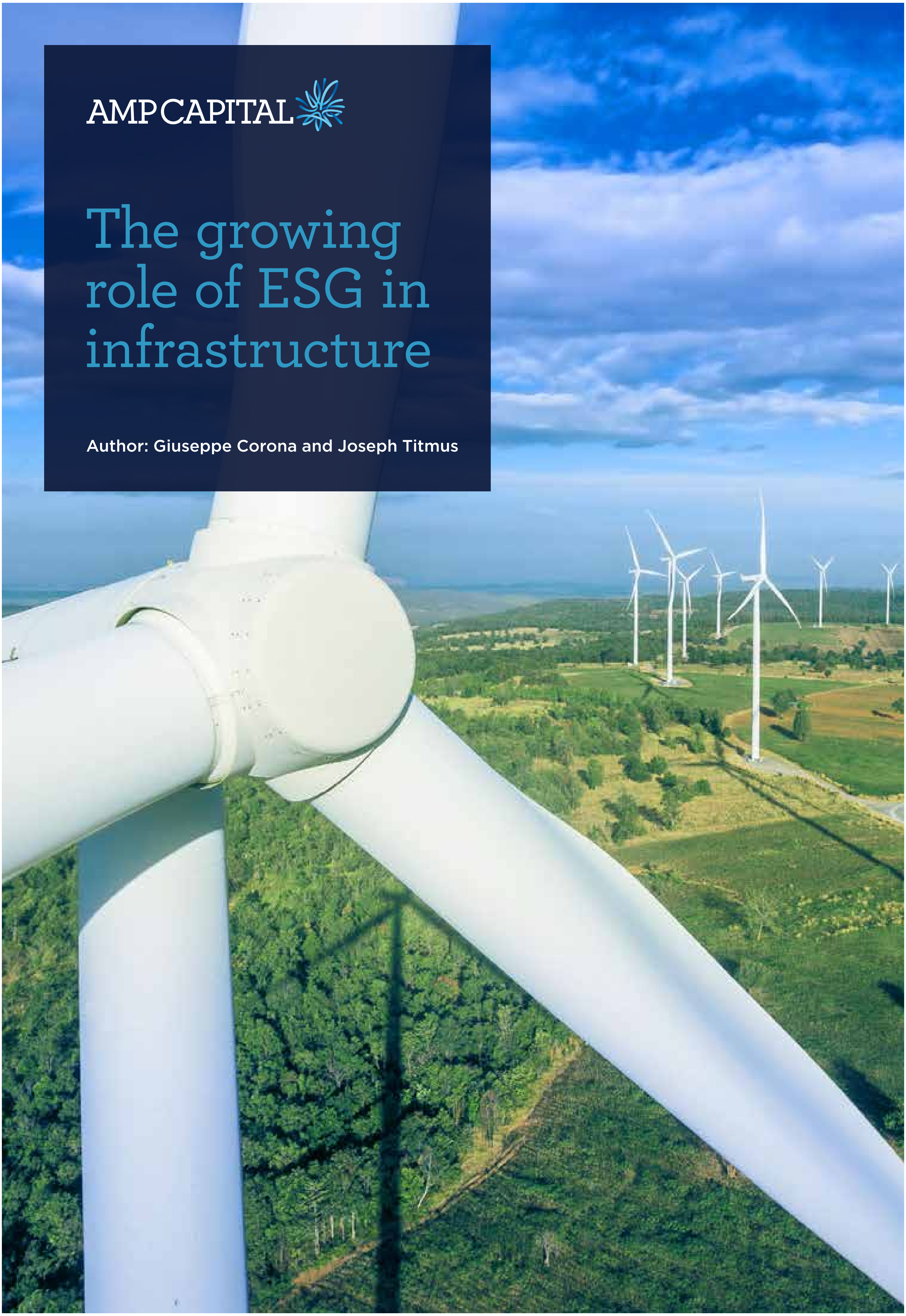
AMP CAPITAL

The growing role of ESG in infrastructure

Author: Giuseppe Corona and Joseph Titmus



Executive summary

As one of the first investment managers globally to sign the UN-backed Principles for Responsible Investment (PRI), AMP Capital has had the privilege of a front-row seat to observe the evolving and rapidly expanding sustainable investment landscape, having started well before it became such a relevant topic in the marketplace.

