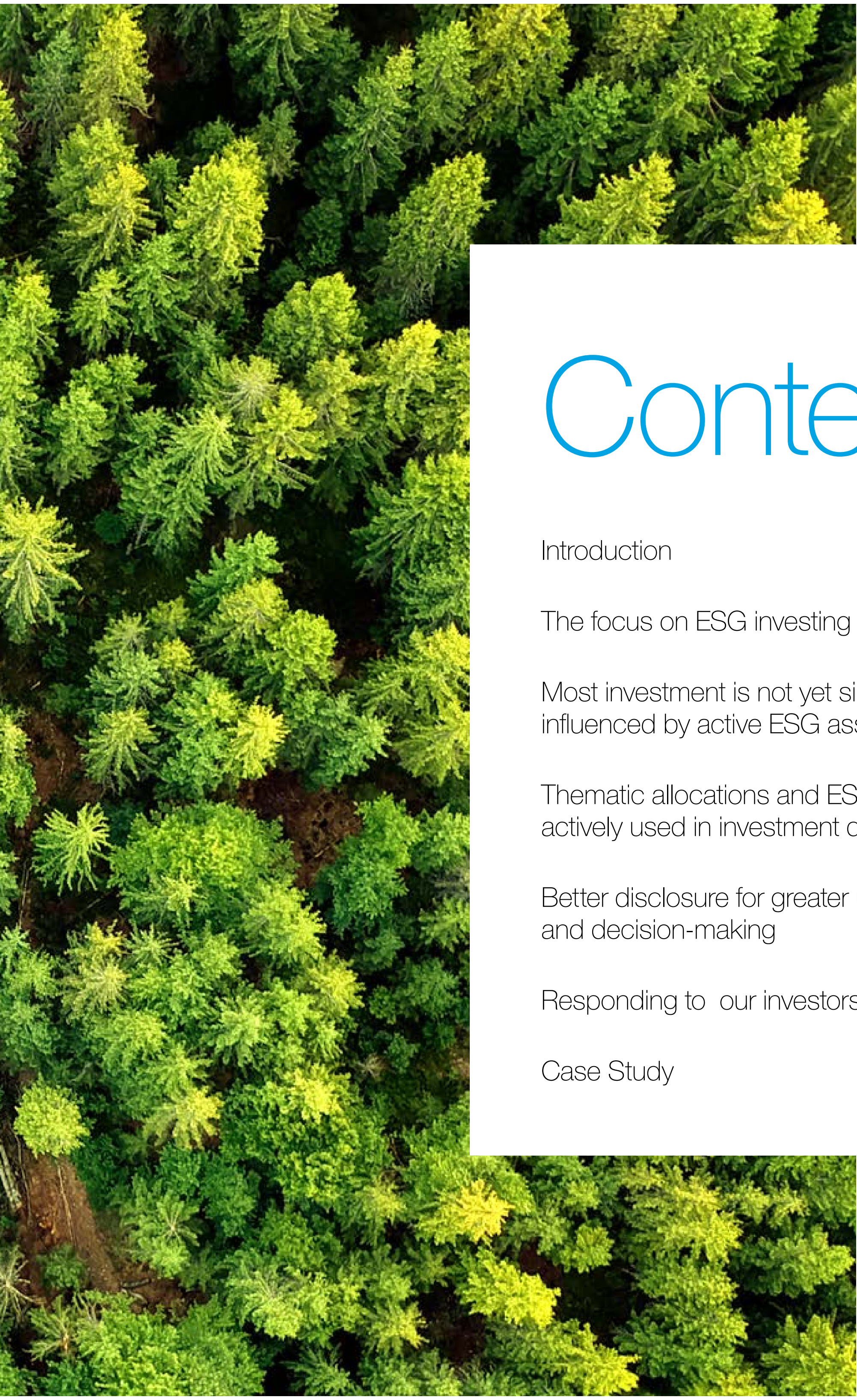
Macquarie Infrastructure and Real Assets **(MIRA)**

MIRA ESG Survey

KEY INSIGHTS FROM OUR INVESTORS

mirafunds.com



Contents

Introduction

The financial and societal benefits of integrating Environmental, Social and Governance (ESG) considerations into investment decisions are increasingly clear.

A recent survey undertaken by Macquarie Infrastructure and Real Assets (MIRA) indicates that while investors clearly see the benefits and are increasing their ESG focus, some are still grappling with how to do so.

This report outlines the key survey findings from 150 real asset investors responsible for managing over $US20 trillion of assets globally[1].

The results suggest that the answer is a dual pathway: improving reporting by asset managers on one side, and, enhancing investors' ESG understanding and capacity to assess ESG factors on the other.

There are some clear takeaways for investment managers. First, there is a growing recognition of the relationship between ESG and long-term value in investments. Indeed, the results indicate a strong conviction, with over 80% polled supporting this proposition.

Second, some regions have a more developed approach to ESG investment than others. The reason for this is likely to be a combination of policy, regulatory considerations as well as market dynamics for investment opportunities across various geographies.

Third, there is a lot of work still to do within the investment community to support the development of investment strategies with clear, measurable and sustainable outcomes together with financial returns.

