SCALING UP

Investing for low carbon solutions

August 2018

Investor Group on Climate Change

The Investor Group on Climate Change (IGCC) is a collaboration of Australian and New Zealand institutional investors and advisors, managing over $2 trillion in assets under management and focusing on the impact that climate change has on the financial value of investments. IGCC aims to encourage government policies and investment practices that address the risks and opportunities of climate change. www.igcc.org.au

Acknowledgments

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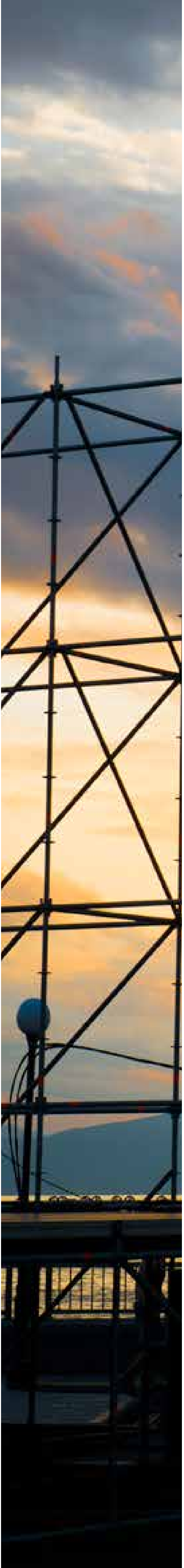


EXECUTIVE SUMMARY

Low carbon climate resilient infrastructure will be a defining investment theme of the 21st century. For investors, finding and backing green infrastructure projects that generate strong, stable and sustainable returns remains challenging, but is critical for tackling climate change. Developing the real-world solutions which unlock capital and embed low carbon at the heart of investment decisions requires the financial and corporate sectors to step up ambition and act.

The Investor Group on Climate Change (IGCC) has undertaken this study of local markets due to increasing demand from broader stakeholders to better understand the low carbon investment landscape and potential barriers for long term institutional investors to allocating further capital towards the transition to a net zero emissions economy. We have also sought to assess trends and changes which have emerged in the past 12 months.

The report provides the collective views of Australian and New Zealand investors with funds representing over AU$1.3 trillion in assets under management surveyed in May-June 2018. These investors include superannuation funds, asset managers and sovereign wealth funds. It is the second time we have undertaken this review, and builds on our previous report *Road to Return: Investing in low carbon solutions.*

The survey has been undertaken against a landscape which continues to rapidly evolve. Investment is growing, momentum is growing and capital is being deployed into low carbon solutions in unprecedented numbers. But significant challenges remain.

Around AU$300 billion was invested in renewables globally in 2017, excluding large hydro, and a record 157 gigawatts of renewable power were commissioned last year, up from 143 gigawatts in 2016 and far out-stripping the net 70 gigawatts of fossil-fuel generating capacity added (after adjusting for the closure of some existing plants) over the same period [1].

However, a significant gap remains between the level of current global climate investment and the level required. The International Energy Agency (IEA) estimates that current global climate finance flows are around US$391–714 billion annually. Over the next 15 years, investments of US$900 billion annually will be required to meet the current national pledges made under the Paris Agreement. To actually limit global temperature increase to 2°C, US$1.13 trillion will be required annually [2]. Institutional investors clearly have a vital role to play in unlocking finance and scaling up investment to meet this challenge.

So where are we today? How are institutional investors thinking about the opportunities, and the challenges of scaling up investment? What tools are investors using and how are impacts being measured?

The insights presented in this report provide a snapshot of current investor sentiment, highlighting some of the factors driving investor thinking and behaviour as they seek to respond to climate change risks and pursue low carbon investment opportunities.

INVESTOR MILESTONES

How institutional investors are thinking about low carbon and green investment opportunities and challenges

INVESTORS ARE GETTING ON WITH IT:

Momentum and appetite for low carbon and green investment remains strong and is accelerating. Investors are actively looking for low carbon opportunities and ways to get deals done.

NO ONE SIZE FITS ALL ASSET CLASSES:

There is increasing activity and interest in low carbon opportunities across a broader range of asset classes. Investors are using a broad range of methodologies for defining 'Green Investment', tailored to the needs of each asset class.

INNOVATION AND INTEGRATION ARE DRIVING DIVERSIFICATION:

Increasing data availability across industry sectors coupled with more innovative solutions coming to market appears to be underpinning greater diversification in low carbon investment activity.

DOING DEALS IS HARD, REGULATORY UNCERTAINTY STILL A MAJOR BARRIER:

Investors are increasingly focused on the challenges of deal execution. Policy uncertainty remains a significant barrier to further investment activity.

METHODOLOGY

This report looks to provide deeper insight into the preferences for current and future investment in climate solutions and perceived barriers for investment by asset owners and fund managers in Australia and New Zealand. In its second year, we are now able to gain further insights into emerging trends.

During May-June 2018, the IGCC undertook a quantitative survey of institutional investors regarding current and future appetite for green investments.

The questions were modelled on the previous survey conducted by IGCC in 2017 and captured in the report *Road to Return: Investing in low carbon solutions*[3]. The survey was adapted from an original version first developed by the European Institutional Investors Group on Climate Change (IIGCC) who undertook a similar survey of European members in March 2017.

This year, a total of 30 participants representing over AU$1.3 trillion responded to the survey, from both Australia and New Zealand and including a mix of asset owners and managers. Additional qualitative information was also sought to enable participants to provide further depth to their responses.