Our global listed infrastructure team takes a long-term approach when investing in utilities, transportation, energy and communication infrastructure companies. We invest in companies which provide clean water and electricity, allow for mobility of people and goods, connect people across the world and participate in the energy transition. In doing so, we are a shareholder with a voice, voting on companies' policies and engaging with management, regulators, legislators about the way companies are run and industries' issues are dealt with.

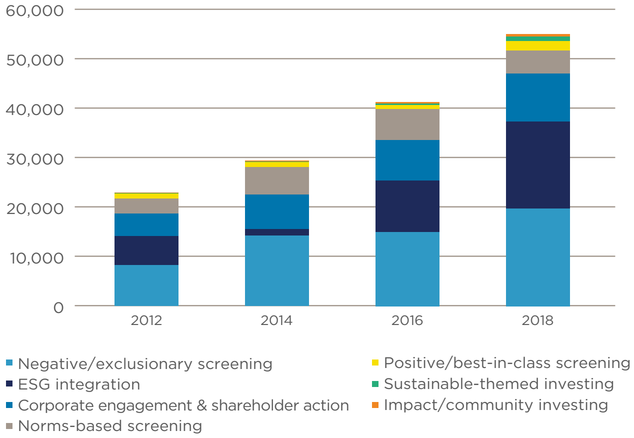
As an investment management team, we invest sustainably because it is the responsible thing to do as stewards of our clients' money but also because we believe it delivers better risk-adjusted returns. We also believe that investing in appropriate infrastructure will be key if the world is going to meet the ambitious agenda set out in the UN's Sustainable Development Goals (SDGs) and the Paris Climate Agreement.

Infrastructure investing and ESG go hand in hand

Environmental, social and governance (ESG) factors are three measures central to the sustainability of an asset. They are especially critical when it comes to assets owned by global listed infrastructure (GLI) companies given their fixed nature and their lengthy lives, in addition to these assets' centrality to economic growth and the smooth running of society. Sustainability has long been a focus of the owners and managers of infrastructure assets as they make investment decisions impacting cash flows and profitability decades into the future. And whilst ESG concerns are not particularly new for the industry they are becoming an increasingly important consideration.

Similar factors are today receiving increased attention from market participants with considerable growth in ESG dedicated funds. Further, managers are increasingly recognising the need to incorporate analysis of these risks in their investment approach and taking more active roles in their interactions with company management teams and boards. Approaches vary, with negative screening still popular amongst many managers, although more integrated methods have seen stronger growth.

Growth of dedicated socially responsible investments



Source: GSIA Global Sustainable Investment Review. Asset under management values are expressed in billions of US dollars.

It is not surprising that the critical nature of ESG for the infrastructure sector has received additional emphasis from the UN following the publication of the SDGs. Specifically, goal nine states: "Investment in infrastructure and innovation are crucial drivers of economic growth and development. With over half the world population now living in cities, mass transport and renewable energy are becoming ever-more important, as are the growth of new industries and information and communication technologies." The UN also acknowledges there is substantial work to be done by many assets' operators to ensure their operations meet stakeholders' expectations about how they actively manage their ESG opportunities and challenges.

Source: UN

Moreover, many of the other 16 SDGs are related to, or rely on, infrastructure, highlighting the importance of these assets, which represent the backbone of any economy. This is evidenced by the so-called 'infrastructure gap' observed across almost all regions; emerging economies needing to invest in new infrastructure networks in order to support its rising standards of living and rapid urbanisation and developing economies facing the challenges of replacing and upgrading existing aged infrastructure. Addressing these gaps, and preventing new ones from emerging, will require substantial investment in many different infrastructure assets, alongside a keen focus on embedding a suitable ESG approach in their management.

Given all the above, our global listed infrastructure team at AMP Capital believes that, in order to deliver superior risk-adjusted returns for our clients, infrastructure investing cannot neglect a thorough analysis of sustainability drivers in terms of ESG criteria. ESG factors and issues that barely received a mention a decade or so ago are now commonplace for infrastructure companies; the impact is becoming more significant and more frequent and affecting both the operations and financial results of their assets.

