

# MOBILISING CLIMATE INVESTMENT IN EMERGING MARKETS

Opportunities for Australian pension and superannuation funds

May 2023



Investor  
Group on  
Climate  
Change



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### **About the Investor Group on Climate Change**

The Investor Group on Climate Change (IGCC) is a collaboration of Australian and New Zealand institutional investors focused on the impact of climate change on investments. IGCC represents investors with total funds under management of more than \$3 trillion in Australia and New Zealand and \$30 trillion around the world. IGCC members' beneficiaries include more than 7.5 million people in Australia and Aotearoa New Zealand.

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# 1. Executive Summary

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As the long-term custodians of trillions of dollars in retirement funds, institutional investors have a fiduciary duty to deliver sustainable returns for their beneficiaries. Unless climate change is addressed in an orderly and just way, future investment returns are likely to be threatened.

One of the most significant challenges in addressing climate change will be financing the transition to net zero emissions in emerging markets and developing economies (EMDEs<sup>1</sup>), many of which must manage the dual challenge of decarbonising their electricity, transport and industrial systems while continuing to drive ongoing social and economic development.

Institutional investors such as pension funds are often cited as potential sources of investment in climate mitigation, adaptation and sustainable development, given the size of the global pension market, which reached USD\$56 trillion in assets under management in 2022. Pension funds are also active as responsible investors, including making commitments related to climate change, sustainable development and human rights.

Despite this, significant mobilisation of investment in climate solutions in EMDEs from pension funds is yet to occur, despite estimates from the World Economic Forum that the market could be worth USD\$2 trillion per year by 2026.

This paper provides a summary of the barriers and opportunities for Australian superannuation funds to invest in climate solutions in EMDEs, concluding with a series of recommendations. To assess the topic, IGCC conducted a series of stakeholder interviews, supported by desktop research. This paper covers climate solutions broadly but focuses largely on renewable energy (RE), given the need to rapidly increase investment in RE in EMDEs and the relative maturity of this technology.

There are a range of complex barriers for institutional investors to invest in EMDE markets. The main barriers identified include:

- The overall risk profile in EMDEs including currency, governance and geopolitical risks.
- Return profile and cost of capital.
- Small project or deal size (this is particularly the case for solar projects), particularly in smaller EMDE markets such as countries meeting the OECD definition of least developed or low income.
- Construction and development risks, such as permitting, approvals and land rights.
- Climate and energy policy settings within EMDE markets being insufficient to drive investment.
- ESG data availability and standards making it difficult to assess and price risk.
- Lack of internal market-level expertise at superannuation funds.

Many of these barriers are complex and differ substantially depending on the EMDE market and the project or asset under consideration. Despite this complexity, it is clear from the consultation for this paper that there is an appetite to address and overcome these barriers given the potential for financial, social and environmental outcomes from mobilising climate investment in EMDEs.

Some of the opportunities or enablers that were identified in the research for this paper include:

- Combining public finance with private capital via blended finance or other financial structures to de-risk investments.
- Increasing offtake certainty for RE projects, for example through reducing counterparty risk, using power purchase agreements and other ways to assure a certain return over a long period.
- Focusing on investment in EMDE markets with stable and positive climate and energy policy settings and targets.
- Boosting expertise and capacity regarding climate solutions and EMDE investing within the superannuation sector.

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<sup>1</sup> This paper has adopted the definition of 'Emerging Economies' as used by the IEA in its Financing Clean Energy Transitions in Emerging and Developing Economies report which includes countries eligible for OECD official development assistance, with the exception of the People's Republic of China.

There was substantial interest in the interviews for this paper in the opportunity for superannuation funds to work with public sector and multilateral organisations such as development finance institutions (DFIs), for example the Australian Government via the Department of Foreign Affairs and Trade (DFAT). This was due to both the opportunity to use a blended finance approach (combining private investment with public investment to decrease risk to the superannuation fund), but also because it was recognised that collaboration and partnerships are likely to be critical in order to foster the expertise, skill and market knowledge required to address the complexity of climate solutions investment in EMDE markets.

The main recommendations from this research include:

- The superannuation sector collaborates with the development and/or climate finance sector more formally, an opportunity that could be facilitated by IGCC together with partner organisations.
- The superannuation sector focus on upskilling and knowledge-building within investment teams on climate and EMDE investing, taking up opportunities to learn from and partner with peers including those experienced in EMDE market investments and experts in this space to continue to boost capacity.
- Superannuation funds consider reporting against both climate solutions investing and EMDE investing in order to track progress.