The questions focused on a range of topics including the methodology and definitions used to define green or low carbon investments, current implementation of green investment strategies across both markets and asset classes, targets, measurement and monitoring of impacts and barriers to green investment.

This year the question set was expanded in several areas. The definition of green investment activity included broader low carbon investment to recognise the significant work investors have undertaken to reduce the climate intensity of their investments. Also, additional questions gained insights into how asset owners are integrating climate change into investment mandates. The survey also began to explore the social dimension of climate change.

This survey seeks to capture the evolution of investor thinking on low carbon investment opportunities: how and where institutional investors are deploying capital, what solutions are emerging across asset classes and key challenges.

NEW ZEALAND SUPER FUND

FINDING PORTFOLIO DIVERSIFICATION IN TIMBER

New Zealand Super's timber portfolio has delivered strong returns since inception. In New Zealand, the Fund owns a 42% stake in Kaingaroa Timberlands, the owner of the Kaingaroa forest plantation. Located in the central North Island between Taupo and Rotorua, Kaingaroa covers around 180,000 hectares of planted forest, the bulk of which is radiata pine, with a small quantity of douglas fir and other species. The Funds investment in Kaingaroa Timberlands continued to perform well this year, both in terms of cash returns and valuation uplift.

Outside New Zealand, the Fund holds timber investments in a diverse range of geographies, including Australia, Brazil, Uruguay, Chile, Guatemala and Cambodia, via its investments in two funds: Global Timber Investors 8 and 9. The fund's are managed by Global Forest Partners LP (GFP), a specialist timber investor based in New Hampshire. These investments expand the Fund's timber investments beyond New Zealand, helping to diversify exposure by geography and species.

NEW FORESTS

FOREST CLIMATE SOLUTIONS AND CONSERVATION FINANCE IN THE UNITED STATES

Since launching its US business in 2007, New Forests has pioneered investments at the forefront of timberland and environmental markets and was the first company to successfully register a forest carbon offset project in California's cap-and-trade program. Since then, New Forests has grown to be one of the leading suppliers of forest carbon offsets in the California market.

Forest Carbon Partners – New Forests' carbon project finance vehicle – works with Native American tribes and corporations, non-profit land trusts, and private owners to develop high-quality carbon projects that deliver climate mitigation and support landowner conservation objectives.

Building on this expertise and New Forests' timberland investment track record, their Forest Climate Solutions investment strategy in the US seeks to provide higher returns by combining revenues associated with timberland investment, carbon management, and conservation finance - all while providing measurable, verifiable climate change mitigation. In this way, US forests are a climate solution as well as a compelling investment opportunity.

DEFINING GREEN INVESTMENTS

Investors are still not tied to any one methodology, and are increasingly using different approaches to assess and measure green investments depending on the asset class.

Following last year's findings, no one methodology has yet emerged as a clear winner for investors. Despite the absence of a clear framework for defining 'green', it is not acting as a barrier to investment.

What is evident is the rising importance of scoping and measuring green or low carbon investment in some way. This could reflect the heightened focus on disclosure and advent of recommendations from the Taskforce on Climate-Related Financial Disclosures (TCFD), as suggested in last year's analysis.

There has been an increase by investors in both the uptake of existing methodologies and tailoring measurement to individual asset classes. This has translated to multiple approaches being used depending on the asset class being assessed. Qualitative responses by participants indicate an increasing influence of bespoke or proprietary methodologies by third party service providers, particularly for listed equities. Despite this, anecdotal feedback by participants has suggested that investors are still struggling with methodologies and definitions for green.

Over half of all participants in the Australian survey indicated that they were using 'other' methodologies, followed by the Low Carbon Investment (LCI) Registry (37%) and the Green Bond Principles (16%). Table 1 highlights the comparison with last year.

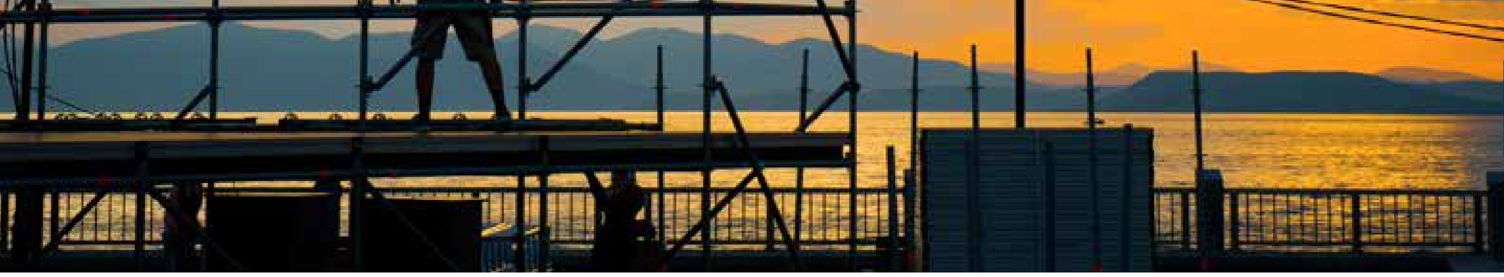
Table 1. Comparison in use of methodologies used to define green investments

Methodology *	2017	2018
Climate Bonds Initiative (CBI)	11%	11%
IFC Definitions	0%	5%
Green Investment Bank or equivalent (eg CEFC or NZ Green Investment Bank)	6%	11%
Green Bond Principles	6%	16%
Low Carbon Investment Registry (LCI)	24%	37%
Other	53%	53%

*These numbers are not directly comparable, respondents in 2018 were able to select more than one methodology.