"Investment in infrastructure and innovation are crucial drivers of economic growth and development. With over half the world population now living in cities, mass transport and renewable energy are becoming ever-more important, as are the growth of new industries and information and communication technologies."

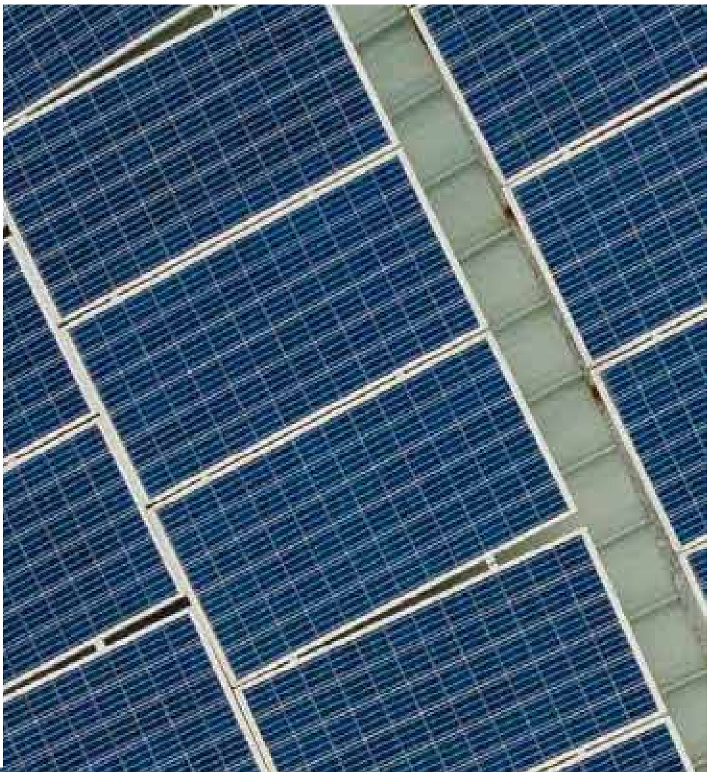
Why ESG is important for infrastructure

	Communications	Transportation	Utilities	Energy Infrastructure
 Extreme weather events		✓	✓	✓
 Rising environment and health standards	✓	✓	✓	✓
 Ageing infrastructure		✓	✓	✓
 Terrorist and security risks	✓	✓	✓	✓
 Data and privacy	✓		✓	
 5G and technology disruption	✓	✓	✓	✓
 Evolving privatisation and regulation	✓	✓	✓	✓

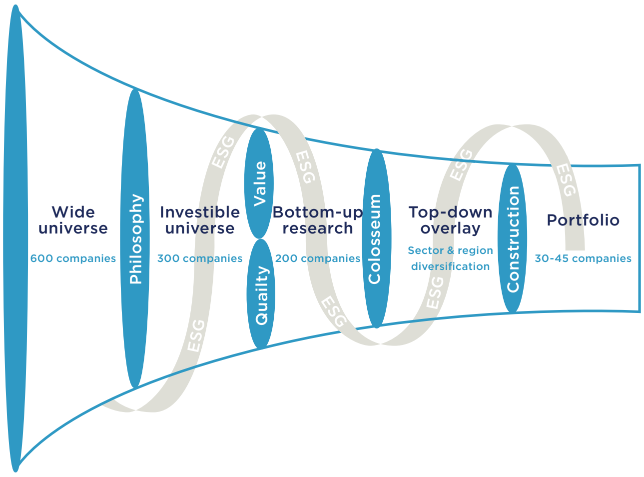
AMP Capital global listed infrastructure team adopts a fully integrated approach to ESG

AMP Capital is one of the first investment managers globally to sign the UN-backed Principles for Responsible Investment (PRI), and has been a long-standing manager of responsible investment funds since 2001. We have also contributed to the development of industry standards for infrastructure assets, such as participating in the development of the GRESB infrastructure benchmark.