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## 2. Introduction

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Transitioning the global economy to net zero emissions by mid-century, or shortly thereafter, is essential if the globe is to limit loss and damages associated with climate change above 1.5 °C, at the same time as supporting the stability and resilience of the societal, financial and environmental systems that investors operate within. While climate finance offers one of the most powerful tools in terms of combatting these risks, progress to date has been disappointing, particularly in developing countries, as pledged finances have failed to materialise. The Intergovernmental Panel on Climate Change (IPCC) has concluded that progress towards aligning financial flows to a resilient and net zero emissions economy remains slow. These findings reflect a persistent misallocation of global capital and high levels of fossil fuel-related financing from private and public sources.

The IPCC estimates the new investment required to limit global warming to 1.5 °C is approximately 2.5 percent of world GDP. This will include investments in renewable energy generation, electricity infrastructure, energy efficiency and end-use decarbonisation in the building, industry and transportation sectors, and in alternative fuels such as green hydrogen and biofuels. IRENA estimates that investment in the energy system alone needs to reach USD\$110 trillion by 2050 to achieve net zero by mid-century, requiring a tripling of investment against current levels.

It is well established that the climate financing gap is a greater challenge in emerging markets and developing economies (EMDEs). Emerging economies account for over two thirds of the world's population, but only one fifth of the world's current investment in energy according to IEA analysis. At COP27 held in November 2022 in Sharm El Sheik in Egypt, climate finance was one of five aims of the conference:

*“Providing, mobilising and delivering climate finance for developing countries is an urgent priority.”*

The resulting text from the conference specifically highlighted the need for about USD\$4 trillion per annum in investment to 2030 to be able to reach net zero by 2050, and the role of institutional investors in meeting these goals. EMDEs also face the challenge of decarbonising while addressing priorities such as boosting health, infrastructure and energy security, often for fast growing populations.

Pension funds represent an estimated USD\$56 trillion in assets under management (AUM), and are often considered a possible source of investment for the transition to net zero, in part due to the perception that pension funds represent long-term, 'patient' capital, and commonly have made commitments to responsible investment. Despite this perceived alignment however, it does not appear that institutional investors such as pension funds are making significant investments in climate solutions in EMDEs. For example, the IRENA report cited above estimates only 1 percent have directly invested in any renewable energy projects.

### The importance of physical risk in EMDEs

Climate change-driven weather events are already causing significant and compounding damage to the global economy, as well as infrastructure, livelihoods, and communities worldwide. Physical risk, which is typically understood by investors to comprise of acute and chronic risks, is a very real challenge in EMDEs. For example, Swiss Re has estimated that climate change could reduce India's GDP by over 35 percent by 2050.

This paper does not focus on physical risks, nor the substantial needs for investment in resilience and adaptation in EMDEs. Future work on this topic will need to consider the interaction between transition and physical risk (for example where high exposure to physical risks can reduce investment in the very region where transition investment is needed). It is likely that frameworks and data will be required that have physical and transition risk integration, while accounting for the specific attributes of EMDE markets.

## 2.1 The opportunity for Australian superannuation funds

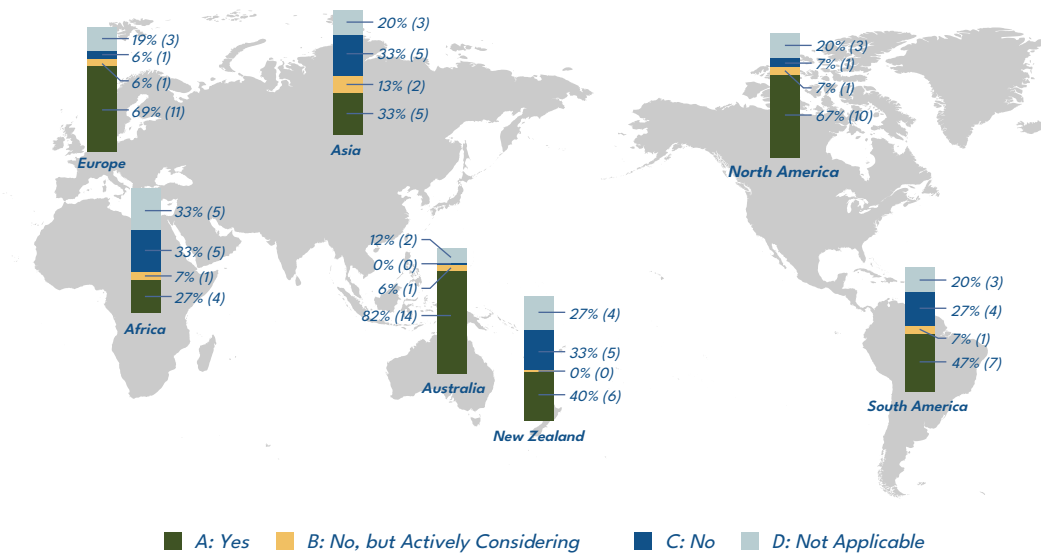
In Australia, there are 145 superannuation funds with AUM totalling \$3.4 trillion, representing the retirement savings of approximately 17 million Australians. In IGCC’s recent *The State of Net Zero Investment* report, 53 Australian and New Zealand institutional investors were surveyed, including 25 superannuation funds, representing 17 percent of all superannuation funds. While 68 percent of superannuation respondents had set a net zero by 2050 portfolio target, only 28 percent had set a climate solutions investment target.