Finally, most stakeholders still grapple with efficient, reliable, and useful ways to collect and compare non-financial data on ESG performance. Sustainable investment strategies carry the obligation to manage inherent social and environmental risks as well as seek out value enhancing opportunities. As real asset managers, this obligation is profound. In a world that is facing the impacts of climate change and related social disruptions, there is a growing need to find appropriate solutions for private capital to contribute positively towards finding solutions.

We hope you find the insights gained through this survey helpful, as we have.

Phil Peters
Global Head, Client Solutions Group
Macquarie Asset Management

[1] Preqin Investor database and other public information. As at 30 November 2019.

MIRA Market insight

ESG-investing enhances value

Increasing emphasis on value enhancement has led to consideration of whether ESG increases returns and/or improves corporate performance.

There are a range of specific channels through which ESG can enhance value. Broadly speaking, the hypothesis is that companies that consider ESG factors are better managed, with higher quality and potentially less volatile earnings.

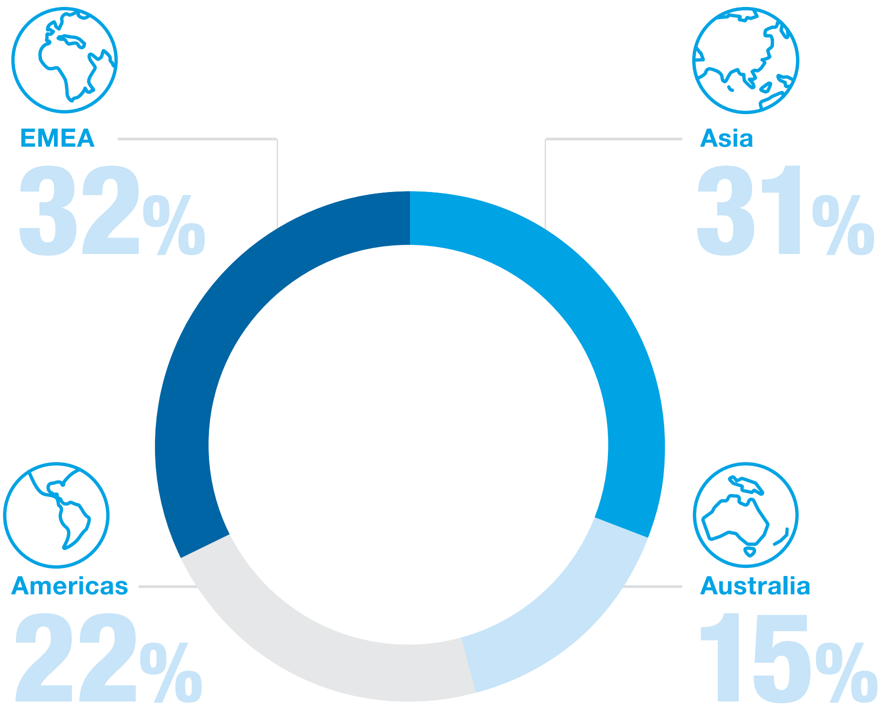
MIRA's Economist Daniel McCormack outlines the findings on how ESG-investing enhances value, on page 17.

SECTION 1

The focus on ESG investing is intensifying

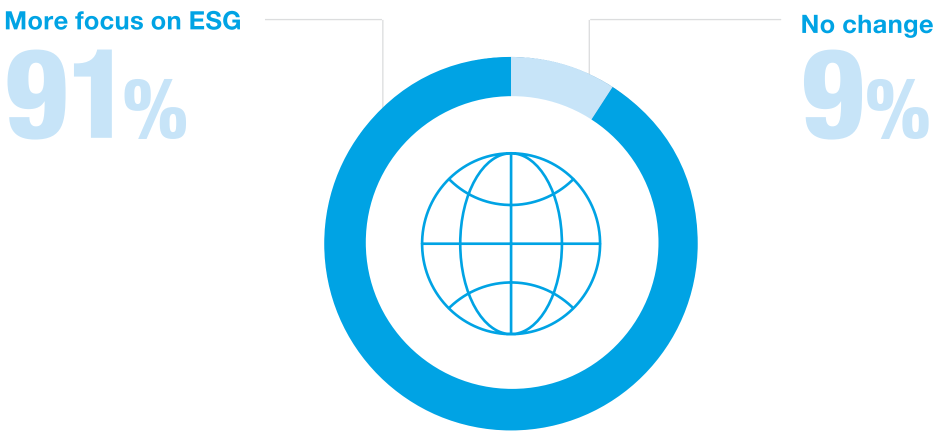
MIRA recently surveyed some of the world's leading institutional investors to understand their approach to applying ESG factors as part of their investment decision-making.

Responses by region



The responses from 150 global investors show that their focus on ESG has been growing and is intensifying. 58 per cent of investors have increased their ESG focus in the last five years, and 91 per cent expect to increase it further in the next five years.

How do you expect your firm's approach to ESG will change in the next five years?