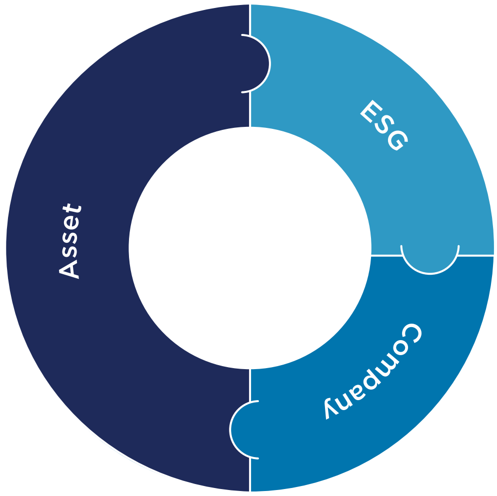
Thanks to the collaboration with our global ESG team, our AMP Capital global listed infrastructure strategy has incorporated ESG in the investment process since its original design in 2010. We feel strongly that, in order to achieve successful long-term outcomes for our clients, we require a full integration of sustainability and ethical drivers in the way we define our investment universe, analyse and evaluate our opportunity set and build and manage our portfolio.



AMP Capital Global Listed Infrastructure investment process



AMP Capital Global Listed Infrastructure quality assessment framework



Identifying the appropriate investment universe

Defining the opportunity set represents a key step of any investment process and this is particularly important in GLI given the emerging and fragmented nature of the industry. Our strict core infrastructure approach (i.e. brownfield assets with monopolistic characteristics, high barriers to entry and contracted/regulated cash flows) focusses on GLI companies that generate attractive and sustainable risk-adjusted returns. ESG factors and risks play an important role in the philosophy and help identify assets and sub-sectors that have the potential to meet these requirements and form part of our GLI universe.

Aiming to build the best portfolio for our clients

The main objective of our investment process is to build a portfolio of infrastructure companies which demonstrate the best combination of valuation and quality. ESG considerations play a critical role in both valuation and quality.

Adopting the relevant valuation methodology

As infrastructure assets have a long duration, we believe that the most appropriate valuation methodology must take into account all the cash flows generated by the assets themselves throughout their life cycle (i.e. initial capital deployment, recurring revenue and operating expenses, growth and maintenance expenditures and decommissioning). By default, our long-term valuation approach requires the assessment of various ESG drivers to determine how the cash flow that we use for our valuation can be impacted by the environment (i.e. decarbonisation and climate change), social (i.e. regulatory changes and affordability for customers) and governance (i.e. capital allocation and majority/minority shareholders' considerations) requirements.

Overlaying a qualitative assessment

Recognising that valuation by itself cannot capture all the risks in the relation to an investment, our decision-making process considers a qualitative assessment of the investable universe, including GLI-specific ESG factors (25 per cent of the total quality score). Regarding the ESG assessment, due to the lack of infrastructure-specific metrics and poor quality and comparability of the data available, our team has collaborated with the AMP Capital global ESG team in order to identify the most relevant sustainability drivers for the infrastructure sector.

Each E, S and G quality score has different sustainability drivers and the scores are determined on a relative basis, while considering similarities across industries and regions. Through this approach companies with higher/lower E, S, and G quality scores are more/less likely to be included in the portfolio. It is important to highlight that, through this framework our team looks to reward positive action and 'direction of travel' as opposed to a passive screening approach using set quantitative criteria.

As the team's approach to ESG has evolved over the years, this now represents a much bigger component of our decision-making process.