The IGCC survey also found that while more than 82 percent of superannuation respondents are currently investing in climate solutions in the Australian market, far fewer have any climate solution investments in regions with concentrations of EMDEs,

such as Africa (27 percent), Asia (33 percent), and South America (47 percent). It is notable that some respondents were actively considering these markets (7 percent, 13 percent and 7 percent respectively).

In interviews for this paper, it was clear that superannuation funds are interested in boosting investment in climate, notably renewable energy, particularly in EMDEs to support development outcomes. Notably, however, the data on targets to invest in EMDEs and reporting on this appears to be scarce, making it difficult to assess the current state of play and assess the pace of change.

Figure 1: Percentage of Australian superannuation respondents (25) invested in climate solutions by geography



Source: IGCC, 2022

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## 3. Why invest in EMDE climate transition?

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### 3.1 EMDEs as part of a responsible investment approach

Superannuation funds may want to increase investment in EMDEs for several reasons. The Principles for Responsible Investment (PRI) interviewed 58 investors on EMDE investing for its 2022 report [Closing the funding gap: the case for ESG incorporation and sustainability outcomes in emerging markets](#). The authors identified four drivers for EMDE investments:

- to gain exposure to growing economies
- portfolio diversification
- the creation of positive social impact
- to overcome a bias towards investing in home markets (see Table 1)

While EMDEs appear to experience more return volatility than developed markets, there is [evidence for greater returns](#) over the long-term, which appears to be particularly the case where environment, social and governance (ESG) considerations are [integrated into investment decisions](#). This is possibly because investors that are integrating ESG considerations are more likely to identify financial and non-financial risks, and use engagement strategies to reduce risks. Moreover, EMDE markets are likely to experience high power demand growth due to rapid development.

Table 1: Drivers for investment in emerging markets (adapted from the PRI)

Drivers identified by the PRI	Description
To gain exposure to growing economies	EMDEs constitute much of the global capital market. As investment pipelines in developed economies become more crowded, investment in EMDEs represents a new pipeline of investment opportunities with strong growth opportunities.
Portfolio diversification	EMDE investment may help improve an investor's overall risk adjusted returns via diversification.
Real-world impact	The greater development requirements of EMDEs mean investment can have more potential to shape positive social and economic outcomes, particularly where these are aligned with frameworks such as the Sustainable Development Goals (SDGs) or climate commitments.
Overcome home bias	Some local investors in EMDEs are required to allocate a percentage of their portfolio to emerging markets.



### 3.2 Investing in climate in EMDEs: Where is investment needed?

To reach net zero, investors will need to scale up investment in renewable energy generation, electricity infrastructure, energy efficiency and end-use decarbonisation in the building, industry and transportation sectors, and in alternative fuels such as green hydrogen and biofuels.

The World Economic Forum [references research](#) by Standard Chartered estimating that emerging markets need almost USD\$95 trillion in additional finance to help them transition to a net zero economy by 2060. The research highlights that developed markets will need to be investing both in local mitigation efforts while also funding less wealthy countries. While emerging market economies are the most exposed to the negative impacts of climate change, investment in the transition could result in net gains to global GDP, as the risks of a disorderly transition are minimised.

