



73% of respondents explicitly consider liquidity when exploring a new asset class.

Infrastructure investments have become increasingly popular among institutional investors in today's prolonged low interest rate environment. In particular, insurers and pension funds searching for higher yielding assets relative to traditional asset classes see infrastructure as an attractive asset class that satisfies a number of their investment requirements. Indeed 53% of institutional investors plan to increase their allocation to infrastructure over the long term¹.

Although many investors have already begun operating in the infrastructure space, it is estimated that \$69tn invest-

ment is needed in global infrastructure by 2035 to maintain current levels of global GDP growth². Hence this asset class is far from saturated and offers considerable capacity for further investment over the next 20 years.

There are a number of ways in which institutional investors can increase their exposure to infrastructure. Infrastructure debt is one particular investment proposition that has long been on the investment radar of insurers and pension funds alike. However, equity investment in infrastructure corporates has recently perked the interest of the industry.

^{1.} https://goo.gl/mG2sjq

^{2.} https://goo.gl/E4ofmg



Table 1: Example of Qualifying Corporates under Solvency II

Company	The entity or group must earn the vast majority of its revenues from "owning, financing, developing, or oper- ating infrastructure assets in the EEA or the OECD."	The entity or group must be in the following lines of business: electrical or thermal energy, natural and petroleum gas, water / wastewater, recycling services, transport or social infrastructure.	If an external credit rating for the infra- structure corporate exists, it must be of credit quality step 3 or above (otherwise it is excluded).	S&P rating (where available)	If an external credit rating does not exist, the infrastructure corporate needs to have been active in the lines of business outlined above for at least 5 years.	Potentially satisfies the requirement for qualifying infrastructure corporate equity.
NextEra Energy	V	V	V	A-		~
Duke Energy	~	V	V	A-		V
Dominion Energy	~	~	✓	BBB+		✓
Southern Co	~	✓	V	A-		V
Sempra Energy	~	~	✓	BBB+		✓
Zurich Airport	~	V	V	A+		V
Getlink (Eurotunnel)	~	~			✓	✓
Pembina Pipeline	~	✓	~	BBB		V
Transurban	~	~	✓	BBB+		✓
American Water Works	V	V	V	А		V
Union Pacific	V	V	✓	А		✓
TransCanada	V	V	V	A-		v
ONEOK	~	~	•	BBB		~
Crown Castle Intl	V	V	v	BBB-		v
Pennon	V	~			~	~

Note: Full analysis is available to GLIO supporters.

Why Would Insurers Consider Investment in Listed Infrastructure Corporates?

A key catalyst for institutional investors looking to complement their existing investments in infrastructure projects with investment in listed infrastructure corporates is the lack of high-quality, availability-based operational infrastructure private projects to invest in. Firms can supplement their existing allocation to illiquid infrastructure investments with more liquid listed infrastructure investments, in order to achieve target exposure for this asset class³.

Equity investment in listed infrastructure corporates is an alternative way for insurers to gain exposure to this asset class, without experiencing some of the complexities that alternative approaches to infrastructure investment bring. Indeed, investment in listed infrastructure corporates is considered operationally straightforward, with a number of benchmarks and data at the investor's disposal. The GLIO coverage has also provided a consensus backdrop in these areas. Investors in unlisted infrastructure funds, on the other hand, must grapple with potential private data access issues and typically a shorter investment history relative to listed infrastructure corporates.

According to Simon Wilde's recent article in the GLIO Journal (page 18, issue 014), listed infrastructure investments achieve a mean return of 12.7% compared to 8.6% for unlisted infrastructure investments. Together with competitive returns, tradeable equities also provide insurance investors with increased liquidity. EY's Investment Advisory team recently conducted its Chief Investment Officer Survey 2017 among a number of UK life insurers, and found that 73% of respondents explicitly consider liquidity when exploring a new asset class.

Liquidity management is very much a hot topic in the insurance industry due to increased regulatory focus in recent months, particularly following the implementation and embedding of Solvency II Pillar II and the PRA's recent consultation paper on financial management and planning⁵. The additional liquidity that listed infrastructure equity can provide could be of benefit to insurers who still want exposure to infrastructure at an attractive yield.

Beyond availability, total return and liquidity considerations, investment in listed infrastructure may also result in a lower degree of volatility for the investor relative to equity investment in infrastructure projects. In particular, private infrastructure projects are typically around 90% leveraged, therefore investing in the equity of infrastructure corporates (with a lower leverage) may in fact provide much less volatility than one might expect.

^{3.} See GLIO Journal (issue 1) – Defining the Blend article, page 18 - https://goo.gl/afUC81

^{4.} https://goo.gl/afUC8

^{5.} https://goo.gl/xkEkXE



Considerations for Insurers Investing in Listed Infrastructure Equity

Listed infrastructure corporates generally operate under regulated (indexlinked) contracts, which cut out income fluctuations and act as a hedge against price inflation. Being listed in the public markets offers the additional security of governance, transparency and reporting requirements/standards.

Insurers operating under the Solvency II Standard Formula are faced with capital charges on equity investments of 41% for Type 1 and 51% for Type II equities as at November 30, 2017. Investment in infrastructure equity previously attracted such a capital charge however, as part of the Capital Markets Union's initiative to boost investment in infrastructure, the European Commission (EC) adopted an amendment in April 2016 to the Solvency II Delegated Act which reduced the capital charges on qualifying equity investments in infrastructure projects to 32% (as at November 30, 2017).