While the majority of methodologies have their own unique approach, some are quite similar or build upon each other. For example, the CBI and the LCI have significant overlap. The difference is in how they are used. For example, an investor would use the CBI to determine if a product or investment qualifies as a green bond, whilst the LCI is purely to capture the flow of institutional capital into climate related investments.

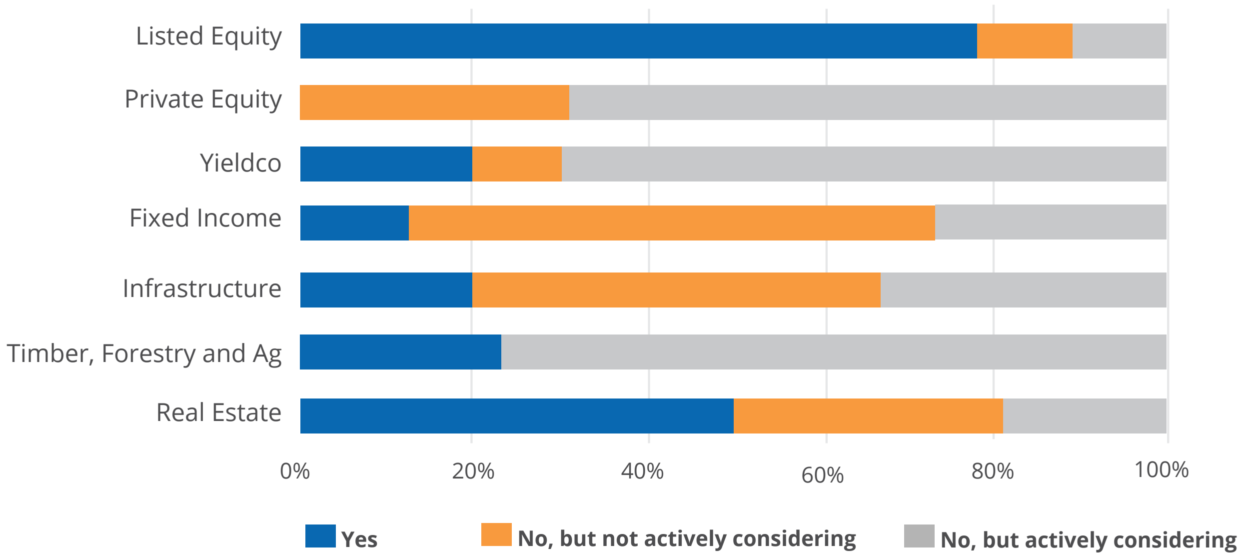
The 2018 findings seem to reflect that approaches for defining green investment are more effective within a sector or for a product rather than applied at the portfolio level. For example, using third party service providers for an equities portfolio, or Australian green building standards such as NABERS Energy Rating and Green Star for real estate.



Investors may also be choosing climate reduction strategies in addition to investing in low carbon opportunities. For example, strategies that exclude or tilt away from high carbon intensive assets or investments such as portfolio optimisation for passive equities. One of the primary methods to achieve reduced carbon intensity is through use of carbon footprint metrics. Whilst it is well understood this is not a pure measure of risk, it has been the most consistent and enduring measure and an ongoing recommendation of the TCFD.

The results continue to show a higher level of activity in asset classes where it is arguably easier to assess the carbon footprint, namely, listed equity and real estate (Figure 1). Further uptake may be observed in future years for infrastructure, primarily due to GRESB, and fixed income, flowing on from listed equities. It remains to be seen if carbon footprint continues to be a key metric following the next wave of new tools likely to become available in the coming years.

Figure 1. Asset classes where investors have undertaken a carbon footprint



Overall, given the pace of change, we are yet to see a future convergence in green methodologies. Last year we suggested the importance of standard green definitions may be driven by the TCFD although this has not occurred. This year we have seen the more commitments to develop Australian and New Zealand specific Sustainable Finance Roadmaps[4], the launch of The Investor Agenda1 and momentum around the Sustainable Development Goals (SDGs), driving either greater climate related allocation of capital or disclosure requirements for asset owners. Arguably, rather than standardisation, we are actually seeing greater diversification of approaches at this time.

UNISUPER

SUSTAINABLE INVESTMENT OPTIONS

In providing for member choice, UniSuper introduced its Sustainable High Growth option in 2001 (100% listed equities) and in 2007 introduced a Sustainable Balanced option (listed equities and fixed income, including green bonds). The investment approach adopted in relation to these options has evolved over time and in 2014, UniSuper put in place a range of sector exclusions (previously, a purely best in class investment approach had been adopted).

In doing so, UniSuper excluded fossil fuel producers and explorers as a means by which to provide their members with the ability to avoid fossil fuels. They have a robust three-tier exclusion process in place, using quantitative and qualitative data in order to identify and exclude fossil fuel producers and explorers (and those companies whose business models are heavily reliant on the fossil fuel industry).

While they are aware of the limitations of carbon foot printing, it is still interesting to note that the carbon footprint of the equities component of these options is 16% of the MSCI ACWI. Put simply, UniSuper's Sustainable options are 84% more carbon efficient than the benchmark.