The International Monetary Fund (IMF) also highlights the importance of investing in climate transition activities in emerging market economies:

*“Importantly, [transition taxonomies] include a focus on innovation in industries like cement, steel, chemicals, and heavy transport that cannot easily cut emissions because of technological and cost constraints. This helps ensure these carbon-intensive industries—those with the greatest potential to reduce greenhouse gas emissions—are not sidelined by investors but rather incentivised to reduce their carbon impact over time.”*

### 3.3 Global pension funds are taking steps to bridge the gap

Internationally, there are some initial signs that pension funds are beginning to answer the call to align their ‘patient’ capital with the need for climate investment in EMDEs. Notably, there have been announcements such as the creation of the Emerging Markets Just Transition Initiative in the UK and a collaboration of Nordic Pension Funds with the Climate Investment Coalition with a USD\$130 billion investment commitment to climate solutions in EMDEs. Other announced deals have included:

- The Ontario Teacher’s Pension Plan [reportedly](#) taking a 30 percent stake in Indian renewable energy assets.
- The Canadian Pension Plan Investment Board developing a [new investment group](#) focused on transition investments including renewable energy, and taking a [large stake](#) in Indian renewables company ReNew Power in 2022.
- The Ontario Municipal Employees Retirement System [announcing](#) its intention to expand existing investments in Indian renewable energy.

#### The Emerging Markets Just Transition Investing Initiative

In May 2022, a group of 12 UK pension funds representing £400 billion in AUM launched the Emerging Markets Just Transition Investing Initiative. Led by the Church of England Pensions Board, members include Universities Superannuation Scheme, Border to Coast Pensions Partnership, Brunel Pension Partnership, BT Pension Scheme, Northern LGPS, RPMI Railpen and the National Employment Savings Trust.

To date, the initiative has explored how it can collaborate, drive real world change, and understand the most practical ways to scale the funding required to support the climate transition in EMDEs. In November 2022, the initiative published draft principles to guide their work including:

- Advocacy towards a just transition in EMDEs
- Aligning internal policies and approaches towards a just transition in EMDEs
- Practically working to de-risk investments in support of intentional allocations within and across asset classes

The principles also note the importance of investor frameworks used in the transition to net zero such as the Net Zero Investment Framework and the Asset Owners Alliance Target Setting Protocol incorporating considerations appropriate and fair for EMDE pathways.

## **Nordic Pension Funds make a USD\$130 billion commitment to invest in EMDEs**

At COP26 in Glasgow, a group of Nordic and UK pension funds announced a USD\$130 billion investment commitment to 2030 towards clean energy and climate solutions with a focus on EMDEs. This was led by the Climate Investment Coalition (CIC).

At COP27 in Egypt, the initiative provided an update on the progress of Nordic pension funds to date – claiming they are on course to reach these commitments, with US\$9 billion invested to date.

They also noted the need for new finance vehicles, frameworks and partnerships including with the public sector, to facilitate the mobilisation of pension capital to EMDE investments.

### **3.4 How superannuation funds can incorporate EMDE investments**

Institutional investors can gain exposure to climate solutions in EMDEs via a range of asset classes including fixed income (e.g. green bonds), listed equity (e.g. listed renewables or energy companies) or unlisted assets (e.g. unlisted infrastructure). Indirectly investing via an asset manager offering pooled investment securities such as an exchange traded fund (ETF) with a sustainability focus is another option.

One important point is that asset owners tend to have high allocations towards listed equity over unlisted, in part due to the need to have sufficient liquidity to pay liabilities and meet regulatory requirements. For renewable energy investments, this preference has tended to result in the prioritising of projects that are already operating over greenfield investments. This may also be driven by some of the technology or project specific barriers, such as construction and regulatory risks mentioned in the Barriers section of this report.

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## 4. Barriers to investment in the transition in EMDEs

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A review of literature and interviews with relevant stakeholders has identified seven major challenges to mobilising capital for the transition in EMDEs:

- Risk profile in EMDEs
- Return profile and cost of capital
- Scale or deal size
- Construction and development risks
- Climate and energy policy settings
- ESG data availability and standards
- Expertise and capacity at superannuation funds

### 4.1 Risk profile in EMDEs

Investment in EMDEs is generally agreed to have a higher risk profile, meaning investors may be putting capital at risk, or risk lower than expected returns. For infrastructure projects, this may mean needing to sell at a significant loss or write off the investment entirely. Some of these broad EMDE investment risks include geopolitical risk such as military coups, war or civil conflicts, currency and sovereign debt risk which can require an investor to undertake currency hedging, and social risks such as social upheaval or violence.

