ESG Investing

Investing in sustainable infrastructure

Joachim Klement, CFA
Head Investment Research

24 October 2018

The integration of ESG criteria in infrastructure investments and other real assets is not as straightforward as in equities or bonds. Yet, investing in sustainable infrastructure is becoming easier all the time and the benefits in terms of reduced risk and higher risk-adjusted returns are convincing more and more institutional investors to implement infrastructure investments in an approach that integrates ESG criteria. In this report we provide an overview over the different ways to invest in sustainable infrastructure and its benefits for investors.

Introduction

Integrating Environmental, Social, and Governance (ESG) criteria into the investment process is becoming increasingly mainstream. With a plethora of consultants and tools available to analyse public equity and bond investments, institutional investors have few issues integrating ESG criteria into traditional investments.

But there is still a dearth of information on how to integrate ESG criteria into alternative investments. We cannot fill this gap but we want to point out some basic principles and steps that investors can take to better integrate ESG criteria in real assets. We define real assets as **infrastructure** (both debt and equity), **property** (again both debt and equity), and **commodities** (futures as well as direct investments in farmland, timberland, etc.).

> "Demand for infrastructure investments will amount to more than $70tn by 2030."

Over this and the two following papers we will be looking at each in turn, starting with infrastructure. It is an asset class that is both an obvious target for investors who want a portfolio of sustainable assets – indeed, as we'll see, for investors who want a portfolio of *outperforming assets* – but one where standards and practices are inconsistent and opaque.

Size of market and opportunity

Although there is a certain amount of arbitrariness to estimates of infrastructure demand, not to mention its ESG component, it is certain that it is considerable. According to the OECD, demand for infrastructure investments will amount to more than $70tn, equivalent to 3.5% of predicted global GDP, between 2015 and 2030.[1] In parallel, the UN Conference on Trade & Development estimated that the annual investment required to meet the UN's social development goals is between $5tn and $7tn.[2] So that is a minimum of about a two-thirds, up to pretty much all of the $70tn, if you take the figures at face value.

That's a lot of supply to top up, particularly at a time when government spending in most countries is dialled down. This, then, is both an opportunity and a need for private capital. However, institutional investors remain underexposed to the asset class. For example, OECD pension funds' allocation to direct infrastructure is less than 1%, with its ESG component even more limited.[3]

How 'limited' this is, again, involves a degree of guesswork: first, because definitions of ESG within infrastructure are not universally agreed on and – far more importantly – they are not measured across the market. Leading alternatives data provider Preqin, for example, doesn't have the ability to tag infrastructure funds or deals as ESG or not, indicating the dearth of independent information on the sector.

So, first, it would be helpful to clarify how we define ESG in the infrastructure market, before we look at what investors can expect from it, and how they access it.

[1] CFA Institute Research Foundation Handbook on Sustainable Investments.
[2] UNCTAD (2015), Investing in Sustainable Development Goals: Action Plan for Private Investments in SDGs.

[3] Kaminker, C. *et al.* (2013), "Institutional Investors and Green Infrastructure Investments: Selected Case Studies", *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 35, OECD Publishing.

What is sustainable infrastructure?

We define sustainable infrastructure as projects that provide the same service as conventional infrastructure while bringing additional benefits flowing from the implementation of ESG criteria.[4] The areas and activities covered by ESG in this area can include, but are not limited to, those listed in the box below.

It is an increasingly important form of thematic investing encompassing a number of sub-asset classes, such as social infrastructure and renewables (see Case Study 1, below), and can be accessed in a number of different ways – whether directly, or through funds, equity or debt, private or public markets, one significant area of the latter being green bonds (see Case Study 2, below).

ESG considerations in infrastructure investing:

▪ Maintaining social licence to operate ▪ health and safety standards (pre- and post-commercial operation date) ▪ biodiversity impacts ▪ alignment of interest with shareholders ▪ stakeholder management and community relations ▪ labour standards ▪ land rights, indigenous rights ▪ accessibility and social inclusion ▪ service reliability ▪ climate change impact and additionality ▪ resource scarcity and degradation ▪ extreme weather events ▪ supply chain sustainability ▪ accountability ▪ board independence and conflicts of interest ▪ management and board oversight of ESG ▪ bribery and corruption ▪ tax policy ▪ cyber security ▪ diversity and anti-discrimination.

Case Study 1: Renewable energy

Renewable energy is the most popular way to invest in sustainable infrastructure. The International Energy Agency (IEA) estimates renewables will take two-thirds of global investment in power plants between now and 2040 as they become, for many countries, the lowest-cost source of power generation. There are numerous sub-sectors, including geothermal, biomass and hydro. However, the two fastest-growing areas are solar and wind, and they should continue to garner the bulk of investment.

