THE MARCO CONSULTING GROUP

Chicago ▪ Boston ▪ Denver

Infrastructure Study

June 28, 2012

Michael Breakstone

OVERVIEW **2**

Infrastructure Sub-Sectors 2
Present Needs 2
PPP 4
Employment Characteristics 5
Recent Infrastructure Examples 6
RCP Language 6

INVESTMENT TYPES AND UNDERLYING VEHICLES **7**

Private Unlisted (open and closed-end) 7
Public Listed 7
MLP 7
Infrastructure Debt Funds 8

ASSET ALLOCATION AND PORTFOLIO CONSTRUCTION **9**

Benchmarking 9
Correlations 11
Risk Return Characteristics 12
Historical Risk and Return 13

PRODUCTS **14**

Product Examples 14

INDEX **17**

Recent Infrastructure Example Details 17
Top 30 Infrastructure Managers by AUM 20

SOURCES **21**

Overview

Infrastructure as an asset class is relatively new, having been introduced to U.S. investors in the early 2000's. Australian pension funds, in the early 1990's, were really the first to allocate to infrastructure as an asset class, and today have allocations of between 5%-15%. A private equity like, closed-end structure was used for early infrastructure vehicles so that infrastructure managers had to educate investors only on the new asset class and not also on a new sort of investment structure.

Infrastructure assets are often monopolistic in nature which helps to provide barriers to entry as well as predictable, income oriented cash flows. Likewise, the cost of constructing a competing asset in a surrounding geography is both prohibitive and redundant. Infrastructure assets often are essential-use assets as well as long-dated which shields them against economic cycles and diminishes investment liability. Due to their high fixed costs and low variable costs, infrastructure assets typically have high operating leverage and inflation increases will typically have a minimal effect on the operating expenses of an asset. Lastly, because many infrastructure assets are regulated, they provide fair pricing that is often contractually linked to inflation and therefore provides protection against inflation.

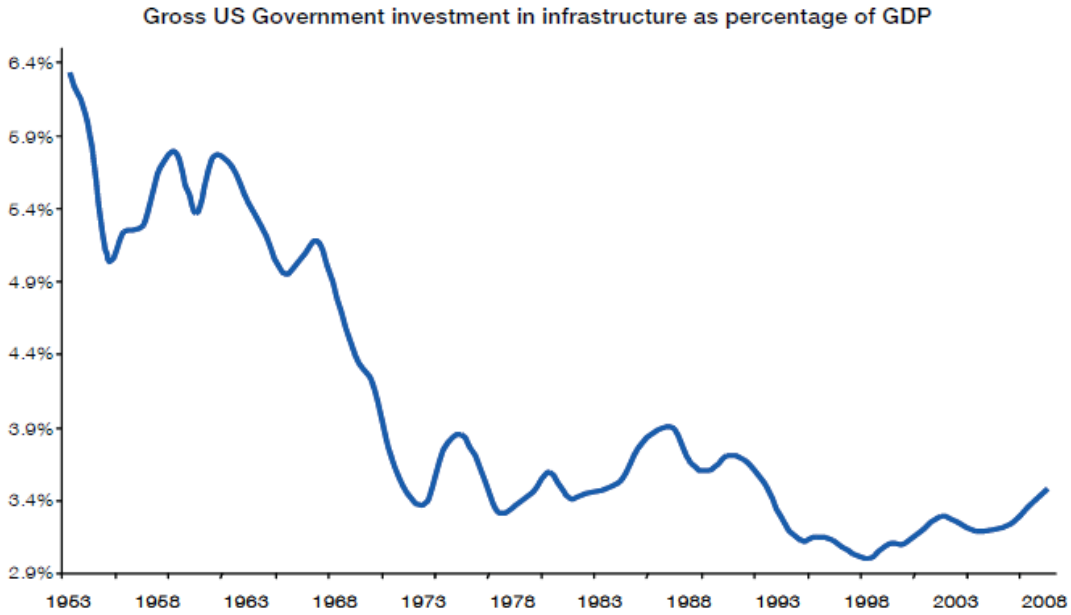
Interestingly, while the value of long-term bonds is of course inversely rated to movements in nominal interest rates and inflation, the value of CPI-linked infrastructure assets often have a positive correlation to inflation. Infrastructure's long duration assets and stable cash flows are attractive to investors looking for strong yield and relatively low volatility.

Infrastructure Sub-Sectors

- **Economic Infrastructure**
  - Airports
  - Electricity Generation
  - Electricity Transmission and Distribution
  - Gas Distribution
  - Pipeline and Related
  - Renewable Energy
  - Seaports
  - Steam and Hot Water Supply
  - Telecom
  - Toll Roads
  - Water and Wastewater
- **Social Infrastructure**
  - Health Care Facilities
  - Prisons
  - School

Present Needs

The World Bank estimates that to maintain projected growth rates, developing economies will need to spend 5.5% of GDP annually on infrastructure. Meanwhile, in the U.S. public investment in infrastructure began to fall in the 1970s, sitting now at around 3.5% of GDP, and has not returned to previous levels. The American Society of Civil Engineers (ASCE), in a 2009 paper, estimated that by 2020 14% of GDP, or $3.1T, will be lost and that 870,000 jobs will likewise be lost unless our country's infrastructure is improved. The ASCE estimates that $1.7T needs to be invested by 2020 to avert this situation.