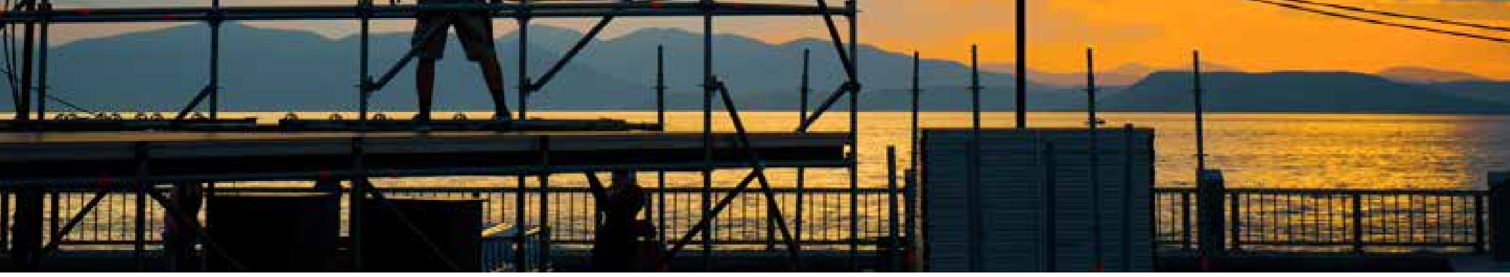
These two options are both managed internally by UniSuper's investment team, which ensures that they are able to maintain direct oversight and control of the investment process. Around 6% of UniSuper's members have put some or all of their superannuation into these options (equating to ~8% of total funds under management).

BLOOMBERG BARCLAYS MSCI

GLOBAL GREEN BOND INDEX

The Bloomberg Barclays MSCI Green Bond Index offers investors an objective and robust measure of the global market for fixed income securities issued to fund projects with direct environmental benefits.

An independent research driven methodology is used to evaluate index-eligible green bonds to ensure they adhere to established Green Bond Principles and to classify bonds by their environmental use of proceeds. The index was created in November 2014, with index history backfilled to January 1, 2014.

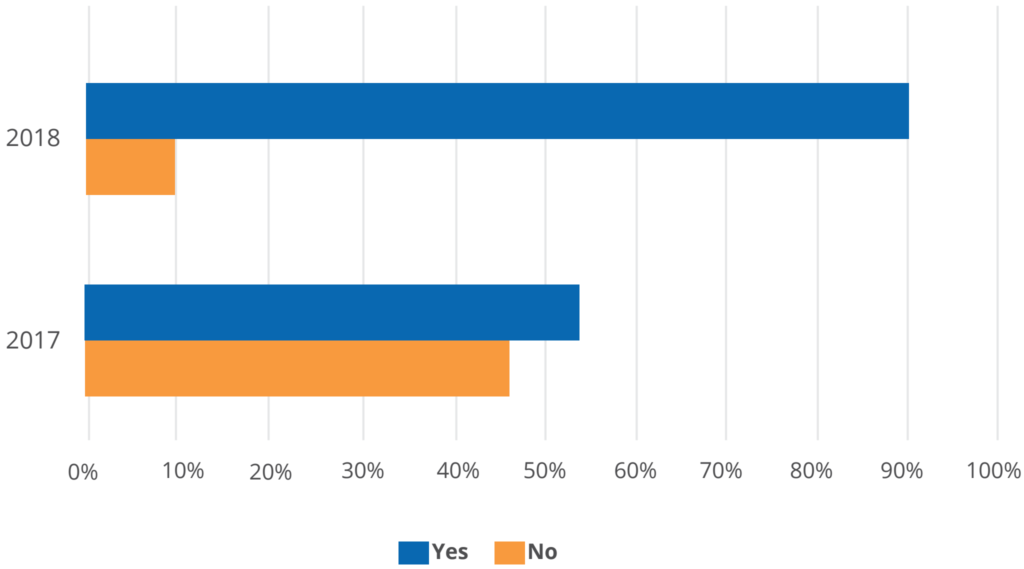


GREEN INVESTMENT ACTIVITY

Strong increase in the proportion of investors implementing green investment or low carbon strategies. Investors are finding deals where they can by market and asset class. Integration, innovation and diversification all key trends.

Since last year, we have seen a significant increase in the proportion of investors implementing a green investment strategy (Figure 2). This would indicate strong momentum and growth in investor appetite for low carbon solutions.

Figure 2. Proportion of investors implementing low carbon strategies



There was a clear trend for investors to be active in all markets. Increased diversification across markets was up significantly from last year (Figure 3 and 4). We have also seen a rapid shift in appetite from investors becoming more comfortable with emerging markets. This was identified as a trend to watch last year, with a significant amount of climate related investment opportunity anticipated in emerging markets between now and 2030.

Only a small number of investors are not considering any investment, whether internationally or in emerging markets.