Solar energy

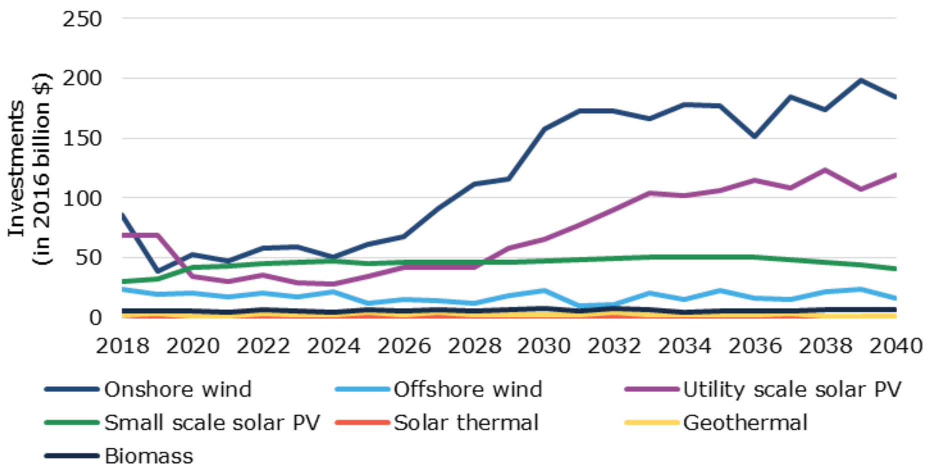
Solar photovoltaic (PV) energy – solar panels – converts sunlight directly into electricity. The IEA predicts that the rapid deployment of solar PV will see it become the largest source of low-carbon generation capacity by 2040, by which time renewables will make up 40% of global power supply. The largest solar PV markets between 2017 and 2040 are expected to be China (1.2TW), India (670GW) and the US (405GW). As we speak, China is already shifting its energy mix towards renewable energy and in particular solar energy, which is a global game changer (see also Fig. 2 for the cost structure of Chinese electricity generation).

After 2030, solar PV electricity from new plants is expected to be "not only cheaper than building new gas and coal power stations, but cheaper in many countries than running existing ones. Once this happens, there is a strong incentive for countries to figure out how to run a grid smoothly at very high solar penetration".[5]

[4] LTIIA (2015), Environmental, Social and Governance Handbook for Long Term Investors in Infrastructure, p. 6.

[5] New Energy Outlook 2017: Solar June 2017, Bloomberg New Energy Finance.

Fig 1: Global investments in renewable energy



Source: Bloomberg New Energy Finance.

Wind energy

This sector breaks down into onshore and offshore wind energy. Onshore wind is now the cheapest form of new electricity generation in the UK, Australia and Chile, with a 39% reduction in the cost of new UK wind plants, making modern onshore wind projects cheaper than new gas and coal plants.

Offshore wind, too, is experiencing significant cost reductions. Bloomberg New Energy Finance (BNEF) expects offshore costs to fall 75% by 2040. Areas that previously looked unpromising for wind generation are being brought into the market as technology advances. That said, while offshore wind costs are coming down more quickly than other renewables, it still remains more expensive than onshore wind.

In the European Union, renewables are expected to account for 80% of new capacity, with wind power being the leading source of electricity after 2030 while the rest of the world will be dominated by solar PV. Onshore wind installations added in 2017 should lead to 54GW of additional generating capacity, more than the installations in 2016, with a further 58GW per year between 2018 and 2020.[6]

Similar to solar, BNEF believes that "more efficient turbines will help drive wind deployment to 17% of global energy generation in 2040, up from 4% today."[7]

Cutting the apron strings

For much of their existence, renewables have been cost-effective compared to carbon-intensive sources only through government incentives. That is no longer the case. Renewables are cost-effective in 'raw' economic terms, and projections of future viability by the likes of BNEF are not predicated on existing subsidies. In most markets, renewables like onshore wind and solar PV are already cheaper than gas, and are set to be cheaper than coal early in the next decade (see Fig. 2 overleaf).

Renewables will soon be consistently cheaper than fossil fuels, as "global average costs could decline to about \$0.05/kWh for onshore wind and \$0.06/kWh for solar PV".[8] US prices for coal, by comparison, were in excess of \$0.10/kWh in 2016.[9]

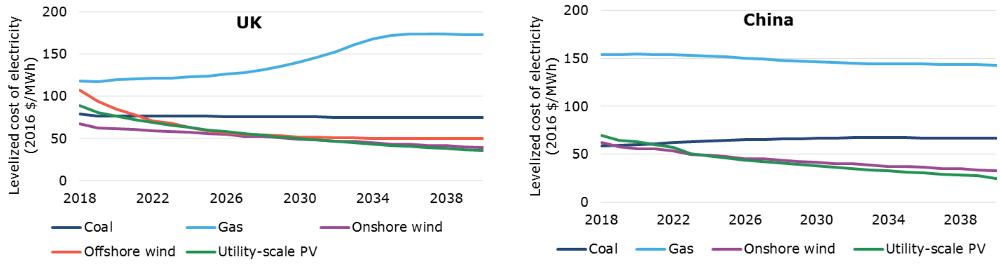
As part of this, wholesale power markets will come under scrutiny, as renewable energy at zero marginal cost and low overall cost will undercut conventional 'base load' power stations.

That renewables are increasingly cost-competitive is down to three factors: technological development, efficient procurement and a large base of

[6] New Energy Outlook 2017: Wind, June 2017, Bloomberg New Energy Finance.
[7] Ibid.
[8] Ibid.
[9] https://nma.org/wp-content/uploads/2016/09/coal-gen-map-2016.pdf

experienced, internationally active project developers that help to improve efficiency in running existing and new power plants.

Fig 2: Cost of electricity production in the UK (left) and China (right)



Source: Bloomberg New Energy Finance.