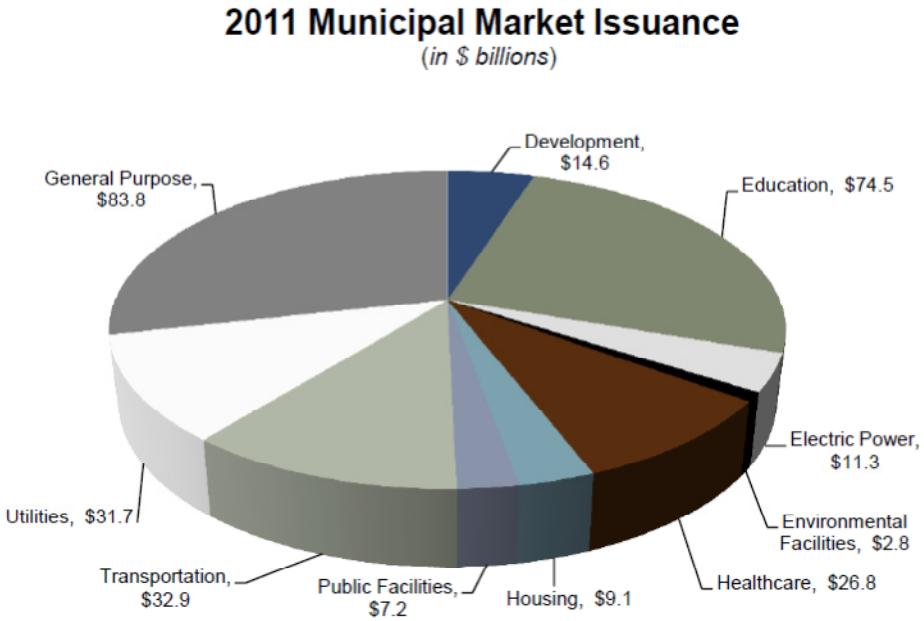
Source: Macquarie, June 2009.

Deficiencies in current infrastructure cost businesses and households approximately $130B in 2010 alone, mostly due to higher running costs and travel delays. Most of this comes from transport infrastructure. The American Society of Civil Engineers estimates this will cost each American family around $10,600 between 2010 and 2020 and gave the country's infrastructure an average grade of D in its *2009 Report Card for American's Infrastructure*.

Infrastructure Type	Grade	Infrastructure Type	Grade
Aviation	D	Public Parks & Recreation	C-
Bridges	C	Rail	C-
Dams	D	Roads	D-
Drinking Water	D-	School	D
Energy	D+	Solid Waste	C+
Hazardous Waste	D	Transit	D
Inland Waterways	D-	Wastewater	D-
Levees	D-	Overall	D

Source: Global Infrastructure Asset Management, "Why Invest in Infrastructure", February 2012

Meanwhile, due in part to the recent financial crisis and the ensuing Great Recession, municipalities and local governments have struggled to pull in enough tax revenue and to find investors interested in municipal debt in accord with levels that would allow them to fund various infrastructure projects.



Source: Bond Buyer. All data as of 12/31/2011.

Note that total municipal bond issuance in 2011 was $285B, a level not seen since 2001:

U.S. Municipal Bond Issuance

	General Obligation	Revenue	**Total**
1996	64.6	120.6	**185.2**
1997	72.4	148.3	**220.7**
1998	93.7	193.1	**286.8**
1999	71.0	156.5	**227.5**
2000	66.6	134.3	**200.9**
2001	101.7	186.0	**287.7**
2002	125.7	231.8	**357.5**
2003	142.1	240.6	**382.7**
2004	129.6	230.1	**359.7**
2005	144.2	264.0	**408.2**
2006	114.8	272.0	**386.8**
2007	131.0	293.5	**424.5**
2008	110.2	276.2	**386.4**
2009	154.9	251.9	**406.8**
2010	146.9	283.4	**430.3**
2011	104.9	180.3	**285.2**

Source: Statistical Industry and Financial Markets Association (SIFMA)

Therefore, in the United States, Private-Public-Partnerships (PPP) (or Private Finance Initiatives (PFI) as they are known in the UK) have become increasingly popular in recent years.

PPP

Public-Private Partnerships have been the more prevalent sort of investment type in Australia and the UK. This sort of investment type is making its way to the United States, spurred in part, by the need for local governments and municipalities to focus on ways to manage debt rather than ways to raise more debt to build infrastructure. Therefore, private investment managers step in to raise money from institutional investors, partner with the municipality to build or renovate infrastructure projects, and to fill the void left by cash strapped municipalities. Common complaints with PPP in the past have been that if projects falter and remain unfinished they become a public problem and, secondly, that the private investor tries to recoup their investment with higher user fees. This was the case with several Chicago area PPP projects under Mayor Daley.

Employment Characteristics

It is important to be aware of constituent affects from infrastructure investments. Due to the size of the investments and labor required for construction and maintenance, there is a large opportunity for labor. It is important to be aware of whether the business model for privatization relies on labor cost reductions, as has been the case in many projects in the past. On a fiduciary basis, trustees must balance whether the return to the pension portfolio resulting from an infrastructure investment, outweighs the potential loss of job hours and subsequent lowering of pension benefits.

The Economic Policy Institute published a study in February 2009 which claims that, although outsourcing government work is done with cost savings in mind, cost savings are accomplished not by creating efficiencies but instead are a result of the willingness and ability of private contractors to push down wages and reduce employee benefits. This study related more specifically to outsourcing federal jobs. However, we at MCG believe that a study focusing on private sector jobs would come to the same conclusion, if not one that is worse, given the overall deficiency in benefits that the private sector has compared to government employees. Past examples of public-private partnerships such as those mentioned in this memo show that wages fall and benefits shrink or are entirely eradicated under the guise of “part-time” contractor employment.

Likewise, the cost to consumer rises and, often times, quality of service diminishes. Theoretically, a multi-employer pension plan could see enough investment return from its infrastructure investments to cancel out wage and benefit decreases to its constituents, and some do argue this, but the investment return would benefit constituents in a different way than would current employment, salary, and benefits.

Meanwhile, some estimate that each $1B spent on infrastructure investment will generate between 9,819 and 17,784 jobs if direct and indirect effects are taken into account. So, again, employment is a huge consideration in infrastructure and could theoretically result in many union jobs.

Estimated employment effects of increased infrastructure spending.

category of infrastructure	jobs per $1 billion infrastructure
	direct/indirect
energy	11,705
gas	15,976
electricity generation, transmission, distribution	9,819
solar	10,951
wind	10,076
transportation	13,829
average roads and bridges	13,714
roads and bridges: new	12,638
roads and bridges: repair	14,790
rail	9,932
mass transit	17,784
aviation	14,002
inland waterways/levees	17,416
school buildings	14,029
new institutional construction	14,291
repair of non-residential buildings	13,768
water	14,342
dams	17,416
drinking water	12,805
waste water	12,805

Source: Political Economy Research Institute, "*How Infrastructure Investments Support the U.S. Economy: Employment, Productivity and Growth*", January 2009.