> There will be even less of a divide between "traditional" financial matters and ESG matters. They will become more entangled, with one key driver being the need to invest in, for example, climate change solutions and Sustainable Development Goal solutions.
>
> - European investor -

> As a concept, ESG investing has evolved over time. Initially it was based on ethical or religious exclusions, but its scope has since expanded to include a broad suite of environmental, social and governance risk considerations, value protection, and most recently value creation.
>
> - Daniel McCormack -
> **MIRA Economist**

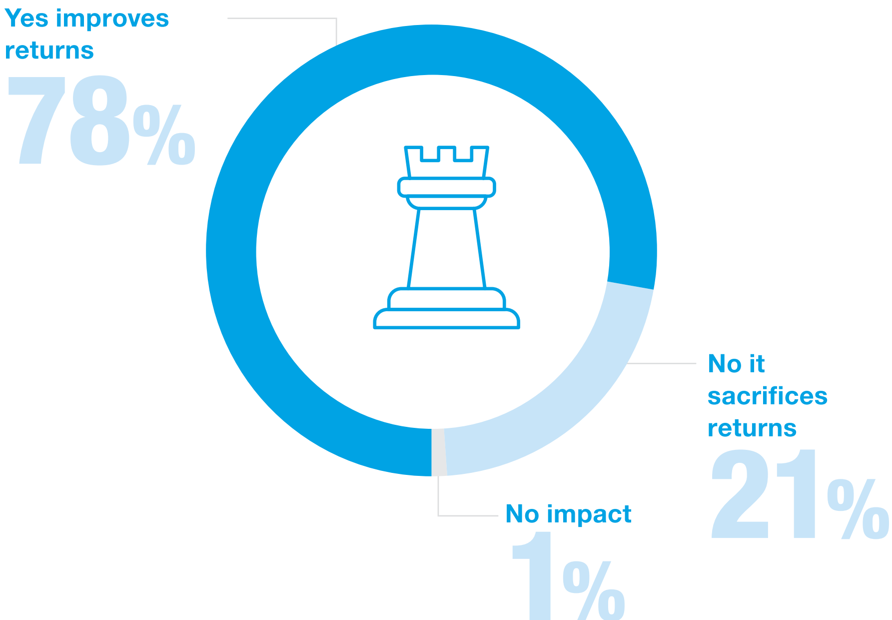
SECTION 2

Most investment is not yet significantly influenced by active ESG assessment

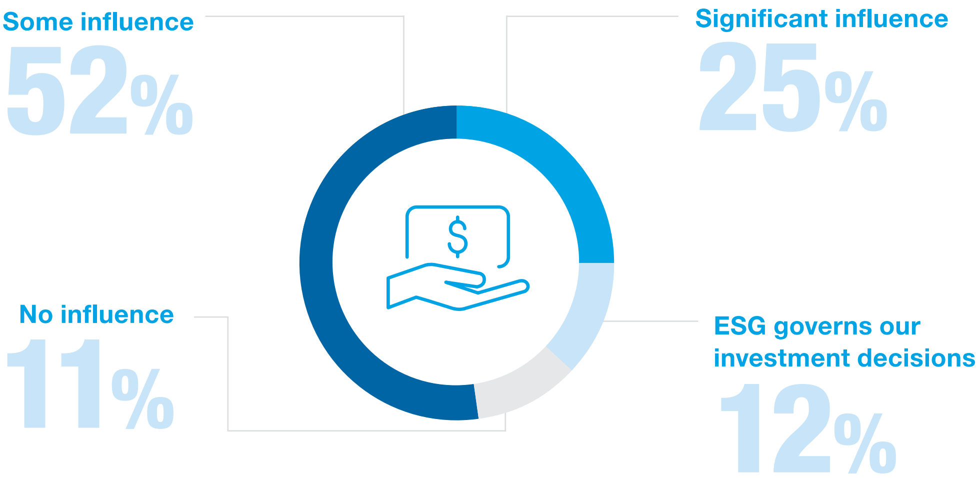
The survey responses reveal a dichotomy in investment decision-making.

On one hand is the widely held belief from almost 80 per cent of respondents that returns will benefit from considering ESG factors in investment decision-making. On the other hand, most investment decisions don't currently appear to be significantly influenced by those same factors – although this is expected to increase, with 91 percent of respondents expecting greater focus on ESG over the next five years.

Does having a good sustainability strategy improve returns?



To what extent do ESG factors influence current investment decisions?



MIRA Market insight

From exclusions to Sustainable Investing

Research shows that investors increasingly believe ESG investing delivers value creation and enhancement. This has seen an evolution from exclusion-based ESG investing to a more active and deliberate approach that includes regular reporting, ongoing monitoring and proactive implementation of initiatives - sometimes called Sustainable Investing. For example, a survey conducted by Environmental Resources Management group (ERM) in 2016 revealed that 95 per cent of survey respondents (GPs and LPs) believe that there is "significant untapped value from ESG in their portfolio companies".[1]

"

We believe good ESG practices are not only good for the world, but would yield superior returns over the longer term.