Case Study 2: Green bonds

Green bonds are corporate, project, and sub-sovereign bonds that finance investments in green infrastructure assets such as renewable energy. They were first issued in 2007 and have built up momentum ever since. Green bonds should typically offer the same yield as non-green bonds offered by the same issuer. There are good intrinsic reasons for this: because "credit exposure arises from the same balance sheet and financial ratios and similar returns should thus be garnered by each. Green bonds are, therefore, a genuine investment vehicle as opposed to a form of philanthropy."[10]

There are four types of green bonds, although others may emerge as the market develops:

- **Standard green use of proceeds bond**: a standard recourse-to-the-issuer debt obligation.
- **Green revenue bond**: a non-recourse-to-the-issuer debt obligation in which the credit exposure of the bond is to the pledged cash flows of the revenue streams, fees and taxes, and whose use of proceeds go to related or unrelated sustainable projects.
- **Green project bond**: a project bond for a single or multiple sustainable project(s) to which the investor has direct exposure, with or without potential recourse to the issuer.
- **Green securitised bond**: collateralised by one or more specific project(s), including but not limited to covered bonds, ABS, MBS, and other structures. The first source of repayment is generally the cash flows of the assets.[11]

They are certified as "green" because all proceeds are used to finance green projects, such as renewable energy, pollution prevention, sustainable agriculture, clean transportation, or the cultivation of environmentally friendly technologies. The certification is by independent parties such as the Climate Bond Standard Board.

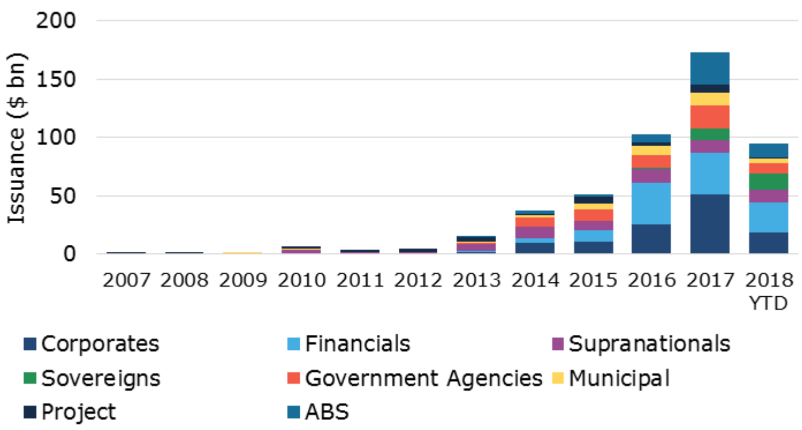
The green bond market has become one of the fastest growing segments of the fixed income market. At the end of 2017, the total amount of outstanding green bonds surpassed $160bn. Throughout the first half of 2018 an additional $78bn in green bonds have been issued, marking a slowdown from the second half of 2017 but still positive growth compared to a year earlier.

Traditionally, corporations and banks have been the biggest issuers of green bonds, but in recent years, sovereigns have increasingly become involved in the asset class as well. In the first half of 2018, Belgium was the largest issuer of a single green bond with the placement of a EUR 4.5bn government green bond. This is the second largest sovereign green bond after the 2017 issue by France.

[10] CFA Institute Research Foundation Handbook on Sustainable Investments.

[11] Green Bond Principles, Voluntary Process Guidelines for Issuing Green Bonds, June 2018.

Fig 3: Green bond issuance by issuer type



Source: Bloomberg New Energy Finance. Data as at end of August 2018.

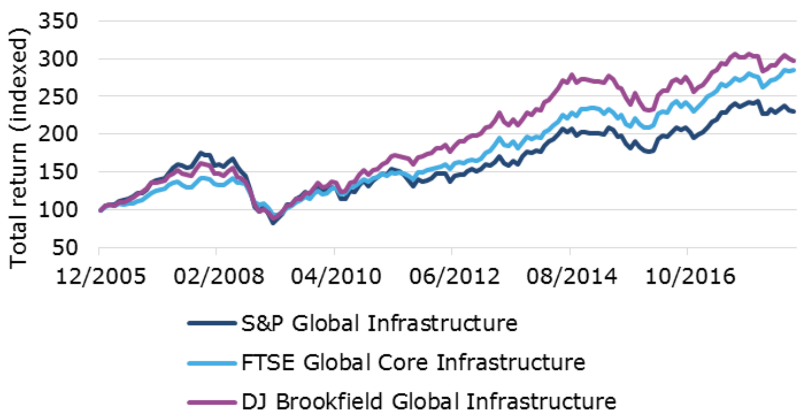
Benchmarking performance

While there are no specific ESG benchmarks for infrastructure, selected investor benchmarks for the broad asset class include:

- Listed infrastructure equity: S&P Global Infrastructure, FTSE Global Core Infrastructure Index, Dow Jones Brookfield Global Infrastructure Index.
- Infrastructure private equity: EdhecInfrastructure Infrastructure Private Equity Index.
- Infrastructure listed bonds: Markit iBoxx Infrastructure Index.
- Infrastructure private debt: EdhecInfrastructure Private Debt Infrastructure Index.
- Green bonds: S&P Green Bond Index, Bloomberg Barclays MSCI Global Green Bond Index.

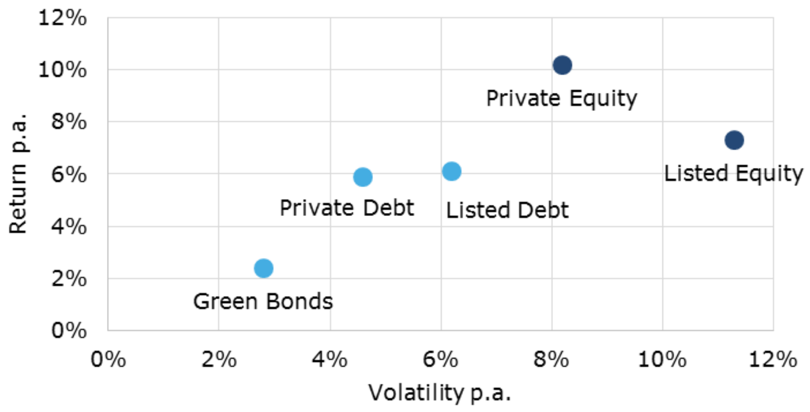
Because there is no universally accepted definition of what does and does not constitute an infrastructure investment, differences between indices can be large. Investors therefore need to look under the bonnet of the indices to understand their characteristics which, as can be seen from Fig. 4, can deliver significantly different returns. In the listed infrastructure equity category, for example, the S&P Global Infrastructure Index had an annual return of 8.0% since 2006, while the FTSE Global Core Infrastructure Index shows a return of 8.8% p.a. and the Dow Jones Brookfield Global Infrastructure Index 9.7% p.a.