Recent Infrastructure Examples[1]

- Chicago Infrastructure Trust
- City of Chicago Parking Meters
- Illinois/Indiana Skyway
- Indiana Toll Road
- Millennium Park Parking Garage

RCP Language

Managers do often have Responsible Contractor Policies (RCP), but these of course do not mandate union labor, but instead seek to use union labor as is "commercially reasonable". Plus, the RCP will often times state that the RCP will only be in effect on projects in which the Manager owns, say, 50%. Because of the large nominal nature of many infrastructure projects, often times the Manager does not have the ownership percentage necessary to put the RCP into effect. Another consideration is when there is cross-functionality in an infrastructure project and one union benefits to the detriment of another. Theoretically, union labor could band together in order to magnify its power and try to exert influence on infrastructure managers. This has in part worked over the past few years as RCPs have become more common among private infrastructure managers.

[1] See Index for details

Investment Types and Underlying Vehicles

Private Unlisted (open and closed-end)

Like closed-end or open-end real estate funds, these are private commingled or separate account vehicles that invest in infrastructure assets on behalf of their institutional investors. These vehicles tend to have lower volatility and correlations with public markets. Historically, these products were structured more like typical private equity vehicles, with closed-end structures and carried interest to accompany the management fee.

Today, more vehicles, such as ULLICO's and IFM's infrastructure funds, are structured like open-end core real estate vehicles, with no set term and only a management fee based on called capital. This is not necessarily in order to provide investors with liquidity, but rather because the nature of infrastructure products are long-dated, with leases sometimes reaching 99 years, and provide value over the long-term. Plus, it is not clear how readily available exit strategies are in comparison to regular private equity buyout strategies.

Public Listed

This is a more liquid way to invest in an arguably larger infrastructure universe than that of private, unlisted infrastructure. These vehicles, like their REIT counterparts in real estate, tend to be more volatile and correlated with public markets than unlisted infrastructure vehicles. They invest either in actual publically traded firms that participate in mining, telecommunications, construction, and other infrastructure related areas or own infrastructure assets themselves. There are approximately 55 funds are in eVestment's and Morningstar's database that focus on public infrastructure investments, some examples of which include Brookfield's Global Infrastructure Securities Strategy, BlackRock's Global Listed Infrastructure Fund, and Franklin Resource's Infrastructure and Real Resources Fund. As is the case between private, unlisted real estate investments and publically traded REITS, there is a lag component to unlisted returns. An example of this can be seen in the following table:

	2007	2008	2009	2010	2011
Unlisted Ownership	15.84	-6.46	-16.86	13.11	14.26
Listed Ownership	-15.69	-37.73	27.99	27.95	8.28

Source: Nuveen Asset Management, "Listed vs. Private Infrastructure", June 2012

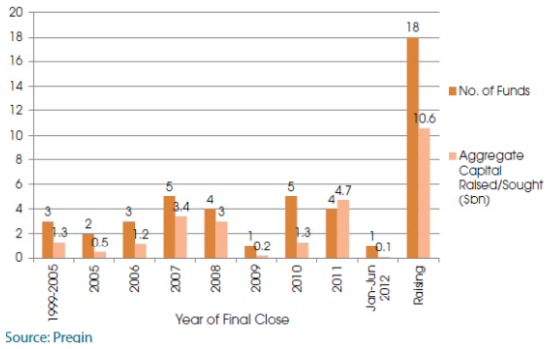
MLP

Master Limited Partnerships (MLPs) are also traded on public stock exchanges though investors, in this case known as Limited Partners (LPs), purchase units in the MLP rather than shares. Currently the sector is comprised of around 75 partnerships with around $300B in market cap, so the universe is not that large. Note though that this is compared to 30 partnerships with around $30B in market cap in just 2002. In other words, the MLP space is growing quickly. The MLP is considered a pass through entity so the investor enjoys certain tax advantages such as no taxation at the corporate level (i.e. no double taxation) when income is distributed. Likewise, depreciation and depletion allowances are passed through to LPs as well, which substantially lowers their taxable income. In order to enjoy this tax advantage MLPs must derive at least 90% of their income from natural resource activities such as the exploration, transportation, storage, processing, refining, and mining of minerals and natural resources. The American Jobs Creation Act of 2004 classified MLP distributions as "qualified income" which opened up the space to institutional investors. Likewise, mutual funds which, in this case, are structured as C-Corps allow for investors to receive just one 1099 rather than a K-1 statement in every state in which the MLP operates, as was previously the case. Part of the attractiveness of MLPs is the high income yield,

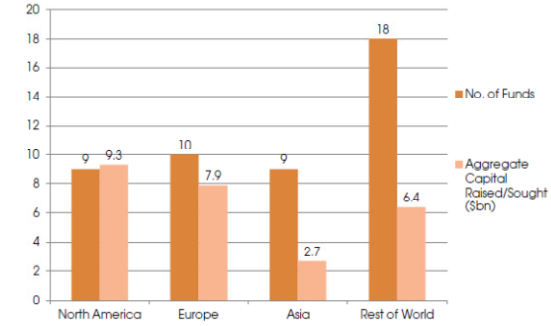
usually around 6%, that an investor receives. A second attractive quality is the annual distribution growth which historically has outpaced inflation and is often around 6% as well. Thirdly, although volatility within the sector is high, the correlation with the rest of the public markets has generally been low, at around 0.37 in the 9 years ending 2010 (though rising, as seen below, to 0.67 in the ten years ending 2011). The largest risk to the MLP sector is that, because they must distribute nearly all cash flow and earnings, they must go to the capital markets constantly to raise additional funds for new projects and to grow distributions.