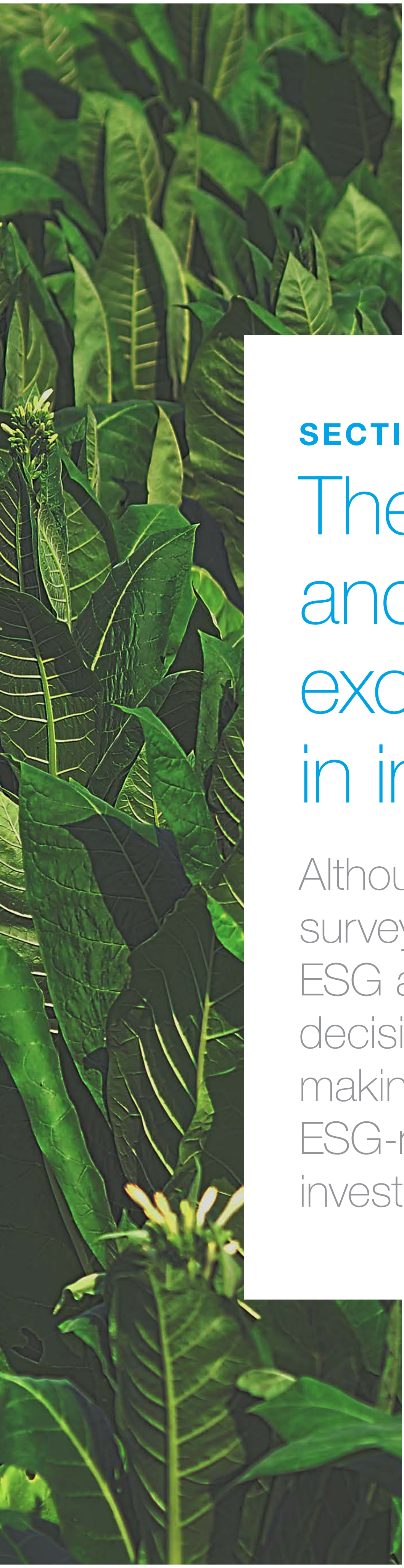
- American investor -

"

Sustainability and resilience are very important given the long-dated nature of the infrastructure asset class and the impact that regulation and reputation can have on returns.

- Daniel McCormack -
MIRA Economist

[1] ERM, https://www.erm.com/globalassets/documents/publications/2016/esg-the-multiplier-effect-an-erm-report.pdf



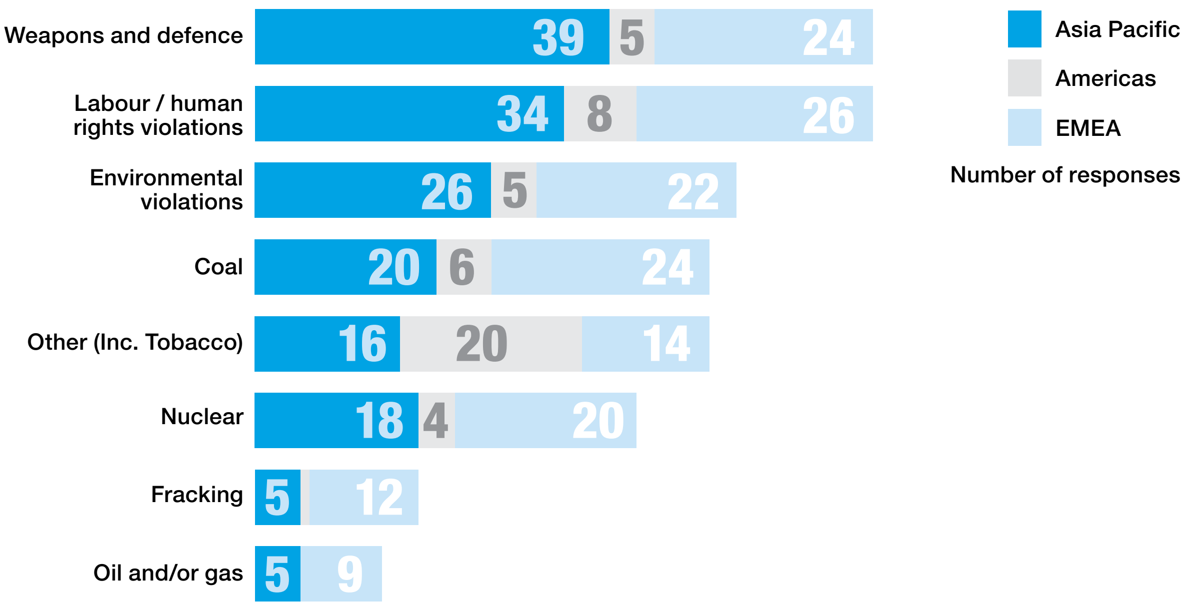
SECTION 3

Thematic allocations and ESG-related exclusions actively used in investment decisions