Fig 4: Performance of different listed infrastructure indices



Source: Bloomberg, Fidante Partners. Data as at 30 September 2018. Past performance is not a reliable indicator of future results.

Fig 5: Performance of different infrastructure investments



Source: Bloomberg, Fidante Partners. Data as at 30 September 2018. Past performance is not a reliable indicator of future results.

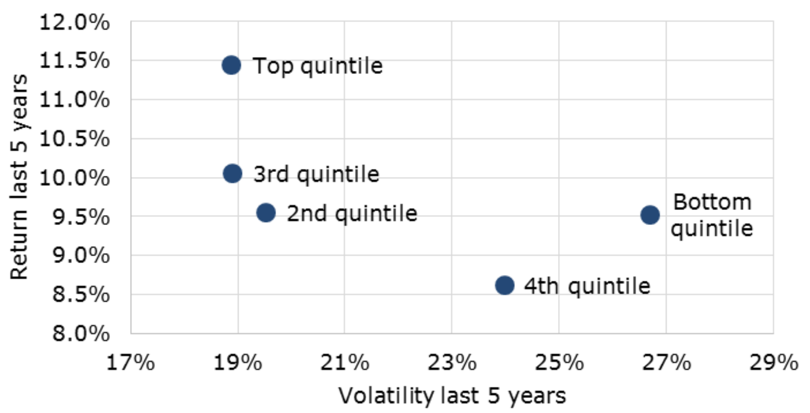
Nevertheless, taken in total, the historic experience with infrastructure investments has been good. Fig. 5 shows the risk and return of different infrastructure investments over the past ten years.

How, then, do ESG infrastructure assets compare to the asset class as a whole? In this chart, the only specifically sustainable investment is green bonds. Running a line of best fit through the points, it would pretty much be performing in line with the others – a lower return, but one commensurate with its lower volatility.

That, in itself, is a positive compared to sustainable assets' historic perception, where investors accepted the possibility of underperformance in exchange for lower negative social or environmental impacts – you pay not to sink the planet, in return for which you sleep better at night; like paying a bit extra for your Fairtrade coffee at the supermarket.

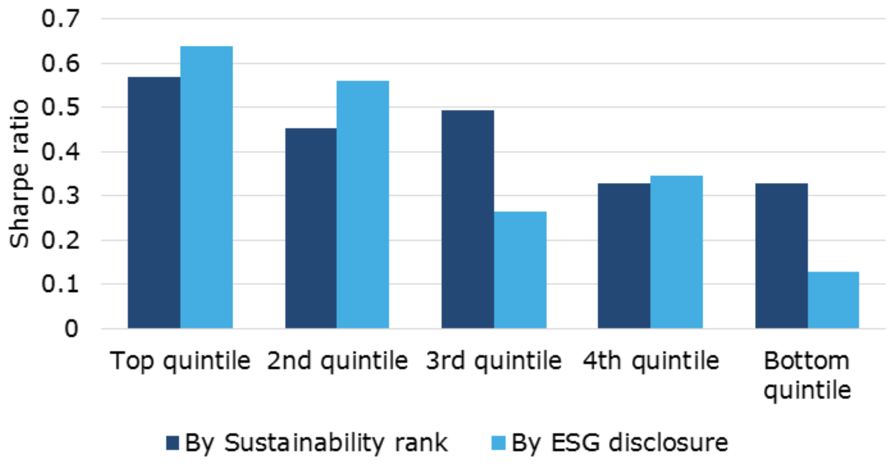
That no longer seems to be the case if, indeed, it ever was. No matter the methodology for integrating ESG into listed infrastructure investments, the outcome tends to be beneficial for investors. To illustrate this, we have looked at the constituents of the S&P Global Infrastructure Index and their total returns (including dividends) over the past five years (see Fig. 6).

Fig 6: Infrastructure performance by sustainability quintile



Source: Bloomberg, Fidante Partners. Data as at 30 September 2018. Past performance is not a reliable indicator of future results.

Fig 7: Risk-adjusted returns and sustainability



Source: Bloomberg, Fidante Partners. Data as at 30 September 2018. Past performance is not a reliable indicator of future results.

We have split the listed infrastructure stocks into five groups of equal numbers of stocks, ordered by RobecoSAM Sustainability Score and then calculated the US Dollar return and volatility for each group. The top quintile is the 20% of stocks with the highest sustainability rank, while the bottom quintile is the 20% with the lowest.

Listed infrastructure stocks with a higher sustainability rank tend to have lower volatility and somewhat higher returns. The main benefit of including ESG criteria, however, is in the reduction in volatility rather than the increase in returns. This reduction in volatility leads to an increase in risk-adjusted returns (Sharpe ratios). The effect is not only a remnant of a specific sustainability ranking. In Fig. 7 we show the Sharpe ratio of listed infrastructure stocks based on two different ESG metrics, the sustainability rank calculated by RobecoSAM and the ESG disclosure score calculated by Bloomberg. In both cases, a higher ESG score leads to higher risk-adjusted returns. Overall, investing in infrastructure that is more sustainable can lead to lower volatility and better risk-adjusted returns.