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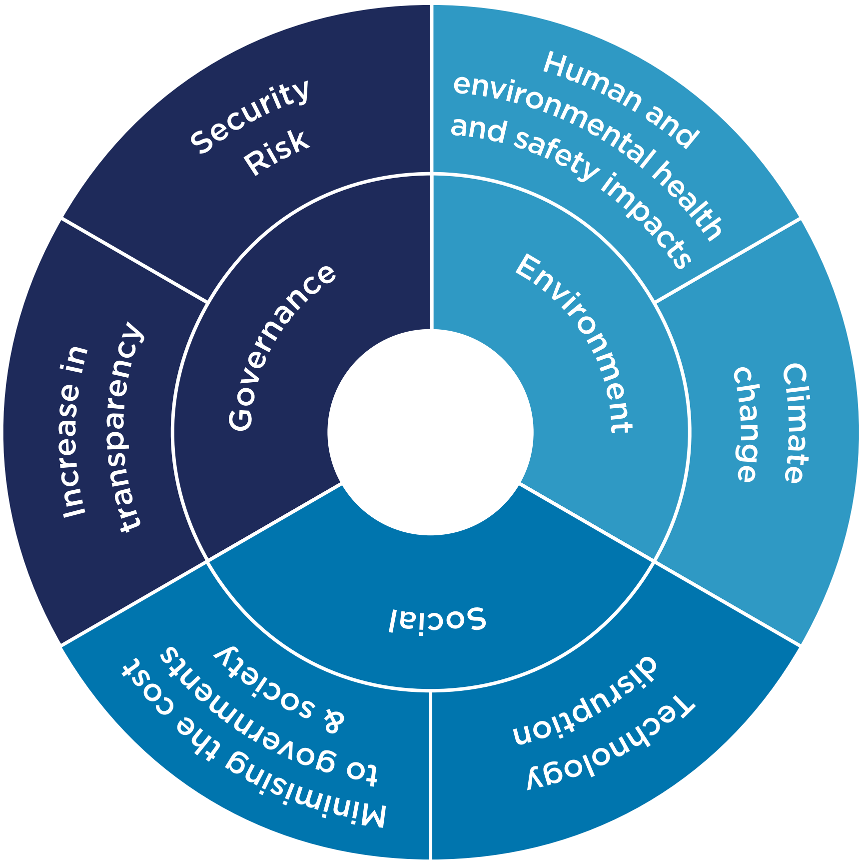

Human and environmental health and safety impacts

Infrastructure assets closely interact with their location and society, therefore minimising any adverse impact ensures contributes to a healthier and safer environment for users, employees and the community.

- Example of positive change: Gas utilities replacing old and unstable pipelines reduces the risk of leakages and improves their safety, whilst continuing to provide a valuable resource.

Climate change

Given the importance of climate change to the environment, managing their impact over the long term is critical to the longevity of almost all infrastructure assets.

- Example of positive change: Electric utilities replacing coal-fired generation with renewables are directly reducing their contribution to climate change.

Technology disruption

Technology plays a role in our day-to-day lives and as it continues to change it impacts how we use and interact with the infrastructure around us.

- Example of positive change: Communication infrastructure companies that support Fifth Generation (5G) mobile networks that will facilitate technologies such as internet of things, artificial intelligence, autonomous vehicles, and virtual reality.

Minimising the cost to governments & society

The development of new, or the enhancement of existing, infrastructure can help reduce bottlenecks in the economy, improve the service for users, and often result in lower costs for government and society.

- Example of positive change: A toll road providing greater access to their infrastructure through road widenings reduces congestion and improves travel times.

Increase in transparency

Transparency is an important aspect of GLI company governance because it improves visibility and trust in the service being provided and the company's strategy.

- Example of positive change: Toll roads that provide visibility of tariffs and payment methods improve the user's experience, whilst assets won through a transparent bidding process improve trust from government and society as well as investors.

Security risks

In recent years, security concerns have become more prevalent and infrastructure assets have been targeted as a means of causing disruption.

- Example of positive change: Airports that ensure the safety and security of passengers whilst providing a smooth and enjoyable travel experience.

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Monitoring our investments

We believe that a critical part of our approach to sustainable investing is continuous engagement with the various stakeholders of our infrastructure investments in order to tackle ESG-related issues and further promote ESG awareness. We regularly meet with management teams, as well as undertake site visits to interact with the employees operating the asset. Other form of engagement includes active participation in proxy voting as well as advocating for positive change by liaising with the respective boards of directors. The team also engages, where appropriate, with government representatives, regulators, and other industry players to fully assess the entire value chain of infrastructure sectors.

Our team has been interacting extensively with the management team of one of the largest natural gas pipeline companies in North America over the last few years, also co-hosting a liquified natural gas (LNG) seminar with a selected group of investors in 2017

Playing an active role on ESG

Environmental

Our team has been interacting extensively with the management team of one of the largest natural gas pipeline companies in North America over the last few years, also co-hosting a liquified natural gas (LNG) seminar with a selected group of investors in 2017 with the goal of highlighting the long-term investment opportunity in North American natural gas infrastructure (e.g. pipelines and LNG export facilities), driven by population growth and rising living standards in emerging markets as well as the need to meet overall growing demand through less carbon-intensive sources (coal to natural gas switching). Furthermore, we recently held a dedicated meeting on ESG with their sustainability management team, discussing the latest changes to their Health Safety and Environmental Committee, improved climate-related financial disclosures as well as plans to mitigate business risk materiality through pipeline integrity and maintenance spending.