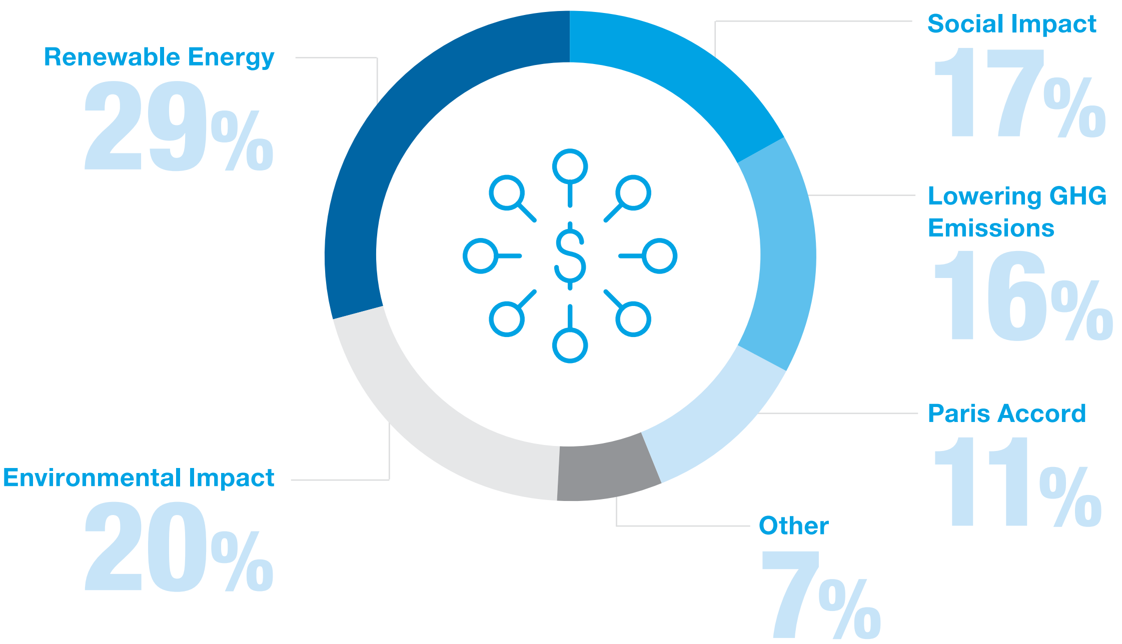
Although nearly two thirds of investors surveyed are not yet using active ESG assessment in their investment decision-making, over 90 per cent are making thematic allocations and using ESG-related exclusions to achieve their ESG investment objectives.

The most common areas excluded are weapons and defence; violations of labour and human rights; environmental violations and coal.

What do you actively exclude from your investment selection?



Investor allocation to ESG strategies



Renewable energy is the most common allocation in ESG strategies

Nearly one in three investors surveyed indicated they are looking to invest in renewable energy.

Renewables were closely followed by investments positively viewed for environmental impact, social impact and the lowering of Green House Gas (GHG) emissions, such as climate mitigation strategies.

SECTION 4

Better disclosure for greater understanding and decision-making

The survey results demonstrate that there is a need for improved information and reporting from managers, and greater in-house ESG expertise for investors, to aid their decision-making.

Currently less than one in four investors quantify the benefits of their asset managers' ESG efforts and performance. With improved ESG focus and disclosure going forward, it is likely this outcome will rapidly change.

Do you quantify the impact of investment managers' ESG efforts?

NO
77%

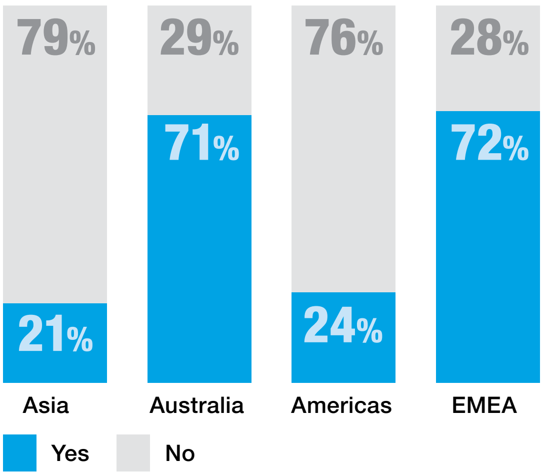
YES
23%

While 91 per cent of investors surveyed expect to increase their focus on sustainability in the next five years, to do so they need improved measurement and reporting of ESG factors and performance from their managers.

At the same time, investors seek to better understand how to integrate this information into their investment decision-making and reporting, for better assessment of investments. They cite concerns about lack of team ability, poor quality of performance information and clarity on terminology.

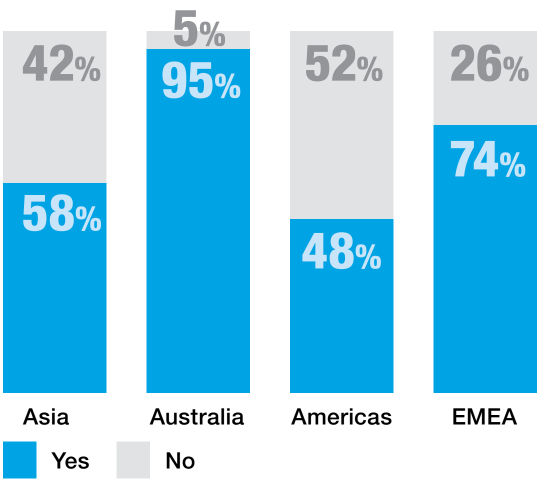
Given the correlations between performance, risk, and ESG management, it is likely that both asset managers and asset owners will increase and enhance their in-house expertise to better inform decision-making.

Does your firm have a dedicated ESG function?