How to integrate ESG into infrastructure investments

Infrastructure assets are often heavily regulated, operate with a government counterparty or are subject to public scrutiny. This means that considering some ESG factors is an inherent part of the business for many direct infrastructure investors.

To properly understand how sustainable an infrastructure investment is entails a deep dive into how each project operates. This should encompass all relevant areas, from its immediate environmental impact to its broader supply chain.

This ‘lifting of the bonnet’ we talked about earlier to determine the long-term sustainability of an asset necessitates being able to conduct internal ESG audits for existing assets of a project, assess the ESG practices of a company’s supply chain, and have ESG practices demonstrably integrated in strategic planning and operations.

In terms of building a portfolio of listed ESG infrastructure assets, investors can screen potential investment opportunities, negatively or positively, through such mechanisms as sector exclusions, shareholder engagement or director appointments to the board.

ESG practices can also feed through into the models used by investors, such as the implementation of flooding or drought scenarios into valuations, the potential effects of increased fuel prices, or increased regulation resulting from carbon pricing, or how road construction projects running through a flood-prone area needs to factor in the threat of rising sea levels.

Risk analysis should consider how a project's energy supply will be managed throughout its life, its exposure to energy pricing volatility, and how it will react to climate change and extreme weather events. As the Long-term Investors in Infrastructure Association (LTIIA) puts it: "Before making the decision to invest in a project, a detailed carbon, energy and climate change risk analysis should … be carried out, after which a project can be classified as low, medium or high risk to determine the subsequent level of monitoring of it that will be appropriate."[12]

> Before making the decision to invest in a project, a detailed carbon, energy and climate change risk analysis should … be carried out, after which a project can be classified as low, medium or high risk to determine the subsequent level of monitoring of it that will be appropriate.

Those investing directly in an infrastructure asset therefore need to have the resources to undertake this level of enquiry themselves or hire external consultants that can help them with these tasks. Those investing through another route need to have the assurance that the appropriate level of due diligence has been done upstream.

Quantifying benefits

Despite the limited amount of broad market data on ESG implementation, there are a number of individual case studies that show the practical importance of ESG factors for infrastructure investments and their positive effect in driving long-term performance.[13] Combining the concrete ways this has been achieved with the results of our ESG performance screen above, it's possible to draw a line of causality between such implementation and the performance of an infrastructure asset. How an infrastructure asset's ESG approach affects its risk-adjusted return can impact in a number of ways:

- **Risk mitigation:** Consideration of ESG criteria helps anticipate and reduce risks before they have a negative impact on costs. A demonstrable ability to anticipate and mitigate costs in turn leads to a better credit rating and therefore a lower cost of capital for an operation.
- **Cost reduction:** ESG implementation implies a more economical use of resources, from building materials to energy, thus resulting in a lower operating cost throughout a project's lifecycle.
- **Improved sustainability:** This optimisation, combined with the integration of resilience criteria (such as factoring in higher wind speeds when building a wind farm), can make an asset more durable and extend its operational life. This can identify efficiencies, reduce negative externalities and, more positively, drive innovation, help staff retention, and improve community relations (a negative and costly example of which is given for the Dakota pipeline, below).

In this sense, ESG is simply an awareness of relevant risks, and the ability to act on them, as explained by the PRI: "Extreme weather, environmental trends, gradual resource degradation, poor governance, deteriorating community relations and potential loss of the social licence to operate are all examples of ESG risks to an operational asset. These risks require management strategies to

[12] Environmental, Social and Governance Handbook for Long Term Investors in Infrastructure, Long-term Infrastructure Investors Association, 2015.

[13] CFA Institute Research Foundation Handbook on Sustainable Investments.

safeguard both assets and returns to investors."[14]

These factors are more important for infrastructure than for many other asset classes, given the often long-term nature of the investment, resulting from its focus on essential services: "Probability of a downside ESG event that can trigger financial liabilities – from environmental pollution to a governance malpractice – grows with a longer hold, hence implementation of ESG prevention and mitigation measures becomes much more important for sustaining financial performance of the investment."[15] Failure of a company's management to address such risks has the potential to hit both its earnings and value as a business, just like the mis-management of other important risks.

Challenges of investing

That still relatively few investors understand what it takes in practice to invest in infrastructure responsibly is probably the greatest barrier to its achievement, as the great heterogeneity of views, motives and practices regarding the ESG approach impedes comparison between firms' claimed successes.

The biggest information gap exists in direct investments into traditional infrastructure, where ESG integration is done mostly "on an ad hoc and case-by-case basis rather than through a strategic assessment of the ESG risks and value creation opportunities across a portfolio" (UNPRI).

This is exacerbated by the fact that no global commonly-agreed ESG standard exists. As a result, it is difficult to state whether or not a firm invests in a sustainable and responsible manner. This can lead to 'greenwashing', where infrastructure operators and investors can dishonestly promote a false environmentally friendly image, without the necessary metrics to be called out, let alone brought to book.

Rectifying this through agreed, coordinated and effective standards would lead to simplified investment decisions, leading to a broadened market. A uniform implementation would also help avoid greenwashing.