Social

Engagement with multiple stakeholders is something our team believes to be core to its responsibilities as an investment manager. In this example, the company took part in an airport regulatory consultation process. The airport operator, which has formed a part of our fund for a number of years, was subject to an unexpected regulatory intervention by a body who was relatively inexperienced in the topic of economic regulation. Had the proposals been carried out, it was likely to result in undesirable levels of airport traffic, and a substantial reduction in investment in the airport. Our response to the regulator utilised our experience from different countries and industry sectors, including suggestions of how incentives could be shaped to drive behaviour which is in the best interests of all stakeholders, rather than a skew towards or away from particular stakeholder groups (i.e. a win-win, rather than a win-lose situation).

Governance

Our team held an investment in a listed financing vehicle of one of the largest North American energy infrastructure companies. Following the sector's shares price correction triggered by the Federal Energy Regulatory Commission (FERC) ruling in March 2018, the holding company proposed to roll-up of the financing vehicle at no premium, launching the transaction at a time, in our view, when the stock price was depressed due to uncertainty. Our team decided to interact with various stakeholders, including the board of directors, describing the near and long-term benefits of the transaction which were not reflected in the monetary consideration of the initial proposal. Ultimately, the definite agreement included a more balanced outcome regarding the majority and minority shareholders' interests.

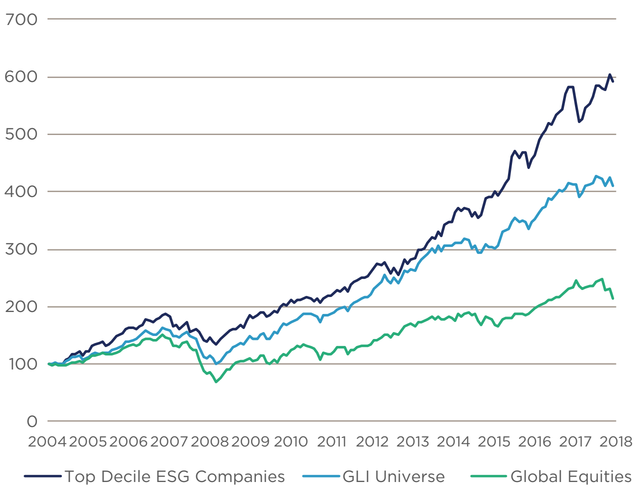
Integration of ESG factors may offer better results for clients investing in infrastructure

Investing in global listed infrastructure offers investors the opportunity to gain exposure to a differentiated set of financial characteristics:

- Long-life assets important to society and the economy
- Strong monopolistic characteristics with high barriers to entry
- Stable cash flows with inflation protection due to regulation or long-term contracts
- Liquidity and geographic/sector diversification

We maintain firm conviction that the attractive risk-adjusted returns of the asset class can be enhanced with the implementation of an investment process, with sustainability drivers representing one of the pillars of decision making. As our companies are making investments over the long-term, we also believe in a long-term investment horizon for the asset class and recognise that other equity market related factors can have an impact on short-term performance.

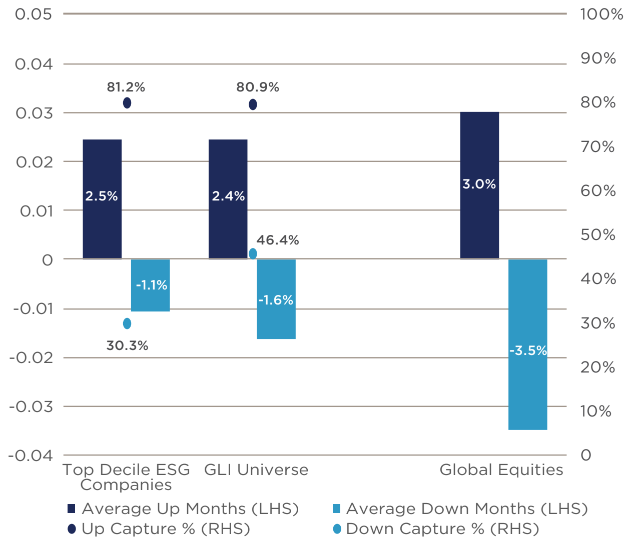
Performance comparison



Source: AMP Capital, Bloomberg, as at 31 December 2018

Past performance is not a reliable indicator of future performance.