Figure 3. Markets in which investors are currently active or considering green investments (2018)

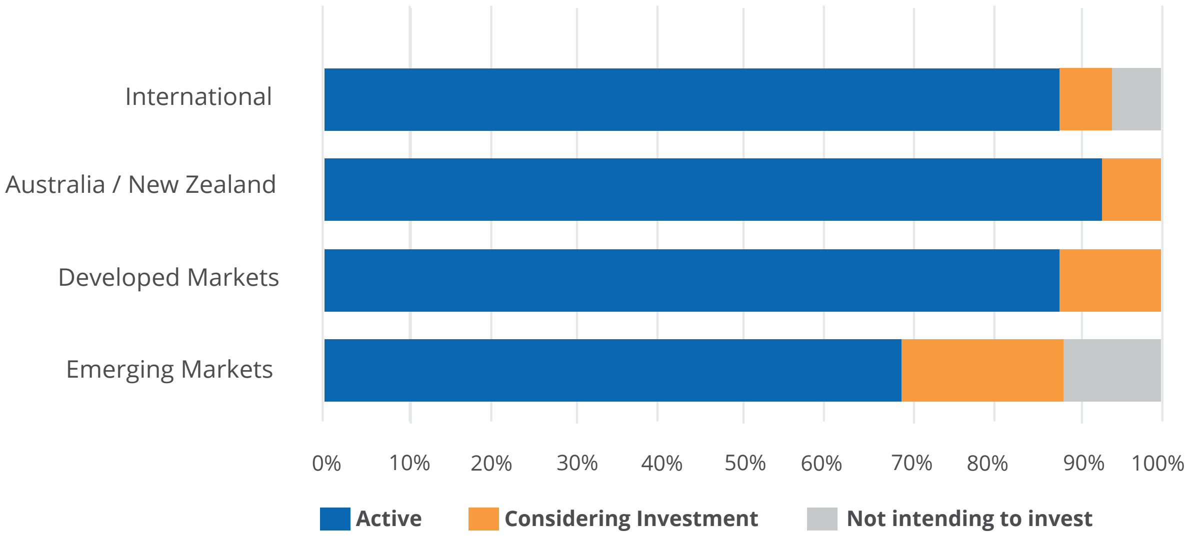
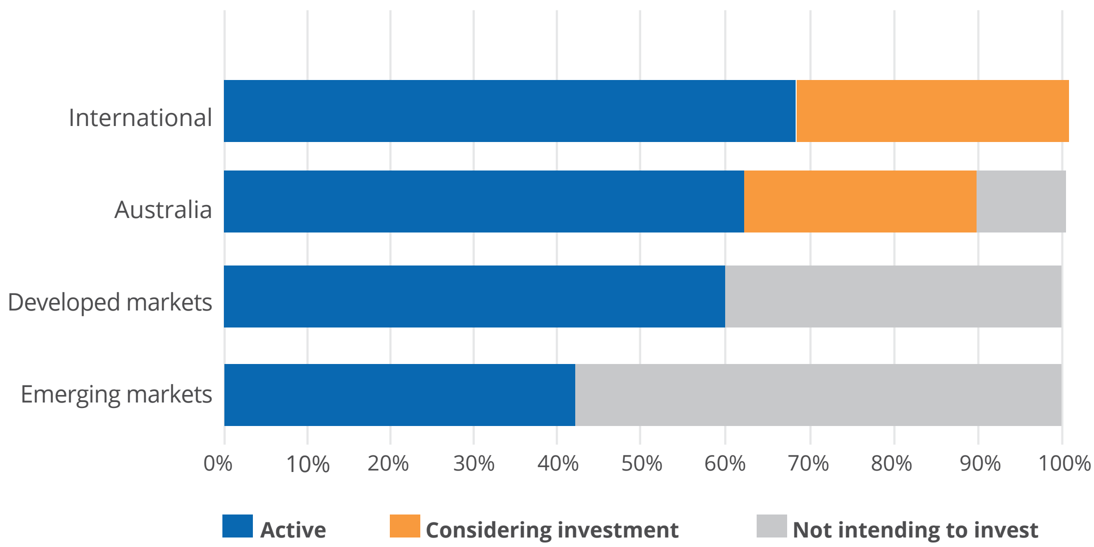


Figure 4. Markets in which investors are currently active or considering green investments (2017)



Which asset classes are considered favourable to low carbon and green investments?

A new wave of low carbon and green investment activity is emerging in a broader range of asset classes as investors look for viable low carbon opportunities.

The investor commitment recorded in the 2017 IGCC survey to consider a broader suite of asset classes appears to have been largely realised (Figures 5 & 6). The previous dominance of listed equities, real estate and fixed income, as the preferred asset classes for allocating green capital, has reduced with investments evident in other asset classes. This increased diversification may reflect the growing number of products being developed to support low carbon and green investment or merely that data quality and disclosure has increased and is being utilised.

Figure 5. Asset classes in which investors are currently active or considering green investments (2018)