In interviews for this paper, some investors also noted the risk of nationalisation of energy assets in the case of a significant shift in government policy. There is also counterparty credit risk, for example where state-owned utilities may delay or default on contractual offtake agreement payments to power producers, a very unlikely scenario in OECD nations. Other interviewees spoke of the risks of corruption and poorer governance in-country, which might mean cultural expectations of bribes and other behaviours not aligned with the investor's responsible business practices. This is underscored by a noted tendency by asset owners to prefer investing, particularly in assets like infrastructure, within their home jurisdiction.

### 4.2 Return profile and cost of capital

Size and stability of returns from renewable energy and other climate solution investments was also a barrier identified via this research. This issue is twofold: the return needs to be sufficiently high to offset the aforementioned risks at both the market level and project level; and the returns need to be stable in the long-term to counter the upfront development costs typically associated with such projects. Concerns about risk and return are also exacerbated by the fact the cost of capital is typically higher in EMDEs and with global monetary

tightening, the cost of renewable energy infrastructure is expected to increase. The higher cost of capital in EMDEs means 'hurdle rates' for investors (or the minimum rate of return required) must also be higher. Unfortunately, this issue looks to be exacerbated by many countries globally emerging from the COVID-19 pandemic holding a significant amount of national debt, as well as a sharp global rise in interest rates in 2022. Possible ways to address these barriers are covered in more detail in the opportunities section of the paper.

### 4.3 Scale and deal size

Deal size is a challenge to direct investment in unlisted infrastructure in EMDEs and was noted by several interviewees. For example, there are relatively few large-scale commercial solar or wind deals in EMDEs, with this being particularly uncommon in smaller markets. Transaction costs and other construction and regulatory risks combine to make such projects less appealing to investors. In a 2015 note, the Institutional Investors Group on Climate Change (IIGCC) proposed aggregation of infrastructure assets as a possible solution to this issue via blended funds and warehousing models. Institutional investors are more likely to be involved in larger renewable energy transactions. According to IRENA analysis the average deal size increases from USD\$199 million to USD\$434 million when institutional investors are involved.

### 4.4 Construction and regulatory risk

Low carbon projects such as renewable energy are often considered to be higher risk than their high carbon alternatives in EMDEs. This is driven by several issues:

- Renewable energy projects may have higher upfront construction costs, and sometimes long and unclear approval processes in some markets.

- Fossil fuel support and subsidies can undermine returns for low carbon projects.
- Some climate solutions investments (for example hydrogen, carbon capture and storage, or biofuels) can have higher technology risks than incumbent sectors, or the technology may be developed but yet to reach optimal economy of scale (for example large-scale battery storage).
- Regulatory risks for renewable energy projects are sometimes higher in EMDEs due to weaker incentives and regulatory settings for renewable energy projects.

A 2021 [AIGCC report](#) noted a key barrier for the widespread rollout of renewable energy in the ASEAN region was inappropriate regulatory regimes in some markets, implying a need for reform to drive investment into the region.

## 4.5 Climate and energy policy settings

Policy uncertainty has been a key barrier to investment in every IGCC annual investment survey since 2017. In the [most recent survey](#), 56 percent of investors highlighted policy uncertainty as a key barrier to investment. This sentiment was reinforced in the research for this paper via both interviews and academic research. Several interviewees also described markets that were attracting investment as having broadly positive and stable policy settings, and conversely a lack of clarity about climate change and energy policies being a deterrent. Some of these specific settings are discussed in the next section of this paper.

## 4.6 ESG data availability and standards

There is a clear discrepancy between reporting requirements in EMDEs and OECD nations, resulting in lesser access to investment risk and performance data as well as ESG and climate data from assets domiciled in EMDEs. For example, mandatory Task Force

on Climate-Related Financial Disclosures (TCFD) reporting has been legislated in the UK, the EU, Switzerland, Hong Kong, Japan, Singapore and New Zealand. The Australian government has also recently signalled its intention to introduce climate reporting standards; a development [supported by IGCC members](#). There is less evidence of progress in this area in other developing market countries.

This lack of data availability can lead to EMDE companies' having poorer ESG ratings, making it more difficult for investors to assess investment risk and company performance. In the interviews for this paper, interviewees also spoke of 'trade-offs', for example, that a given company in an EMDE may have different governance and social approaches (e.g. gender representation in management and labour rights) given that regulations and norms may be different than in jurisdictions like Australia. Despite these concerns, many interviewees felt that social concerns should not prevent investment, rather that investment can provide an opportunity to engage with the company or asset to boost social performance. However, this finding underscores the range of complex risks investors in EMDEs face.