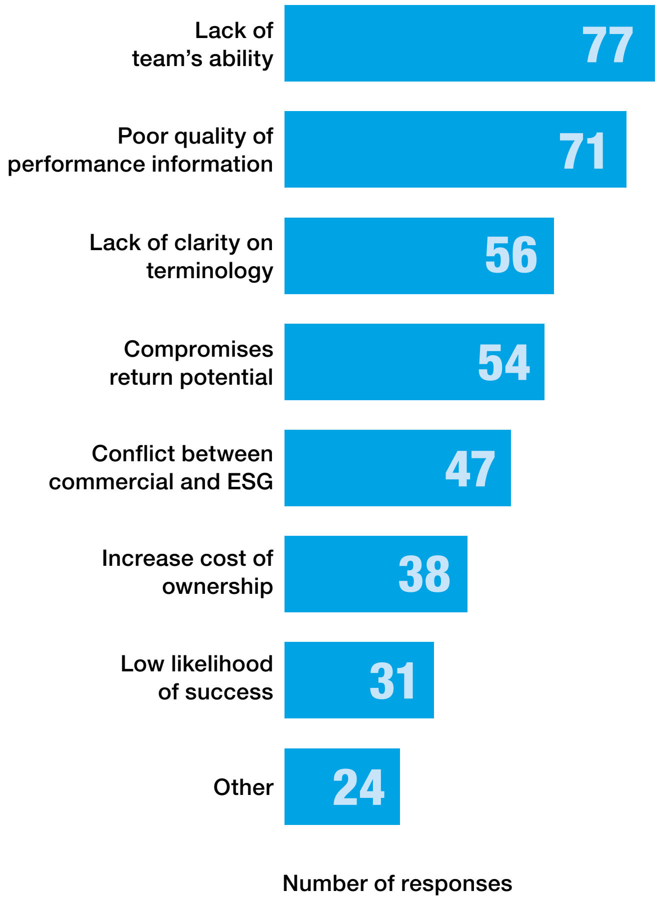


Investors in Europe and Australia are more progressed in integrating ESG into their investment decisions.

Does your firm have an ESG policy?



What do you believe are the biggest barriers to making positive ESG allocations?



> Though we are a late entrant, we are strongly engaging managers that we hire on ESG issues.
>
> - Asian investor -

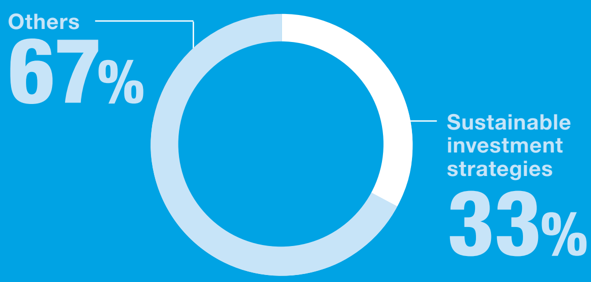
> Best-in class managers understand how to embed sustainability within investment processes and strategy, and utilise it as a value driver, rather than a cost of doing business.
>
> - European investor -

MIRA Market comment

The rise and rise of ESG investing

Demand for ESG-based investing is growing rapidly. From 2016-2018, the amount of capital managed under sustainability strategies grew 34 per cent to $US30.7 trillion and in 2018 accounted for around one third of managed capital globally. The bulk of that $US30.7 trillion comes from EMEA (45.9 per cent) and North America (44.6 per cent).

Sustainable investment strategies are now a meaningful pool of global capital



Source: Global Sustainable Investment Alliance (GSIA) 2018 Review

ESG investment growth: driven by risks and opportunities

One reason for the rapid growth in ESG-focused investing is the perception that risks have increased, including the direct and indirect impacts of climate change; ongoing evolution of political risks; consumer empowerment; regulatory risk; and data security. Investors are also increasingly aware of their own reputation and brand image, and are steering away from controversial investments.

Another is the fact that the performance data is finally confirming the thesis that ESG investing helps create value. This has been difficult to evaluate historically because there were limited tools to identify and benchmark ESG performance and then correlate it with financial returns. The data has become available and the research is much more advanced.

ESG's growth is also driven by new entrants. In the past, the sector was dominated by religious groups, families and foundations, labour pensions, and multilateral development institutions. Today, sovereigns, such as Norway, are complementing their policy interests with investment policies, particularly as they relate to climate change. Insurance companies are also seeking to align the risks they insure with investments that mitigate, rather than exacerbate, those risks.

Public policy is also a contributing factor to ESG growth. The UN Principles for Responsible Investment provided a benchmarking entry point to integrate ESG into investment practices. More recently, the Sustainability Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosure (TCFD) created frameworks for asset owners and managers to disclose and compare data sets.

Lived experience should not be underestimated as a driver of investment behaviour. While the trajectory of climate change has been known for 30 years, it is only in the past 10 years that analysts and the media have linked acute weather events to the fact that we have 385 ppm CO_2 or more in the atmosphere and average temperatures have increased 0.9°C.

SECTION 5

Responding to our investors

The benefits of integrating ESG factors into investment decision are increasingly clear, and feedback from 150 investors demonstrates the growing importance of ESG mandates in the future.

To fully and confidently integrate ESG investing into investment decision-making, the survey results indicate that investors want more detailed information and clear reporting on ESG factors and performance from managers.