Infrastructure Debt Funds

Prior to the 2008 credit crisis it was typical for debt to make up 90% of total asset value. The contraction in credit markets obviously made it more difficult to raise debt from traditional sources and banks today still face pressure on their balance sheets and so are reluctant to support infrastructure projects. Likewise, as previously discussed, the municipal market has shrunk because there is less tax revenue to back revenue backed bonds, municipalities are wary of adding further debt to their balance sheets, and investors are more wary of purchasing the bonds of municipalities who face downgrade and credit pressure. This has opened the way for infrastructure debt funds. According to Preqin, this market is set to double in the next few years and has gone from 27 unlisted funds to 46 unlisted funds in the past 18 months. Around 45% of infrastructure debt funds are focused on debt only while the other 55% will also make equity investments.



Source: Preqin



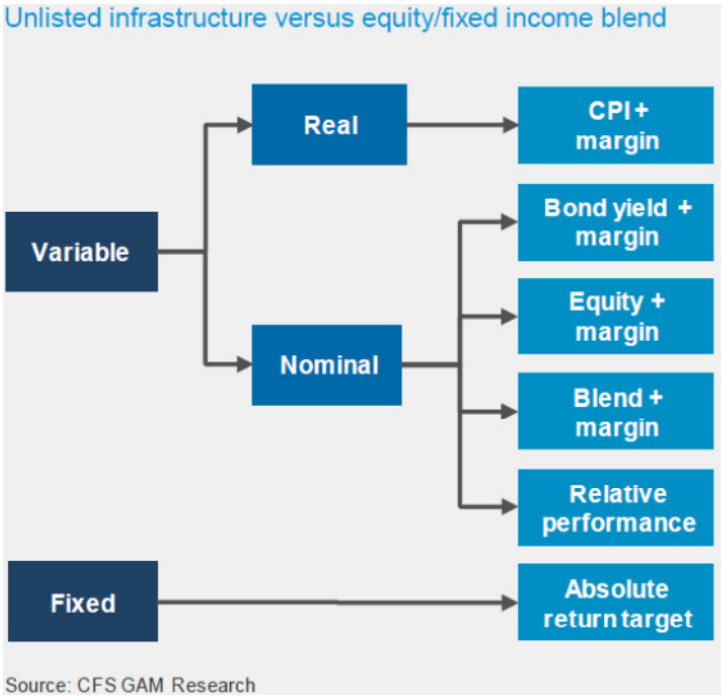
Source: Preqin

Asset Allocation and Portfolio Construction

Benchmarking

No real standard exists for benchmarking the performance of unlisted infrastructure investments, though investors often use CPI plus X or LIBOR plus X benchmarks, depending on whether they're tracking inflation risk or trying to outperform their fixed income allocation. Because the asset class is relatively new, especially in the United States, the performance track record is generally short. Even in Australia, unlisted infrastructure only has a track record of 15 years. Complicating this situation somewhat, unlisted infrastructure is still developing in terms of investor return expectations and objectives.

Some investors use listed index benchmarks, such as the **S&P Global Infrastructure**, the **MSCI ACWI Infrastructure Index**, and the **Macquarie Global Infrastructure Index** for public, listed infrastructure but this does have limitations due to volatility of the stocks and not all the companies in the index can be compared to pure, core infrastructure. Here is a possible range of infrastructure benchmarks along with some historical and projected returns:



	10-year avg	15-year avg	20-year avg	10-yr fcst
Equities	7.7%	9.7%	9.6%	9.5%
Bond yield	5.6%	6.0%	6.8%	6.0%
Unlisted infra (diversified)	9.9%	12.8%	n/a	11%
CPI	3.2%	2.7%	2.7%	2.5%

Source: CFSGAM

Data as of 12/31/2010

Below are some details on existing, listed infrastructure benchmarks:

S&P Global Infrastructure: *(data as of 6/20/12)*
The index follows a modified cap weighted weighting scheme that reduces single stock concentration and balances exposure across the three clusters. At rebalancing, the Utilities and Transportation Infrastructure Clusters have a weight of 40% each and the Energy Infrastructure cluster has a weight of 20%.

- Number of Constituents – 74
- Adjusted Market Cap – $707.17B
- Constituent Mkt. Cap
  - Average – $9.6B
  - Largest – $36.8B
  - Smallest – $0.27B
  - Median – $6.7B
- Weight Largest Constituent (%) – 4.92%
  - TransCanada Corp (pipelines)
- Top 10 Holdings (%) – 35.07%
- U.S. Weighting (%) – 24.1%

MSCI ACWI Infrastructure Index: *(data as of 6/20/12)*
Cap-weighted index comprised of listed infrastructure companies based on the Global Industry Classification System (GICS)

- Number of Constituents – 248
- Adjusted Market Cap – $2,304.8B
- Constituent Mkt. Cap
  - Average – $9.3B
  - Largest – $202.5B
  - Smallest – $0.36B
  - Median – $4.1B
- Weight Largest Constituent (%) – 8.79%
  - AT&T
- Top 10 Holdings (%) – 32.40%
- U.S. Weighting (%) – 38.3%

Macquarie Global Infrastructure Index:
(data as of 6/20/12)
Cap-weighted index based on stocks from the FTSE Global All Cap Index that have an infrastructure/utilities bias

- Number of Constituents – 241
- Adjusted Market Cap – $2,427.8B
- Weight Largest Constituent (%) – 7.02%
  - E.ON (German utility)
- Top 10 Holdings (%) – 31.97%
- U.S. Weighting (%) – 35.0%

Alerian MLP Index: *(data as of 3/30/12)*
Cap- weighted weighting of the 50 most prominent energy Master Limited Partnerships

- Number of Constituents – 50
- Adjusted Market Cap – $260.8B
- Constituent Mkt. Cap
  - Average – $5.2B
  - Largest – $27.7B
  - Smallest – $0.78
  - Median – $2.8B
- Weight Largest Constituent (%) – 15.6%
  - Enterprise Products Partners, LP
- Top 10 Holdings (%) – 59.6%