The table below (Fig. 8) gives an overview of how the areas of infrastructure, sustainability and regulation create risks for investors, which need to be understood and mitigated where possible. When it comes to green infrastructure investments there are several additional hurdles that investors have to overcome compared to traditional infrastructure investments. Most important amongst these are the risks that government incentives or tax breaks may be cut retroactively or curtailed at short notice. However, as we have seen above, modern green infrastructure projects are increasingly profitable without government incentives, eliminating this major source of uncertainty. Also, as the markets for green bonds, ESG ratings, carbon disclosures etc. matures, hurdles due to a lack of suitable investment vehicles will gradually disappear and investing in green infrastructure will become as simple and straightforward as traditional infrastructure investing.

Fig 8: Barriers to investments in infrastructure

Area of concern	Main challenges
Traditional infrastructure	• Illiquidity risk • Need for scale • Political uncertainty • Accounting rules • Lack of historical data
Green infrastructure	• (Retroactive) changes in government incentives • Additional expertise in ESG-related risks
Suitable investment vehicles	• Nascent (inefficient) markets • Higher transaction costs • Lack of historical data

Source: Fidante Partners, based on OECD (2015).

[14] Primer on Responsible Investment in Infrastructure, PRI.

[15] Environmental, Social and Governance Handbook for Long Term Investors in Infrastructure, Long-term Infrastructure Investors Association, 2015.

Risks of not integrating ESG

If getting ESG right can be difficult, getting it wrong will likely be costly and potentially terminal for an infrastructure investment. For example, infrastructure projects are by their very nature capital-intensive: while the cost of wind turbines has come down, they will never fall off trees – although they may fall into them if they haven't been built in an ESG-cognisant way. Likewise, railways always have been made from great quantities of stuff (excuse the technical term). If that 'stuff' is misallocated – such as being run through an area that becomes prone to flooding – it will take a lot of expensive fixing.

Alongside the physical risks to a project that fails to future-proof, those that do not take into account emerging risks could well be hit by later regulatory action, such as being fined for resource usage that a government deems to be unacceptable. Any such project therefore needs to be aware of, and factor in, such risks from the start.

The much-publicised events surrounding the Dakota Access Pipeline over the past few years are a case in point. Not only does all the global coverage result in reputational damage for those involved following the Standing Rock Sioux tribe filing a lawsuit to defend against the alleged threat to their water supplies and cultural sites, the project has also incurred costs that may well be far from over. Although President Trump's executive order ensured the pipeline began commercial service in June 2017, a district court ruling immediately found that the constructor had failed to adequately consider the pipeline's impact on and risks to the tribe. While proponents argue that it remains the lowest-impact way of transporting the oil,[16] the failure to address local concerns has resulted in costs, delays and continuing uncertainty of the pipeline's long-term viability.

Investment vehicles

Having covered what sustainable infrastructure is, the methods and problems of its analysis and its investment advantages, how do investors access it? There are various types of sustainable infrastructure investments (Fig. 9).

Fig 9: Investing in sustainable infrastructure

Asset class	Benefits	Drawbacks
Listed stocks and bonds	• Liquid • Transparent • Low transaction costs	• Very volatile • Few "pure plays" • Additional risks (e.g. market risk) • Low correlation between return and project IRR
Alternative investment funds and listed investment companies	• Increased liquidity if listed as closed-end fund • Transparent • Low transaction costs • Access to alternative beta • Low correlation to traditional investments	• Higher fees • Exposure to market risk if listed on secondary market
Direct investments	• Low volatility • Steady cash flow • Direct link between project IRR and investment return • Illiquidity premium • Low correlation to traditional investments	• Very illiquid • Large investment size needed (> £50m) • High transaction costs • Difficult to diversify

Source: Fidante Partners.

[16] https://daplpipelinefacts.com/

Direct exposure, either through equity or debt instruments, can deliver attractive returns. However, this can be difficult and resource intensive, not to mention requiring large individual allocations beyond the reach of many institutional investors. "It can be prohibitively expensive partly due to the costs of developing and maintaining the human resources of a direct investing team as well as transaction costs and legal fees. While direct investments should have higher risk-adjusted returns than investments in publicly traded shares or bonds, the additional return must be high enough to justify both the higher transactions costs and the possible illiquidity of the investment."[17] Such costs will likely be magnified by the need to carry out an extra layer of ESG due diligence and monitoring alongside the standard analysis.

ESG integration is most advanced in listed infrastructure investments where the same techniques as in traditional equity and bond investment can be used, although the weight of the various criteria may vary (see Case Study 3, below). Additionally, there are niches within the infrastructure space like renewable energy investments or green bonds that allow investors to invest directly in sustainable infrastructure projects, as we have seen above.

Case Study 3: Listed infrastructure

Listed infrastructure investments naturally lend themselves to the same ESG approach as their traditional equity or debt equivalents. However, for infrastructure companies, some ESG criteria will be more important than others. Below is a table that summarises typical ESG criteria that are more or less important for infrastructure investments than the average stock or bond (Fig. 10).

Fig. 10 does not imply that the ESG criteria in the right column of the table above are not important, just that it is in the nature of infrastructure projects that the ESG criteria on the left tend to have a higher impact on the risk-return-profile of the investment. They should therefore be analysed more thoroughly by investors and asset managers.

Fig 10: ESG criteria in listed infrastructure investments

	More important than average stock	Less important than average stock
Environmental	• Total Greenhouse gas emissions • Total energy consumption • Electricity/fuel used • Renewable energy used • Water used • Spills and fines	• CO_2 emission per unit of production • Travel emission • Waste production/recycling • Paper consumption • Sustainable packaging
Social	• Workplace safety • Health and safety policies • Anti-bribery policy • Employee protection policy • Human rights policy • Social supply chain management	• Employee diversity • Gender pay gap • Fair remuneration policy • Equal opportunity policy • Training policy
Governance	• Board independence • Compensation linked to ESG	• Board diversity • Shareholder rights

Source: Fidante Partners.

