL&FS Asia Infrastructure Growth Fund
GS Institutional Infrastructure Partners II	Starwood Energy Infrastructure Fund
Infracapital Partners Fund	Table Rock Partners
JP Morgan Infrastructure Investments Fund	RREEF North American Infrastructure Fund
JP Morgan Asian Infra. & Related Resources	UBS International Infrastructure Fund
KKR Infrastructure	Kotak Infrastructure and Real Estate Fund
Lazard Global Listed Infrastructure Trust	

TRS Considerations in Infrastructure Investing

- Stress diversification (avoid risks that can be associated with concentration);
- Demonstrated skill in investing (strong track record);
- Ability to invest wherever the risk reward profile is most attractive (Global);
- Make sure we can hit our target returns (Above 11%);
- Viable projects without government intervention when deemed appropriate.

Infrastructure Summary

- Huge GLOBAL demand for Infrastructure funding;
- Characteristics of asset group give superior risk adjusted returns;
- Risk / return profile and inflation linkage are highly asset dependant;
- Complex asset group with many discrete subcategories;
- Long lived assets that meets pension long term liabilities needs.

Acknowledgment:

John Ritter, Principal, TRS

Chicago Skyway Potential Bidders - Appendix

The list of contacted Skyway bidders became public after financial close.

	Toll Road Companies	Insurance/Pension Funds	Private Equity Firms/Other	Construction/Industrial Companies
Examples of Potential Buyers	<ul style="list-style-type: none"> • Abertis (Spain) • ACS/Dragados (Spain) • ASF (France) • Autostrade (Italy) • Biffinger Berger (Germany) • Brisa (Portugal) • Cofiroute (France) • Cheung Kong Infr. (China) • SAPP RR (France) • Transurban (Australia) • Vinci (France) 	<ul style="list-style-type: none"> • AIG (NY) • Allstate (Chicago) • Berkshire Hathaway (NE) • CALPERS (CA) • Caja Madrid (Spain) • Mass Mutual (MA) • Northwestern Mutual (WI) • Ontario Teacher's (Canada) • Prudential (NJ) • State Farm (IL) 	<ul style="list-style-type: none"> • Berkshire Partners (NY) • Blackstone Group (NY) • Carlyle Group (Wash DC) • GTCR (IL) • Investcorp (NY) • JP Morgan Chase (NY) • Madison Dearborn Partners (IL) • KKR (NY) • Warburg Pincus (NY) • Willis Stein (IL) 	<ul style="list-style-type: none"> • Bechtel (US) • Central Parking Corp (US) • Fluor Corp (US) • General Electric (US) • Kiewit (US) • Koch Industries (US) • TransCore (US)
Operating Strategy	Enter US market via merger and grow footprint	Seek long-term, steady fixed rate return to offset liabilities	Leverage long-term cash flows to enhance equity returns	Focus on core businesses
Strategic Rationale	Expansion opportunity into North America	Buy and hold to generate cash flow	Interest in municipal assets as an investment class	Create integrated synergies
Interest	High	Medium to High	Medium	Low

Source: Morgan Stanley