	YTD a/o 6/20/12	Annualized Performance a/o 5/31/12			10 Year Sharpe
		1 Year	3 Year	5 Year	
S&P Global Infrastructure Index (TR)	2.22%	-9.93%	8.63%	-3.09%	0.46
MSCI ACWI Infrastructure Index (TR)	2.20%	-7.66%	7.57%	-2.46%	0.40
Macquarie Global Infrastructure Index (TR)	-1.59%	-3.71%	17.66%	-18.44%	0.42
S&P 500 (TR)	8.9%	-0.41%	14.92%	-0.92%	0.12
		Annualized Performance a/o 3/30/12			
Alerian MLP Index	-6.45%*	9.6%	35.8%	11.9%	0.76

*does not include yield of 6.1%

Correlations

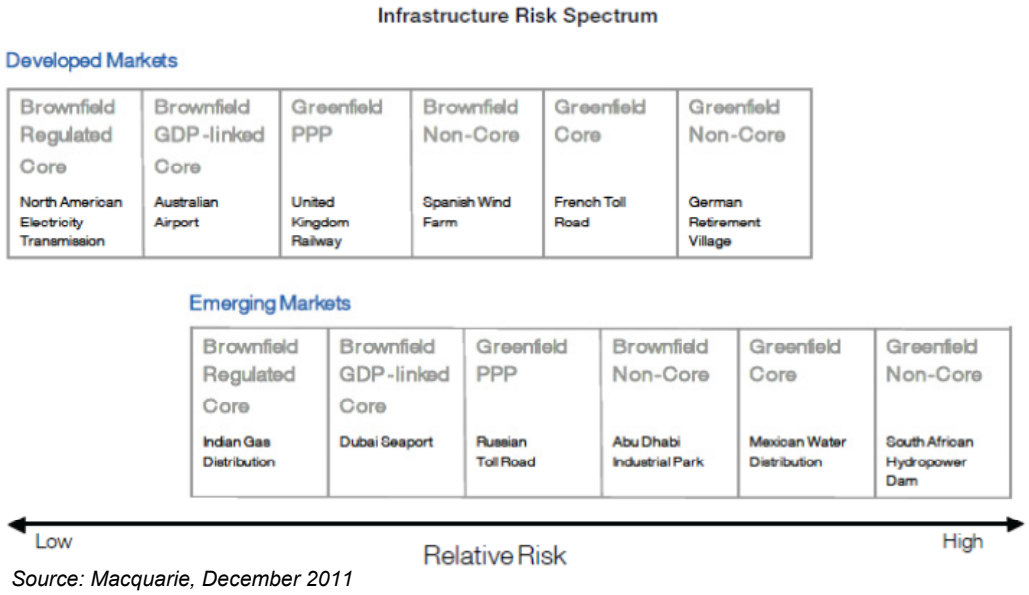
Note the following historical correlations using the period from March 2002 through December 2011:

Correlations	*Alerian MLP Infrastructure*	*S&P Global Infrastructure*	*Macquarie Global Infrastructure Index*
Alerian MLP Infrastructure	1.00		
S&P Global Infrastructure	0.66	1.00	
Macquarie Global Infrastructure Index	0.61	0.98	1.00
S&P 500	0.67	0.86	0.84
Russell MidCap	0.72	0.88	0.85
Russell 2000	0.63	0.81	0.79
Russell 3000	0.68	0.87	0.85
MSCI EAFE NR	0.61	0.95	0.93
MSCI EM NR	0.69	0.88	0.85
MSCI ACWI NR	0.67	0.93	0.91
BarCap Aggregate	-0.08	-0.09	-0.09
BarCap Hi Yld(US Corp)	0.84	0.73	0.66
Citigroup WGBI Non US$ (Hedged)	-0.36	-0.29	-0.26
JPM EMBI Global	0.66	0.62	0.61
Dow Jones UBS Commodity Index	0.50	0.57	0.52
NCREIF ODCE	-0.03	0.25	0.27
HFRI FOF: Composite	0.72	0.82	0.78
Venture Economics All U.S. Private Equity	0.62	0.79	0.78

(The youngest of the 3 infrastructure indexes show below incepted in March 2002 and venture economics has not yet released 1Q12 data)

Risk Return Characteristics

Revenues of an infrastructure asset are often regulated or linked to GDP with the risks for GDP linked assets being higher than that of regulated assets. Another aspect of risk in infrastructure is, like real estate equity, whether a project is greenfield or brownfield.



Source: Macquarie, December 2011

Like other private equity-like investments liquidity risk is a factor for unlisted, private infrastructure. Lastly, due to the nature of infrastructure assets, regulatory and political risks exist. Below are illustrative expected cash yields from various types of infrastructure:

Indicative expected returns of infrastructure sub-sectors

Asset Type	Cash Yield	Average Equity IRR (Leveraged, post-tax)
PFIs/PPPs	6 - 12%	8 - 12%
Regulated assets	4 - 9%	9 - 13%
Toll roads - Mature	4 - 9%	8 - 12%
Long-term contracted power generation	4 - 12%	9 - 13%
Airports	4 - 9%	13 - 16%
Toll roads - Greenfield	5 - 10%	12 - 16%
Telecommunications infrastructure	3 - 5%	13 - 17%
Midstream	5 - 10%	12 - 17%
Waste management	3 - 5%	16 - 20%
Ports / Marine terminals	4 - 6%	16 - 19%

Source: Macquarie, December 2011. Yield and IRR estimates are illustrative only and subject to change. Long-term contracted power generation includes renewable energy generation assets. Indicative cash yield from greenfield tolls roads reflects expected yield following construction completion and initial traffic ramp-up.