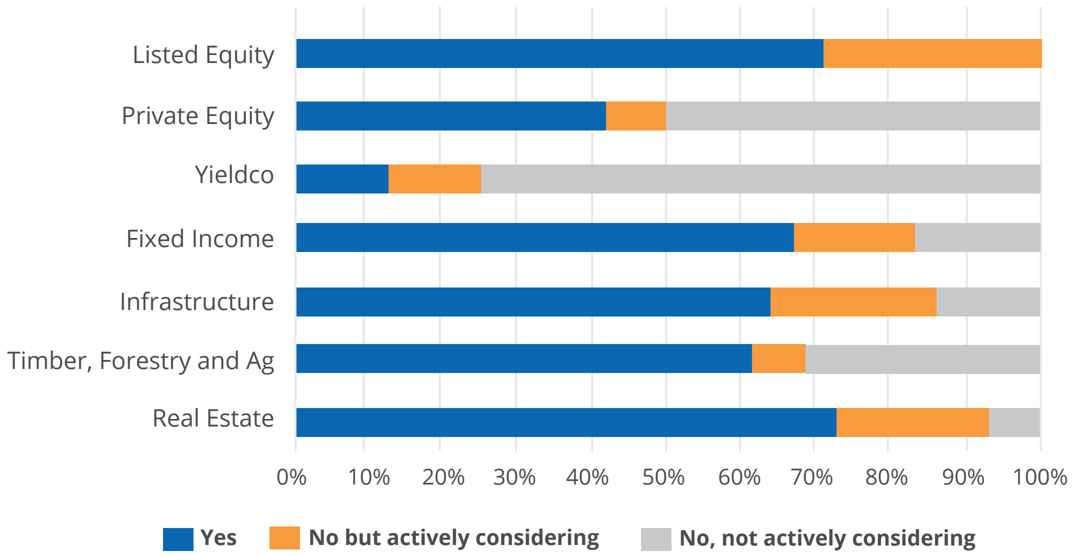
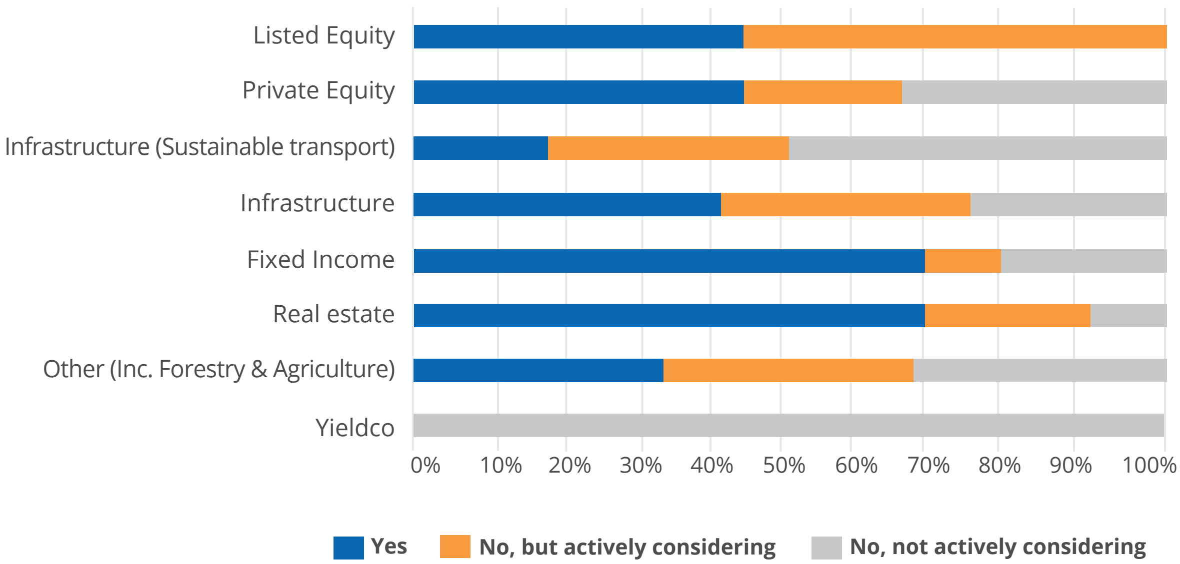


Figure 6. Asset classes in which investors are currently active or considering green investments (2017)



Investment in infrastructure has risen in the absence of stable energy policy in Australia. Like last year, while the type of investments in infrastructure wasn't explored in detail in IGCC's survey, participant feedback suggests that green investments beyond renewables are increasingly being considered, including the potential for energy efficiency gains or emission reductions across existing assets.

Real estate has remained a stable green asset class, particularly in the commercial building space. Given the real estate sector in Australia is now seeing a move towards Science Based Targets and net zero emissions, energy efficiency and low carbon investment is likely to continue to feature prominently as an asset class attracting green investment.

The strong growth in green bonds may explain the ongoing large allocation to fixed income in climate-related investments (Figure 5). The most recent Climate Bonds Initiative State of the Market Australia and New Zealand 2018 found a cumulative green bond issuance for Australia of AU$8.3 billion, and for New Zealand with NZ$2.1 billion (US$1.5 billion) for a combined total of AU$10.2 billion in green bond issuance to date. Australia was the second largest cumulative source of issuance within the Asia Pacific region in H1 2018, second to China and twelfth in the overall world ranking.

Yieldco has come on the radar since 2017 with both recorded active investments and as being under consideration for future investment. Timber, forestry and agriculture as an asset class has emerged more prominently.

A large appetite exists from institutional investors for ongoing investment in low carbon or green solutions with 100% of respondents again indicating the intention to increase low carbon investments in the coming years.

Do investment mandates reflect investor appetite for green investments?

Climate change is emerging in investment mandates. The drive for TCFD disclosure may be an emerging influence. Asset owners and managers have mixed views.

Over 50% of asset owners responding to the survey indicated that climate related goals or green investment factors are considered in mandates with fund managers. Comments from asset owners suggest this is specific to strategies that have climate change objectives such as socially responsible investment options or themed mandates.

Given the response that nearly 40% are actively considering incorporating these requirements into mandates, this is likely a growing area of focus for asset owners.

Interestingly, fund managers reported that between 0-25% of asset owners require climate related obligations in mandates. This may seem a contradiction to the above response by asset owners, although it is logical given asset owners are only referring to relatively few explicit mandates.