Up/down market capture



Source: AMP Capital, Bloomberg, as at 31 December 2018. Data period 31 December 2004 - 31 December 2018.

Besides having delivered better overall returns in the last 14 years (as shown above), companies with a 360-degree approach on ESG have also exhibited a favourable risk/reward ratio versus global equities in up/down markets, although these trends are not a reliable indicator of future performance.

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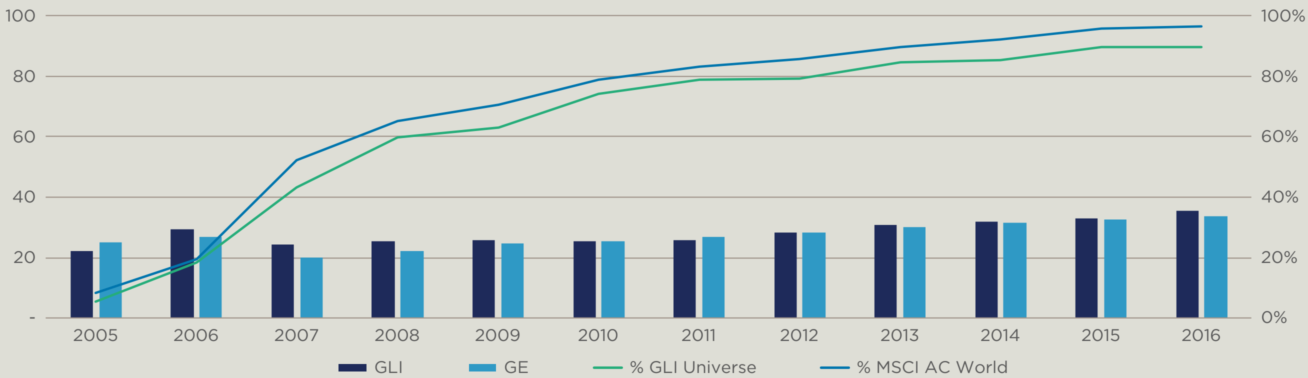
Listed infrastructure companies boosting their ESG credibility

The industry's response to rising ESG factors continues to evolve but notably the approach from many companies is becoming more proactive than reactive. Infrastructure companies are increasingly ESG aware, by publishing ESG reporting and liaising with various stakeholders on these matters, including investment managers like ourselves. With infrastructure companies now having dedicated teams of people focussed on sustainability drivers, the engagement with them has noticeably increased, whether at a senior management or board level, and there is a growing desire to raise and discuss these issues.

In this context, companies are also increasingly taking action to manage and prevent against ESG risks. This varies from increased collaboration with stakeholders such as the communities, governments and investors, improved and more efficient operational processes, and further investments to achieve pre-set standards, targets or incentives. In some cases, this has even involved selling or retiring certain assets due to the ESG challenges they face.

Disclosure of ESG factors has been improving also. More companies are now producing sustainability reports or similar documents on a more regular basis, with the quality and comparability of the data within these disclosures also increasing. This can be seen in the chart below showing the Bloomberg ESG disclosure score for GLI and global equities, with steady improvement in both the score and number of companies reporting.

Disclosure of ESG factors on the rise



Source: Bloomberg, as at 31 December 2016

We believe these disclosure and engagement trends to continue and, as stakeholders, we will continue to advocate for them. Over the long term we expect those companies taking positive action on these issues to have the potential to realise improved risk-adjusted returns.

Conclusion

ESG risks are critical to the sustainability of assets owned by infrastructure companies. Whilst they are not particularly new, their significance and impact has been increasing in recent years and various stakeholders including management, investors, regulators and end-users are becoming more aware of their relevance. By incorporating sustainability drivers in our investment process, our AMP Capital listed infrastructure team strives to find the right combination of ESG factors which ensures our clients' savings help minimize the impact on the planet's health, deliver essential services to those in need and contribute towards improving public trust in large corporations. In doing so, it is expected that over the long-term the companies best positioned have the potential to generate superior risk-adjusted returns.