Historical Risk and Return

Below are the historical, annualized risk and returns for global, listed infrastructure versus various other asset class indices with data through 12/31/2011:

	Annualized Return				
	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs
NAREIT	17.0	20.4	-2.1	3.9	9.5
NCREIF ODCE	16.2	-1.8	-0.2	4.9	6.2
Venture Economics All U.S. Private Equity	14.4	14.0	6.8	11.0	9.9
S&P 500	8.4	14.1	-0.2	2.6	2.9
IFM Global Infrastructure Fund *(unlisted product)*	12.1	10.4	NA	NA	NA
S&P Global Infrastructure *(listed index)*	2.6	9.7	-0.2	6.9	11.1
BarCap Aggregate	7.2	6.8	6.5	5.6	5.8
BarCap Hi Yld(US Corp)	9.9	24.1	7.5	7.4	8.9
	Annualized Risk				
	2 Yrs	3 Yrs	5 Yrs	7 Yrs	10 Yrs
NAREIT	21.8	40.5	34.2	31.0	28.4
NCREIF ODCE	3.3	13.0	11.8	11.1	9.4
Venture Economics All U.S. Private Equity	7.7	7.9	11.3	10.8	10.8
S&P 500	22.0	24.0	21.6	18.8	19.0
IFM Global Infrastructure Fund *(unlisted product)*	6.0	5.4	NA	NA	NA
S&P Global Infrastructure *(listed index)*	20.1	26.2	23.6	22.0	21.1
BarCap Aggregate	3.5	3.4	3.6	3.6	3.7
BarCap Hi Yld(US Corp)	9.0	17.3	17.8	15.0	13.7

As a point of reference, here are target allocations, as of 2011, to infrastructure for a few select institutional investors:

Institutional Investor	Infrastructure Allocation
CALPers	3%
CALSters	3%
Midwest Operating Engineers	5%
Motor Trades Association of Australia	20%
San Diego County Employees Retirement Assc	5%
Washington State Investment Board	5%

The typical allocation for institutional investors is rather broad, mostly falling between 3%-10%.

Products

Product Examples

Private Unlisted – Open-end

- **ULLICO Infrastructure Fund (UIF)**
  - ERISA Fiduciary
  - Open-ended
  - Focused on union labor, RCP
  - Seeking equity in smaller projects, with an average UIF share of $25M
  - 6/10 projects are Greenfield
  - 1.75% management fee, no incentive. Discounted to 1.25% for two years for initial investors
  - No first close yet

- **Industry Funds Management (IFM)**
  - 2 Funds: 1) Australian 2) Global
  - Open-ended
  - Global fund is $4B AUM with 8 investments in Europe and North America
  - IFM has developed InFRAME, a suite of proprietary tools for the infrastructure market
  - Focused on union labor, RCP
  - 17 years of experience in infrastructure and $10 billion invested in 26 infrastructure assets across the globe
  - Target cash yield for the Global Infrastructure Fund is 6% p.a. (current cash yield since inception is 5.1% p.a.) and target total return is 10% net (current IRR is 10.6% as of March 31, 2012)
  - Management Fee
    - 1.25% on first $250M
    - 1.15% on next $250M
    - 1.00% above $500M
  - Performance Fee
    - 20%, over 8% preferred return, based on three-year rolling period
      - 50% of the fee earned each year is held back and used to make up underperformance from prior years

- **JP Morgan Infrastructure Investments Fund**
  - Inception – 7/1/07
  - NAV – $3.0B
  - 9 investments in 50 assets
  - Leverage – 59%
  - 34% in North America, 40% in the UK, 13% in Australia, and 13% in Continental Europe
  - first quarter cash yield is 1.7% and the trailing one year cash yield is 6%, in-line with our targets for 2012
  - JPMAM was named “Infrastructure Manager of the Year” by Institutional Investor magazine

Investment Performance

TIME WEIGHTED RATES OF RETURN
FOR PERIODS ENDED MARCH 31, 2012[3]

(%)	Quarter	One Year[4]	Three Years[4]	Since Inception[4,5]
Cash distributions (yield)	1.7	6.0	4.5	3.7
Asset performance	1.9	10.9	5.1	6.7
FX impact	1.7	-0.5	3.5	-3.2
Other[6]	-0.3	-1.6	-1.1	-1.2
Total (gross of fees)	3.2	8.6	7.6	2.0
Total (net of fees)	2.8	6.9	5.8	0.3
Total (gross of fees excluding FX)	1.5	9.2	4.0	5.5
Total (net of fees excluding FX)	1.2	7.4	2.3	3.8

Source: JP Morgan Asset Management

Private Unlisted – Closed-end

- **Macquarie Infrastructure Partners**
  Products operated as VCOC and thus exempt from ERISA
  - MIP I
    - 22.6% TH AUM
    - 10 year fund life from 2007
    - Leverage up to 50%
    - 4 year commitment period
  - MIP II
    - 5 Assets
    - 22.4% TH AUM
    - 10 year fund life
    - $1B (69%) of committed capital called
  - MIP III
    - Not yet in market.
    - Will most likely have a target of around $2B

Infrastructure Debt

- **Nuveen's Community Reinvestment Fund (CRF)**
  - Targeted returns of 3.5%-4%
  - Fixed income fund focused on municipal bond market
  - Total return competitive with other fixed income investments of comparable quality and duration
  - Finance new construction on infrastructure projects
  - Project must utilize union labor or be considered "union friendly"

MLP

- **Kayne Anderson Fund Advisors – family of funds**
  - **MLP Investment Company (KYN)**
    - Inception – 9/28/04
    - Closed-End Fund
    - Annualized Return SI – 10.2%
    - NAV Updates – Monthly
    - Total Assets – $4.25B
    - 1099 Reporting
    - Fund Breakdown
      - Propane – 1%
      - Shipping – 5%

        - Coal – 8%
        - GP MLP – 6%
        - MLP Affiliate – 9%
        - Midstream – 68%
        - Upstream – 3%
- **Energy Development Company (KED)**
    - Inception – 9/21/06
    - Closed-End Fund
    - Annualized Return SI – 8.9%
    - NAV Updates – Quarterly
    - Total Assets – $358M
    - 1099 Reporting
    - Fund Breakdown
        - Public MLP – 58%
        - Private MLP – 25%
        - Debt – 16%
        - Cash – 1%
- **Midstream/Energy Fund (KMF)**
    - Inception – 11/24/10
    - Closed-End Fund
    - Annualized Return SI – 22.2%
    - NAV Updates – Monthly
    - Total Assets – $913M
    - 1099 Reporting
    - Fund Breakdown
        - Debt – 15%
        - Other – 1%
        - Other Energy – 4%
        - MLP Affiliate – 36%
        - Midstream – 44%
- **Energy Total Return Fund (KYE)**
    - Inception – 6/28/05
    - Closed-End Fund
    - Annualized Return SI – 10.7%
    - NAV Updates – Monthly
    - Total Assets – $1.41B
    - 1099 Reporting
    - Fund Breakdown
        - Debt – 11%
        - US & Canadian Income Trusts – 14%
        - Coal – 3%
        - Marine Transportation – 15%
        - MLP Affiliate – 46%
        - Midstream – 11%