From the portfolio company up, MIRA is constantly evolving and enhancing our sustainability strategy and policies. We understand that capturing and reporting better and more detailed ESG information from portfolio companies is critical to improving knowledge, management and disclosure of ESG factors for our investor clients.

MIRA is committed to supporting investors to fully integrate ESG considerations into their investment decision-making with enhanced information, support and by developing ESG products to meet investment needs.

Case Study

Green For Life (GFL) Environmental

GFL Environmental is a provider of diversified environmental solutions across solid and liquid waste management in North America.

During MIRA's ownership period, regulatory and other stakeholder demands meant that sustainability considerations became increasingly relevant for GFL. For example, environmental regulations such as British Columbia's Zero Waste Initiative and the US and Canada's carbon pricing strategies, drove change in the North American waste market. The thrust of these regulatory changes was to require a reduction in waste and lower carbon emissions.

GFL made significant investments in forward-looking 'circular economy' processes. These were aimed at minimising waste and maximising regeneration of resources. One clear example of this was GFL's acquisition of Biocan, a firm that turns food waste and reclaimed sulphur waste into fertiliser. GFL also invested in landfill gas to energy facilities that capture landfill gas and convert the captured gas into a renewable source of electricity for use by households and businesses.

Separately, in a bid to lower costs and be more environmentally friendly, GFL started using clean natural gas to power its solid waste collection vehicles.

GFL also invested in soil remediation facilities that enable contaminated soils otherwise destined for landfill disposal to be reused in construction and development projects. The use of soil remediation facilities not only reduced construction costs but also reduced greenhouse gas emissions from trucking by supporting the beneficial reuse of soils.

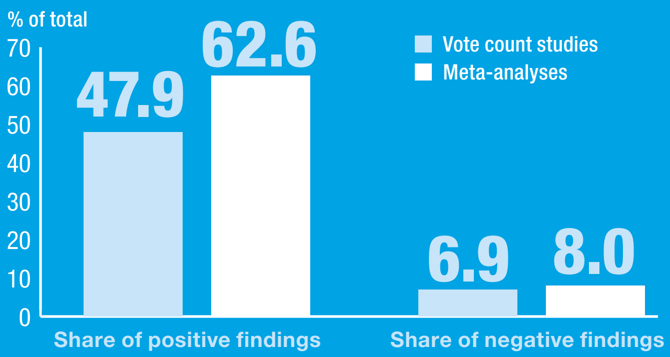
Finally, GFL stood out in terms of governance and human capital management. The culture at GFL, where clear entrepreneurial spirit was combined with low bureaucracy, was a differentiating factor compared to larger operators in the waste market. This distinctive entrepreneurial culture coupled with a stronger focus on sustainability was a positive factor in attracting talent and potential acquisition opportunities.

MIRA Market insight

ESG investing enhances value

Daniel McCormack – MIRA Economist

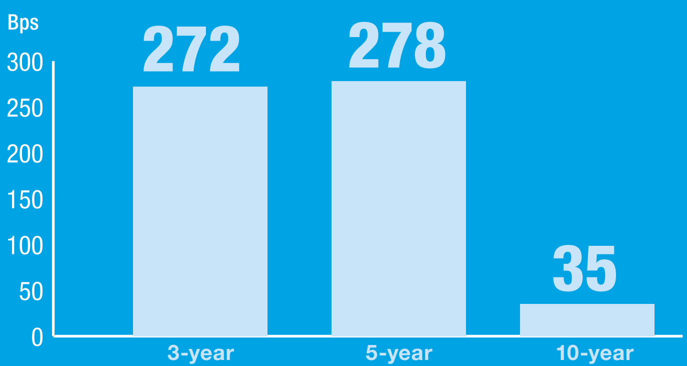
There is now a substantial body of academic literature that examines the question of whether ESG investing improves financial performance. A good summary is provided by the landmark meta-study undertaken by Friede, Busch, & Bassen (2015). The study combined the findings of approximately 2,200 individual studies. They find strong evidence of a positive relationship between ESG and financial performance. The results are summarised in the chart below.



Infrastructure – the benefits of active ESG management

MIRA analysis of listed infrastructure equities[1] shows a difference in returns between stocks with a good ESG rating and those with no ESG rating. Over three, five and ten-year time horizons ESG-rated stocks have performed better than non-ESG rated. This rating can be used to screen investments and create ESG indices. We are seeing this more and more in the equities space.

ESG performance premium

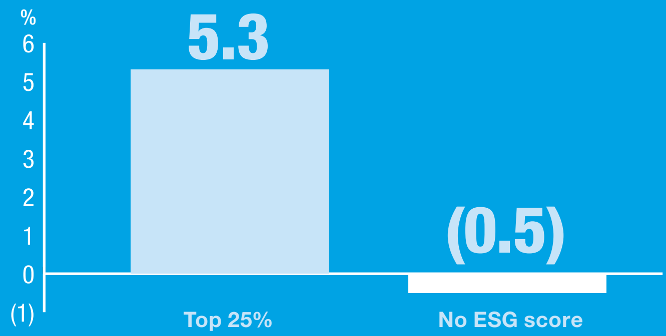


[1] Dow Jones Brookfield Infrastructure Index (DJBII)