[17] Kaminker, C. et al. (2013).

Conclusion

While the level and reliability of information about ESG available on infrastructure doesn't equal that of traditional stocks or bonds, investors have a lot more at their disposal than simple guesswork.

Returns across infrastructure will likely be well supported by persistently high infrastructure demand, with institutional investors being underexposed to the asset class. The majority of this will have some sustainable component, bringing additional benefits with the implementation of sustainable criteria.

These criteria are not universally agreed, and the degree to which different investments implement them is not always clear. However, where that information is available, it seems reasonable that one may expect better returns from those projects operating in a sustainable fashion compared to those that are not, as demonstrated in Fig. 7. Investors in sustainable infrastructure are not paying the equivalent of a Papal Indulgence in order to get out of Purgatory in the never-never – they should be able to enjoy their tangible rewards in this life, in the form of lower volatility and therefore better risk-adjusted returns.

Accessing sustainable infrastructure can be done through both listed equity and debt, the latter being generally lower volatility and lower return than the former, or directly, through private markets, although this requires large quanta of capital to deploy and is highly illiquid. For investors who either aren't able to invest on that scale, or who don't want the illiquidity risk, a broad portfolio can be accessed through listed investment vehicles – specialist funds for which the manager carries out their own sustainability screening. Those choosing to invest through this route would be well served by understanding how their prospective managers carry out this selection.

RESEARCH

Joachim Klement
+44 20 7832 0956
jklement@fidante.com

Martin McCubbin
+44 20 7832 0952
mmccubbin@fidante.com

Aliy Akbarov
+44 20 7832 0957
aakbarov@fidante.com

MARKET MAKING

STX 79411 79412

Mark Naughton
+44 20 7832 0991
mnaughton@fidante.com

Anthony Harmer
+44 20 7832 0995
aharmer@fidante.com

UK SALES

Daniel Balabanoff
+44 20 7832 0955
dbalabanoff@fidante.com

Max Bickford
+44 20 7832 0934
mbickford@fidante.com

Hugh Ferrand
+44 20 7832 0935
hferrand@fidante.com

Patrick Valentine
+44 20 7832 0932
pvalentine@fidante.com

Justin Zawoda-Martin
+44 20 7832 0931
jzawodamartin@fidante.com

INTERNATIONAL SALES

Christian Andersson
+46 8 1215 1360
candersson@fidante.com

Ian Brenninkmeijer
+46 8 1215 1361
ibrenninkmeijer@fidante.com

Trevor Barnett
+1 212 897 2807
tbarnett@fidante-us.com

Adam Randall
+1 212 897 2807
arandall@fidante-us.com

Yves van Langenhove
AAMYS* (Fidante Partners)
+34 468 29 08 04
yvanlangenhove@fidante.com

PRODUCT DEVELOPMENT

Tom Skinner
+44 20 7832 0953
tskinner@fidante.com

CORPORATE FINANCE

John Armstrong-Denby
+44 20 7832 0982
jdenby@fidante.com

Nick Donovan
+44 20 7832 0981
ndonovan@fidante.com

Will Talkington
+44 20 7832 0936
wtalkington@fidante.com

*AAMYS is a tied agent of Fidante Partners Europe Limited which is authorised and regulated by the Financial Conduct Authority of the United Kingdom and also trades as Fidante Capital.

Important Information

This is a marketing communication and is not, and should not, be considered as independent investment research. It is issued by Fidante Partners Europe Limited ("Fidante Partners") which is authorised and regulated by the Financial Conduct Authority ("FCA"). Fidante Partners Europe Limited trades as "Fidante Partners" and "Fidante Capital". Fidante Partners Europe Limited is a wholly owned subsidiary of Challenger Limited, a company listed on the Australian Securities Exchange Limited.

This marketing communication is for persons who are Eligible Counterparties or Professional Clients (for the purposes of the FCA rules) only and it is not available to Retail Clients. It is being distributed (a) in the United Kingdom to, and is directed only at, persons who are (i) investment professionals as defined in Article 19 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Promotion Order") or (ii) are persons to whom this marketing communication may otherwise lawfully be issued or passed on or (b) outside the United Kingdom to, and is directed only at, persons to whom this marketing communication may be lawfully issued or issued without compliance with any filing, registration, approval or other requirement in the relevant jurisdiction, and in each such case without the inclusion of any further warnings or statements as required by the Promotion Order, or other applicable law or regulation, which are not included in this marketing communication (all such persons together being referred to as "relevant persons"). Neither this marketing communication nor any of its contents may be received by, acted on or relied on by persons who are not relevant persons.

No part of this marketing communication may be published, distributed, extracted, re-utilised or reproduced and any attempt to do so may be restricted or prohibited by law. Recipients are required to inform themselves of, and comply with, all such restrictions or prohibitions and none of Fidante Partners or any other person accepts liability to any person in relation thereto.

Fidante Partners does not produce independent investment research within the meaning of the FCA Handbook of Rules and Guidance. Accordingly, this marketing communication is non-independent research within the meaning of those rules, which means it is a marketing communication under the Markets in Financial Instruments Directive ("MiFID") and it has not been prepared in accordance with legal requirements designed to promote the independence of investment research, and it is not subject to any prohibition on dealing ahead of the dissemination of investment research. However, Fidante Partners has policies, internal organisational and administration arrangements and information barriers to prevent or manage the conflicts which may arise in the production of non-independent research, including preventing dealing ahead. This includes physical and electronic information barriers procedures and the operation of a cultural Chinese Wall. For further information, please view the following policies: Conflicts of Interest, Chinese Walls Policy.