These numbers may also increase in the future as asset owners increase mandates relating to green investment but also use them as an opportunity to request climate related disclosures from their fund managers for the purpose of their own TCFD reporting.

CATHOLIC SUPER

RENEWABLE PROJECTS IN EMERGING MARKETS CREATING SOCIETAL BENEFITS

A few years ago, Catholic Super made an investment in the Global Energy Efficiency and Renewable Energy Fund (GEEREF). Many developing countries lack reliable electricity and rely on diesel generators, kerosene lamps and wood fires, which impact their health, environment and economic outcomes.

GEEREF invests in renewable energy projects in developing countries around the world. Not only do these projects generate clean electricity, they also create jobs and efficiencies for local communities, providing enormous social, and development benefits.

This Fund was raised by an arm of the European Investment Bank and has a 50/50 mix of A shareholders (the German and Norwegian governments and the European Commission) and B shareholders (private investors). Catholic Super is the largest B shareholder, providing approximately 40% of the total B shares. Despite the “global” in the fund’s name, underlying investments are entirely in developing countries. GEEREF’s assets include windfarms, solar farms, geothermal projects and hydro projects in developing countries across the globe.

CBUS

A BRIGHT FUTURE FOR ENERGY

Cbus, alongside the Dutch Infrastructure Fund (DIF) will hold an 80.1% equity interest in a portfolio of wind and solar renewable generation assets known as Bright Energy Investments (BEI). Synergy, the Western Australian Government owned electricity generator and retailer will hold the remaining 19.9%.

This was a rare opportunity to obtain a portfolio of renewable energy assets with long-term contracts as well as the opportunity to access a pipeline of future greenfield renewable assets.

The partnership approach taken with Synergy and DIF reflects the alignment of long-term interests to deliver sustainable power to Western Australian communities whilst also creating approximately 200 new construction jobs in WA’s mid-west region.

The investment is unique in that it enables all stakeholders to contribute to the United Nations Sustainable Development Goals through strong, sustainable long-term returns for Cbus members as well as make a meaningful contribution to the West Australian economy, creating local jobs and supporting the development of sustainable power for the communities.

The social dimension

Recognition of the need to manage social and climate factors together is growing.

This year, for the first time IGCC also surveyed how investors are considering the social dimension of low carbon and green investment.

Investors are becoming increasingly cognisant of the societal impacts and expectations of transitioning to a low carbon economy and a focus on impacts and outcomes of their investments more broadly.

Over 60% of survey respondents indicated that they incorporate the social dimension into their low carbon investments.

For those investors that consider social issues, the most favoured approach is the Sustainable Development Goals which has seen a significant rise in investor uptake in the past year. More general social and impact investment approaches are also popular with factors relating to a Just Transition important to a significant number of investors.

Setting targets for green investments

Investors are starting to set targets. But getting the right approach is still challenging and slowing progress.

Targets are starting to emerge from investors committed to reducing their carbon intensity but also in identifying targets for allocating capital to opportunities.

This is still very much in its infancy with only 20% indicating they had set measures and only 10% of those being public. Additional feedback from fund managers suggests that investors are currently more interested in funding practical investment solutions than setting overarching targets.

This sentiment supports the 2017 findings and feedback that investors are still predominantly focused on ensuring the investment or strategy is assessed on its individual merits and meeting the required risk return profile rather than setting specific green targets. However, this could be an emerging trend to watch given the change we have already seen in the course of a year.

Anecdotal feedback from survey respondents also suggested that their activity is moving away from portfolio based targets to asset class specific metrics. This may reflect pressure from activities such as TCFD and The Investor Agenda, focused on disclosure of such metrics. This may provide the impetus for a more rapid uptake in targets by asset owners.

BARRIERS TO GREEN INVESTMENT

Investors are getting on with it. With more investment activity across a wider range of asset classes, barriers are more evenly spread across the practical challenges of execution. However, resurgence of political instability in Australia after the survey closed is not reflected in these results and will likely change the numbers.

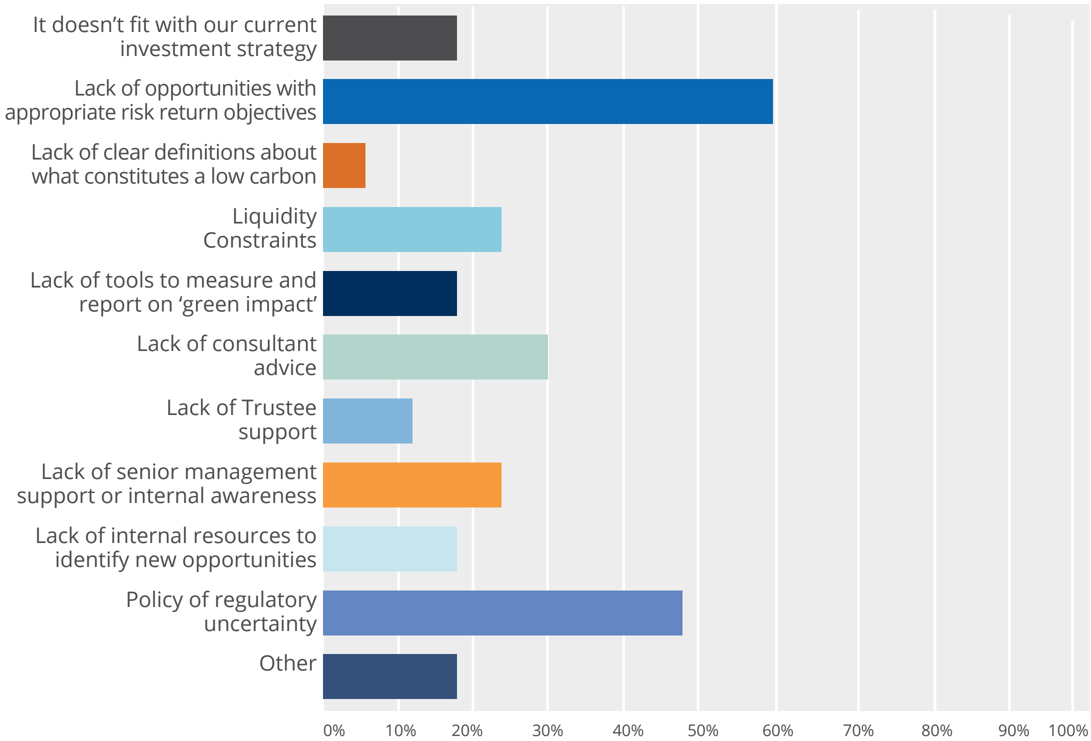
Lack of opportunities continues to dominate identified barriers. However, it has reduced significantly since 2017, and now appears to be spread across a broader range of transactional or organisational barriers related to deal or strategy execution.