Index

Recent Infrastructure Example Details

CHICAGO INFRASTRUCTURE TRUST (CIT)

Deal Summary: On March 1, 2012 Mayor Rahm Emanuel announced plans for the creation of the Chicago Infrastructure Trust, the nation's first city infrastructure bank aimed at using private capital to renovate and retrofit a city's infrastructure. The trust specifically aims to make infrastructure investments in energy efficiency, transportation, education, and utilities. The CIT was created in cooperation with private sector, non-profit organizations, and union leaders and beyond investments by investment managers, projects will be funded by the City of Chicago, bonds, and grants.

Investment Manager Partners: The following five investment managers were present at the announcement of the CIT initiative and have agreed, on a preliminary and non-binding basis, to provide $1B for possible investment dependent on vetting each project:

1. Citibank
2. Citi Infrastructure Partners
3. Macquarie Infrastructure Partners
4. J.P. Morgan Asset Management Infrastructure Investment Group
5. Ullico Investment Advisors

First Project: The first initiative announced as part of the CIT will be a $200M-$225M investment called Retrofit Chicago aimed at reducing Chicago energy consumption by 20%. The project specifically aims to reduce energy costs by $20M annually, to create around 2000 construction jobs, and to remove, on an annual basis, CO2 emissions equivalent to 30,000 cars. Former President Bill Clinton, present at the announcement of the CIT, and the Clinton Global Initiative Foundation, which currently has 250 energy efficiency projects in 47 cities around the world in process, plan to use their expertise to aid in this project.

Next Steps: The creation of the trust will require City Council approval and an ordinance creating the trust will be introduced at the March 14, 2012 City Council meeting. Mayor Emanuel, seemingly aware of the bad taste leftover from Chicago infrastructure leases in recent years, is putting into writing in the ordinance that the CIT will be prohibited from leasing or selling public assets. The trust will specifically be used to build new assets that benefit taxpayers and not to lease or sell existing assets. Though the CIT will be set up as a non-profit and therefore not be subject to the Freedom of Information Act or the Open Meetings Act, the ordinance will specifically subject the trust to the Open Meetings Act, Freedom of Information requests, and oversight by the City Council. Among those items yet to be determined are what revenues, beyond those resulting from efficiencies created by specific projects, the city would use to pay off any debt and whether the trust could be a chief funder for CTA projects.

Preliminary Labor Reactions:

- *Chicago Regional Council of Carpenters (CRCC)* – Frank T. Libby, President of the CRCC, supports the plan and feels that the goals of CRCC and the CIT blend together well. He points out that CRCC's Certified Energy Anlaysts are trained and qualified for the Retrofit Chicago project and is furthermore excited that Mayor Emanuel chose to announce the CIT initiative at the CRCC Apprentice and Training Facility.

- *Teamsters Joint Council 25* – John T. Coli, President of Joint Council 25, supports the CIT initiative. He feels that it is an innovative way to use private investments without privatizing public space or city assets. Mr. Coli feels that the CIT could be a great

source for public works initiatives and could keep city officials from outsourcing or downsizing public employment to save money.

ILLINOIS/INDIANA SKYWAY

Deal Summary: In October 2004 Chicago's Department of Streets and Sanitation leased operation and maintenance of the Chicago Skyway for 99 years. This was, and continues to be, the only toll road in Illinois not operated by the Illinois Toll Highway Authority. This deal marked the first time an existing toll road moved from public to private operation in the United States.

Investment Manager: Skyway Concession Company (SCC), JV of Macquarie Infrastructure Group (Australia) & Cintra Concesiones de Infraestructuras de Transporte S.A. (Spain).

- In June 2006 the same JV took over operating and maintaining the Indiana East-West Toll Road, which sits adjacent to the Chicago Skyway, with a 75 year lease.
- Both the Indiana Toll Road and the Skyway sit in Macquarie Infrastructure Partners I. The projected long-term IRR for Macquarie is 11.2% for the Skyway and 13% for the Indiana Toll Road.
- The word "job" is not mentioned even once in a 33 page Townsend Group recommendation for investment into Macquarie Infrastructure Partners I and the word "union" is mention only as part of an existing investor name.
- Note that nowhere in Macquarie's 2007 Chicago Skyway case study is employment mentioned as a consideration in the investment decision, let alone as any sort of variable that needs to be protected.

Investment Size: $1.8B for the Skyway

- $3.8B for the Indiana East-West Toll Road (Goldman Sachs earned $19.5M for brokering the deal)
    - In 2007 Merrill Lynch analysts estimated that this investment would break even in year 15 of the 75 years lease, with potential for $21B in eventual profits.

Aftermath: Teamsters Local 727 was affected by this deal. Prior to privatization deal, most Skyway workers were full-time employees of the city. After the deal most workers became part-time independent workers without benefits. As part of privatization labor was hired at market rates of $12-$15 per hour instead of the union controlled $20+ per hour. Even with this wage expense cut, SCC raised tolls on the Skyway by 50% over the three years following the investment. As of 2009 SCC was threatening to never pay more than the Chicago Living Wage ordinance requirement of $10.60 per hour and Teamsters were threatening to strike. After four months of negations a deal was reached whereby full-time employees were guaranteed pay raises for the following three years and part-time workers receive holiday pay benefits.

MILLENNIUM PARK PARKING GARAGE

Deal Summary: In 2006, the City of Chicago leased the East Monroe Street Parking Garage, a group of four garages with 9,178 spaces, for 99 years.

Investment Manager: Chicago Loop Parking, LLC, a division of Morgan Stanley Infrastructure Partners, with LAZ Parking acting as operator.