Fidante Partners acts as a market maker, corporate broker and, from time to time, bookrunner to companies in the closed-end listed investment company sector. A list of all companies in relation to which Fidante Partners acts as market maker and/or corporate broker and/or bookrunner (and the relevant dates of any closing of any such capital raise) can be viewed here: Market Making Stocks (of which Fidante Partners acts as market maker and accordingly Fidante Partners may own net long or short positions exceeding 0.5% of the total issued share capital), Corporate Appointments. The Market Making Stocks will indicate any other equity interests held by Fidante Partners or a member of the Challenger Group.

Fidante Partners or a member of the Challenger Limited group may have an economic interest (for example, minority equity interest or fee entitlement) in investment managers of the funds of which it provides services (such as corporate finance, listing sponsorship, market maker, corporate broker, bookrunner and administrative and support services). The Corporate Appointments also indicates whether Fidante Partners or any member of the Challenger Limited group holds more than 5% of the total issued share capital of the issuer. Fidante Partners is remunerated by fees for services provided and may be entitled to a share of profits from these investment managers and third parties. There is no direct link between the remuneration of individuals at Fidante Partners and the recommendations or transactions tied to services provided by Fidante Partners. Fidante Partners does not produce buy, sell or hold recommendations with respect to specific securities. Unless otherwise stated, this communication will not be regularly updated.

Please click here for the Fidante Partners research policy.

This marketing communication does not constitute a personal recommendation or take into account the particular investment objectives, financial situation or particular needs of any specific recipient. It is not intended to provide the sole basis for any evaluation of an investment decision. Your attention is drawn to the date of issue of this marketing communication and of the opinions expressed herein. Before acting on any advice or recommendations in this marketing communication, recipients should consider whether it is suitable for their particular circumstances and, if necessary seek professional advice, including tax advice. Recipients of this marketing communication should note that: All investments are subject to risk; the value of shares may go down as well as up; you may not get back the full amount that you have invested; past performance is not a guarantee of, and cannot be relied on as a guide to, future performance; fluctuations in exchange rates could have adverse effects on the value or price of, or income derived from, certain investments.

This marketing communication is for informational purposes only and does not constitute, and should not be viewed as, an offer, invitation or solicitation in respect of securities or related other financial instruments nor shall it be construed as a recommendation for Fidante Partners to effect any transaction to buy or sell securities or related financial instruments on behalf of any recipient nor shall it, or the fact of its distribution, form the basis of or be relied upon in connection with, any contract or commitment in relation to such action. The securities that may be described in this marketing communication may not be eligible for sale in all jurisdictions or to certain categories of investors.

This marketing communication is based upon information which Fidante Partners considers reliable, but such information has not been independently verified and no representation is made that it is, or will continue to be accurate or complete and nor should it be relied on as such. This marketing communication is not guaranteed to be a complete statement or summary of any securities, markets, documents or developments referred to in this marketing communication.

Any statements or opinions expressed in this marketing communication are subject to change without notice. Neither Fidante Partners, any member of the Challenger Limited group nor any of their directors, officers, employees or agents shall have any liability (including negligence), however arising, for any error, inaccuracy or incompleteness of fact or opinion, or lack of care, in this communication's preparation or publication; provided that this shall not exclude liability which Fidante Partners has to a customer under the Financial Services & Markets Act 2000 or under the Rules of the Financial Conduct Authority.

This marketing communication contains certain forward-looking statements, beliefs or opinions. These statements concern future circumstances and results and other statements that are not historical facts, sometimes identified by the words "believes", "expects", "predicts", "intends", "projects", "plans", "estimates", "aims", "foresees", "anticipates", "targets", "may", "will" and similar expressions. Such statements reflect current views with respect to future events and are subject to risks and uncertainties because they relate to events and depend on circumstances that will occur in the future. These forward-looking statements are based on current plans, estimates, projections and expectations. These statements are based on certain assumptions that, although reasonable at this time, may prove to be erroneous. No statement in this marketing communication is intended to be a profit forecast. No representations or warranties, express or implied, are given as to the achievement or reasonableness of and no reliance should be placed on, such statements, including (but not limited to) any projections, estimates, forecasts or targets contained herein. Fidante Partners does not undertake to provide any additional information, update or keep current information contained in this marketing communication, or to remedy any omissions in or from this marketing communication. There are a number of factors that could cause actual results, developments, financial targets and strategic objectives to differ materially from those expressed or implied by statements in this marketing communication. Fidante Partners, nor any other person intends, and no person assumes any obligations, to update information or statements set forth in this marketing communication. You should not place reliance on forward-looking statements which speak only as at the date of this document.

Where references to external resources such as internet websites are provided these are for reference purposes, and the external resources are not intended to be included as part of this publication; Fidante Partners plc has not checked and is not responsible for any external content, and makes no representation as to its reliability or accuracy.

Any dispute, action or other proceeding concerning this marketing communication shall be adjudicated within the exclusive jurisdiction of the courts of England. All material contained in this marketing communication (including in this disclaimer) shall be governed by and construed in accordance with the laws of England and Wales.

Fidante Partners Europe Limited

Authorised and Regulated by the Financial Conduct Authority

Fidante Partners Europe Limited trades as "Fidante Partners" and "Fidante Capital".

Registered Office: 1 Tudor Street, London EC4Y 0AH.
Registered in England and Wales No. 4040660

FIDANTE
PARTNERS