A previous lack of trustee support highlighted last year, has largely dissipated but lack of management support has risen. Trustees are on board but management are now likely trying to work through how to execute when appetite is outstripping potential opportunities that achieve the required risk adjusted return for investment.

In 2017, policy and regulatory uncertainty was identified as the other dominant barrier to investment. This has dropped significantly in the 2018 results.

However, it should be noted that this survey was undertaken in the period before the collapse of negotiations on the National Energy Guarantee in Australia and before the events which overthrew Prime Minister Turnbull and re-set the Government policy agenda. Since then, investment confidence in the domestic Australian low carbon investment environment has re-set and it is likely that sentiment has soured more than is represented in the data.

Figure 7. Perceived barriers to green investment (2018)



FIRST STATE SUPER

AU$205 MILLION INVESTED IN DARLING SQUARE - 6 STAR GREEN STAR DESIGN & AS BUILT CERTIFICATION

Darling Square is a next generation A-grade commercial office building situated prominently within the Darling Harbour Live urban regeneration precinct in Sydney. It is targeting 5.5 Star NABERS Energy and 4.5 Star NABERS Water outcomes. Construction commenced during early 2015 and practical completion was achieved on 21 July 2017. The developer, builder and investment manager is Lendlease and the architects were Woods Bagot.

In June 2018, Darling Square was awarded a 6 Star Green Star Design & As-Built certification from the Green Building Council of Australia (GBCA). To achieve a rating at this level, a score of 75 points of more is required under the Green Star assessment criteria. The building yielded 79.4 points, well above the necessary 75 point threshold. Contextually, under the GBCA rating system, a 4 Star rating represents Australian best practice, 5 Star represents Australian excellence and 6 Star represents international excellence.

The building was a finalist in the Development of the Year category at the recent Property Council of Australia Innovation & Excellence Awards 2018. It was also an award winner in the architecture category at the 2018-19 Asia Pacific Property Awards. The building is a showcase for sustainable office development and illustrates how successful partnering between the owners, builder, developer and tenant can deliver strong outcomes.

CONCLUSIONS

In summary, low carbon and green investment activity is growing, innovating and diversifying across a broader range of markets and asset classes.

While no industry standard for assessing or measuring green or low carbon investments has clearly emerged, there has been an absolute increase in the uptake of different frameworks, applied across new asset classes and applying new tools from third party service providers to measure equity portfolios. This momentum is likely to continue with pressure on investors to disclose building in line with the TCFD and industry-led platforms such as The Investor Agenda.

Investors are still using their standard asset allocation for allocating capital to green investments. The dominance of real estate and fixed income have subsided with the predicted increase in infrastructure and listed equities from last year coming to fruition.

Local asset owners have started setting targets for allocating capital. Although the baseline remains low and the practical challenges remain evident, investors are reporting on measures taken to reduce the carbon intensity of portfolios. The release and widespread adoption of the final recommendations of the TCFD may have been a catalyst in driving this change in investor reporting behaviour. Looking ahead, this will be a trend to watch.

Barriers to green investment have evolved in response to increased investor activity. Investors appear to have moved to the implementation phase and strong trustee support is evident. Lack of investable deals at scale and policy uncertainty remain major barriers to increased investment.

While in their infancy, we are seeing new areas of activity emerge, such as asset owners using mandates to drive low carbon investment activity and also increasing recognition of the importance of the social dimensions of climate change.

Overall, there was widespread activity and uplift since the 2017 survey and a strong desire to continue to pursue low carbon investment opportunities to support the objectives set out in the Paris Agreement of limiting global warming to less than 2°C was evident.

IGCC will continue to support growing appetite among institutional investors for low carbon investments, and to work with our members to develop investable solutions to facilitate the transition to a low carbon economy.

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4. The Investor Agenda is a new platform for showcasing global investor actions on climate change. It was developed by IGCC, the Asia Investor Group on Climate Change (AIGCC), the Institutional Investors Group on Climate Change (IIGCC), Ceres, CDP, PRI and UNEPFI. www.theinvestoragenda.org

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