A further consultation paper was issued by EIOPA on April 15, 2016 suggesting that qualifying equity investments in infrastructure corporates⁶ (both listed and unlisted) could attract a capital charge of 38% (as at November 30, 2017). The EC recently released a statement of its intent to implement this proposal⁷, which would make equity investment in infrastructure corporates more capital-efficient than other equities under the Standard Formula (which we explore in further detail in this article).

The key qualifying criteria for infrastructure corporate equity are outlined below:

- The entity or group must earn the vast majority of its revenues from "owning, financing, developing, or operating infrastructure assets in the EEA or the OECD".
- The entity or group must be in the following lines of business: electrical energy, natural and petroleum gas, water / wastewater, recycling services, transport or social infrastructure. This closed list acts as a "filter" and these activities are similar to that in the portfolio used in EIOPA's calibration.
- If an external credit rating for the infrastructure corporate exists, it must be of credit quality step 3 or above (otherwise it is excluded).



- If an external credit rating does not exist, the infrastructure corporate needs to have been active in the lines of business outlined above for at least five years. This is so that the corporates have a certain level of maturity which:

 is the same as the portfolio used for
 - is the same as the portfolio used for the EIOPA calibration;
 - offsets the lack of requirements to limit construction risk (we note that a corporate which has been active for five or more years is likely to have sufficient experience to manage the construction risk it accepts in its infrastructure portfolio); - reduces the risk that there are insuf-
 - reduces the risk that there are insufficient operational capabilities;
 - gives more confidence in determining whether revenues are sufficiently predictable.

It is expected that far more infrastructure assets are likely to qualify as an infrastructure corporate, compared to the much stricter definition for infrastructure projects.

What Investments Are Likely to Qualify as Infrastructure Corporates Under Solvency II?

We have made an indicative assessment of firms captured in the GLIO coverage, to determine which companies are likely to qualify as an infrastructure corporate based on the key qualifying criteria outlined previously. Treating such companies as a bucket of Solvency II-friendly equities

gives further insights into how the GLIO coverage could be carved out into additional subsets for insurers. We outline below the return achieved by these assets relative to the wider GLIO coverage for illustration.

As Chart 1 illustrates, the bucket of Solvency Il-friendly infrastructure corporate equities has slightly outperformed the wider GLIO coverage since December 31, 1999, obviously with a high level of correlation between the two indices. Although return is of course important to investors, we will now explore a metric of perhaps more significance to insurers: return on capital.

Implications of the EC Amendments to the Delegated Acts and EIOPA's Consultation Paper

In order to assess the significance of the changes in the capital treatment of infrastructure corporate investments, we compare the return on capital of three portfolios:

- **Portfolio 1:** Equity investment in the FTSE 100.
- Portfolio 2: Equity investment in the MSCI World.
- Portfolio 3: Equity investment in listed infrastructure corporates (GLIO coverage).

The comparison of the three portfolios in Table 2 illustrates that return on >

^{6.} Infrastructure corporate equity refers to the equity of a company that owns, manages, develops and operates infrastructure investments. 7. https://goo.gl/8gfwCA





Chart 1: GLIO Coverage vs GLIO Solvency II Coverage



Dec-99 Dec-00 Dec-01 Dec-02 Dec-03 Dec-04 Dec-05 Dec-06 Dec-06 Dec-07 Dec-08 Dec-09 Dec-10 Dec-11 Dec-12 Dec-13 Dec-14 Dec-15 Dec-16 Dec-17

Source: GLIO, Reuters, FTSE & MSCI Note: Comparison of private and listed benchmarks is used for illustration only.

Table 2: We compare the return on capital of these portfolios under the Solvency II Standard Formula:

Mandate	Annualized return (%)	Capital charge (%)	Return on Capital (%)	Return source (as at 30/11/17)
Equity investment in the FTSE 100	7.6%	41.0%	18.5%	https://uk.investing.com/ indices/uk-100
Equity investment in the MSCI World	12.0%	41.0%	29.3%	https://www.msci.com/ end-of-day-data-search
Equity investment in listed infrastructure corporates	12.7%	38.0%	33.4%	GLIO Journal Issue 01

capital may be improved by reallocating equity investment in the FTSE100 (and/ or MSCI World) to equity investment in qualifying infrastructure corporates.

As the return on capital is one of the key metrics by which insurers measure investment performance, the favorable treatment of infrastructure investments provides insurers with a higher performing portfolio and ultimately a better solvency position.

Conclusion

Investment in listed infrastructure companies is an attractive proposition, which provides insurance investors with an alternative way to increase their exposure to infrastructure. In light of the recent amendments to the Solvency II Delegated Act, which reduces the capital charge for equity investment in qualifying infrastructure corporates, this asset class of Solvency II-friendly assets is expected to grow in popularity among insurance investors in the near future.





Rvan **ALLISON**

Ryan Allison is a Senior Consultant in EY's Investment Advisory team, specialising in particular in infrastructure investments. Ryan co-authored EY's infrastructure investments thought leadership paper and has worked with a number of insurers and asset managers who are interested in this asset class. rallison2@uk.ey.com



Gareth **MEE**

Gareth Mee is a Partner at EY, and global lead of its Investment Advisory team. Mee is passionate about insurers investing in illiquid assets, including infrastructure, and has authored a number of papers on the topic for EY & IFOA. g.mee@uk.ey.com