- The investment lies within the fund Morgan Stanley Infrastructure Partners

Investment Size: $563M

Aftermath: LAZ Parking decided early on to keep most of the parking system's line employees but replaced the management team. Proceeds from this sale were exhausted by the City of Chicago way ahead of schedule due to the growing deficit that occurred as part of the 2008 financial crisis.

- Meanwhile, Morgan Stanley is expected to have gains of $11B over the span of the 75 year lease.

CITY OF CHICAGO PARKING METERS

Deal Summary: In December 2008 the City of Chicago leased the 36,000 parking meters in Chicago for 75 years.

Investment Manager: Chicago Parking Meters, LLC, a division of Morgan Stanley, with LAZ Parking acting as operator.

- The investment lies within the fund Morgan Stanley Infrastructure Partners

Investment Size: $1.2B

- Analysis to value the city's meters was performed by William Blair & Company and many people feel that the meters' value should have been closer to $3B.

Aftermath: Within weeks of signing the lease parking rates in many parts of Chicago quadrupled. Parking meter rates rose by such a degree and so many mechanical problems with meters occurred that vandalism of parking meters begins to be a major problem in March 2009 and many small business owners began to complain that the high cost of parking was keeping potential customers away from their businesses. Mayor Daley of Chicago sent out City of Chicago workers to clean up the vandalism despite the fact that LAZ Parking employers are, by the terms of the deal, supposed to maintain and clean all parking meters. LAZ Parking sent out its own workers who were mostly mall security guards and workers from a temporary job-placement agency, all with no experience in the parking industry, to reprogram the city's approximately 36,000 meters and change over the decals that provide drivers with rates and rules.

INDIANA TOLL ROAD

Deal Summary: In 2006 the State of Indiana turned over a 157 mile stretch of Interstate Highway 80/90 to private investors

Investment Manager: JV of Macquarie Infrastructure Group (Australia) & Cintra Concesiones de Infraestructuras de Transporte S.A. (Spain).

Aftermath: The Indiana State Legislature was cognizant of the effect this deal could have on labor and took steps to mitigate it. For example, the state gave vesting rights to some workers who lost their jobs and who otherwise not have been vested in the state pension plan. It also allowed workers who were short of the number of years to qualify for early or normal retirement to buy credits that allowed them to qualify.

Top 30 Infrastructure Managers by AUM

Investment Group	Assets Under Management (US$ billions)
Macquarie Infrastructure and Real Assets	31.83
Goldman Sachs Asset Management	10.72
CPP Investment Board	9.97
Ferrovial	9.42
APG	7.43
Alinda Capital Partners	7.10
Energy Capital Partners	7.04
Brookfield Asset Management	6.26
QIC Global Infrastructure	6.24
La Caisse de Depot et Placement du Quebec	5.92
Ontario Teachers' Pension Plan	5.81
GIC Special Investments	5.74
Global Infrastructure Partners	5.64
Ontario Municipal Employees Retirement System	5.49
Industry Funds Management	5.35
ArcLight Capital Partners	4.85
JPMorgan Asset Management	4.40
Highstar Capital	4.25
Morgan Stanley Infrastructure Partners	4.00
RREEF Alternative Investments	3.98
Arcus Infrastructure Partners	3.81
SteelRiver Infrastructure Partners	3.73
Future Fund	3.60
British Columbia Investment Management Corporation	3.53
Citi Infrastructure Investors	3.40
Energy Investors Funds	2.85
AXA Private Equity	2.80
Alberta Investment Management Corp	2.70
Australian Super	2.66
3i Group	2.63
Total	**183.15**

Source: The Infrastructure Investor 30, June 2011.

Sources

- *A Question of Infrastructure*, The Economist, May 12, 2012.
- *An Elegant Solution: A Parking Public-Private Partnership in Chicago*, Parking Today, December 2007.
- *Chicago Infrastructure Trust*, Frank T. Libby – Chicago Tribune editorial, March 8, 2012.
- *Chicago Launches Infrastructure Bank*, Pensions & Investments, March 1, 2012.
- *Chicago Skyway Workers Offered Last, Best and Final Offer*, Teamsters Local 727, March 9, 2009.
- *Chicago Skyway: Case Study*, Macquarie Securities (USA), March 22, 2007.
- *Chicago's Parking Meters: A Case Study*, In The Public Interest, July 2010.
- *Emanuel to put 'Infrastructure Trust' Rules in Writing*, Fran Spielman – Chicago Sun-Times, March 8, 2012.
- *FAIL, Part One: Chicago's Parking Meter Lease Deal,* Chicago Reader, April 9, 2009.
- *Mayor Emanuel Debuts Plan to Fund Million in Infrastructure Work*, Crain's Chicago Business, March 1, 2012.
- *New Contract Reached at Chicago Skyway*, Chicago Joint Teamsters Council 25, July 2009.
- *Open-End Infrastructure Funds*, Industry Funds Management, March 2011.
- *Outsourcing Poverty: Federal Contracting Pushes Down Wages and Benefits*, Economic Policy Institute, February 11, 2009.
- *Parking Meter Deal: No Experience Needed*, NBC Chicago, May 5, 2009.
- *Point Counterpoint: Infrastructure Investments Bring Financial Risks and Rewards*, Capital Matters, Volume 1, No. 2, January 2008.
- *Press Release*, Office of the Mayor – City of Chicago, March 1, 2012.
- *Recommendation for Investment in Macquarie Infrastructure Partners I*, The Townsend Group, January 2007.
- *Roads to Riches*, Bloomberg BusinessWeek, May 7, 2007.
- *Teamsters Applaud Chicago Infrastructure Trust*, Teamsters Joint Council 25, March 2, 2012.
- *The Meter Lease Deal – A Daley Double Part 1*, The Expired Meter, March 2, 2010.
- *The Reinvention of Rahm Emmanuel*, Bloomberg BusinessWeek, August 4, 2011.
- *Why Invest in Infrastructure*, Global Infrastructure Asset Management, February 2012.
- *Infrastructure Spotlight,* Preqin, June 2012.