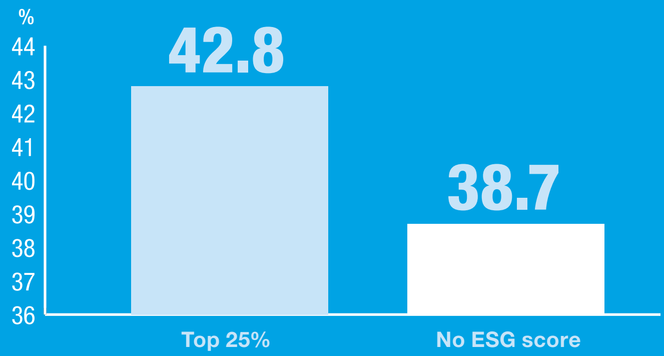
But the impact of ESG can extend beyond returns. For infrastructure investors, cash flow is particularly important. The chart below shows that the DJBII companies that are highly rated on ESG generate more free cash flow (FCF) than non-ESG rated stocks.

Since the start of 2009, ESG-rated stocks have, on average, delivered a FCF yield of 5.3 per cent, while the non-ESG rated stocks return negative FCF.

Free cash flow



In addition, margins for ESG-rated stocks are also higher. The chart below shows, the average margin for stocks with a high ESG rating has been 42.8 per cent since the start of 2009, while non ESG-rated stocks had an average margin of 38.7 per cent.



There is strong evidence of a positive relationship between ESG and corporate performance in listed equity markets, and the effect appears more pronounced in emerging markets.

Our analysis also points to a positive relationship between ESG and financial performance for infrastructure equities. Those companies that rate well on ESG criteria have performed better than those without an ESG score over the long-term. They also generate greater amounts of FCF and have better margins than non-ESG stocks.

Private markets

In private markets companies don't face an intense examination of their financial performance every quarter so are arguably well placed to focus on long-term sustainable value creation. There are five ways ESG factors can improve value for private infrastructure investments:

1. Cash flow. Actions that permanently reduce operating costs can provide long-term dividends. Examples include management initiatives to reduce inputs such as energy, water, raw materials, processing chemicals and other costs. All of these can grow EBITDA from fixed revenue.

2. Higher long-term value. ESG practices can prolong the life of an asset. For example, a waste management company that converts a higher fraction of its waste input into recycled products can extend the useful life of landfills, enhancing the asset's long-term productivity with sustainable practices.

3. Enhanced trust and transparency. Consumers and stakeholders increasingly value practices aligned with long-term sustainability. Consumers want to know how products are sourced, investors seek greater transparency, and regulators and municipalities prefer partners they trust. These elements contribute to corporate image, brand value, and goodwill. ERM's survey found that 30 per cent of portfolio companies experienced commercial advantage from the brand value that ESG gave to their reputation[2].

4. Reduced risk exposure. With the legal and regulatory environment constantly evolving, ESG processes can help to meet current regulatory requirements and anticipate regulatory changes. Acting ahead of formal changes in policy and/or the law can lower costs by smoothing disruptive adjustments, reducing reactive work, and decreasing reputational risk.

5. Improved productivity. Companies with better staff engagement and safety tend to perform better. As well as being a lead indicator of management quality and long-term performance, there are direct financial and operational improvements to be achieved. Turnover is costly, an unmotivated workforce is less productive, and reducing workplace accidents, for example, can improve productivity while creating a safer working environment for employees.

All of these channels are particularly pertinent to infrastructure due to:

1. Long-term investment horizon. Infrastructure assets typically have long holding periods, and the assets themselves last decades. The long-term risks and issues that ESG seeks to address are, therefore, particularly relevant for this asset class.

2. Essential services – asset owners are the custodians. Infrastructure assets provide essential services to the communities in which they operate. If something goes wrong with service provision, a large number of people are affected and as the custodians of these assets, the owners are held accountable. This leads to reputational consequences, in addition to loss of revenue from failure to provide contracted services. ESG inherently prioritises the public's long-term interest. Adhering to it will reduce the risk of these incidents.

3. Reputation and regulation. Infrastructure assets are often regulated, making the owner's reputation with regulators and the community particularly important. Being regarded as a reliable, honest and transparent owner can boost long-term performance and access to future investments.

Vigilance is needed - good reputations take a long time to build, but can be damaged overnight. Adherence to ESG principles and processes to align with the regulators and communities' expectations may burnish that owners' reputation.

In summary

The substantial body of academic literature on this subject points to a robust, positive link between ESG and corporate performance. Our analysis of listed infrastructure shows that ESG stocks have performed better than non-ESG stocks over a long period. ESG stocks also generate greater amounts of FCF and have better margins than non-ESG stocks.

Taken together the evidence provides support for the notion that sustainable investing (the latest evolution of ESG) adds financial value.

In private markets, we believe ESG can enhance value through the five main channels above. These channels are particularly relevant to infrastructure given the long life of most assets, the essential nature of the service they provide, and their heightened exposure to regulation.

[2] ERM,https://www.erm.com/globalassets/documents/publications/2016/esg-the-multiplier-effect-an-erm-report.pdf ESG investing and its impact on infrastructure returns

For more information contact your MIRA Relationship Manager or email us at mirafunds@macquarie.com.