## 4.7 Developing or partnering for expertise in EMDEs

The need for in-house capacity and expertise in EMDE and climate investment within the superannuation sector was a substantial barrier raised in interviews. Several interviewees noted this needed to occur at both technology level (e.g. building a renewable energy specialist team), and at the market level (e.g. having expertise in emerging markets). This appears to be far more likely to occur at larger superannuation funds where there is often already existing infrastructure, energy or market-level expertise.



## 5. Opportunities to mobilise investment in EMDEs for the transition

A review of literature and interviews with relevant stakeholders revealed a number of opportunities worth exploring in order to mobilise climate transition capital in EMDEs. These included:

- Combining public finance with private capital via blended finance
- Increasing offtake certainty for renewable energy projects
- Investing in EMDE markets with positive climate and policy settings
- Selecting a debt or pooled funds approach to minimise risk
- Improving frameworks and data availability within EMDE markets
- Boosting expertise and capacity within the superannuation sector

### 5.1 Combining public finance with private capital

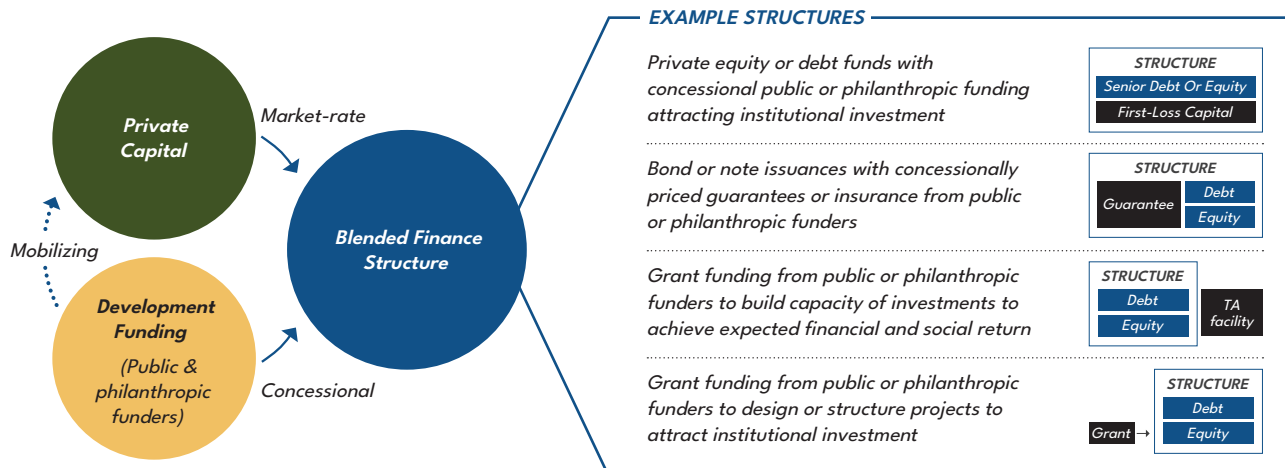
There is substantial interest in the concept of using public funding to catalyse private investment in EMDEs. Blended finance is repeatedly cited as a potentially effective way to combine private and public capital to deliver development outcomes, including addressing climate change.

### 5.2 Blended finance

Blended finance is the innovative and strategic use of public or philanthropic finance to catalyse private investment. It is important to note that blended finance is a structuring approach, not an investment approach. Structuring approaches for blended finance can include:

- Public or philanthropic finance taking a ‘first loss’ position in a project, sometimes via an investment vehicle such as a Development Finance Institution (DFI) which provides greater security to institutional investors.

Figure 2: Typical blended finance mechanics and structures



Source: Convergence

- Bond issuances with concessionally priced guarantees from public finance.
- Concessional loans, which are financial loans to a project at rates that are better than the market would offer, generally offered in order to secure a development outcome. Providing a concessional loan to a project, for example via a green bank, would reduce the cost of capital for the project, potentially boosting the return to the investor.
- Public finance provided via a grant or development aid. The grant funding can boost the return or reduce risks to the institutional investor by reducing the reliance on project finance and covering costs like transactions or due diligence.
- Public finance delivered by national funds or government funded domestic investors which can increase the equity proportion of the financing structure.

## Convergence: State of Blended Finance 2022

Convergence is the global network for blended finance. The organisation generates blended finance data, intelligence and deal flow to increase private sector investment in EMDEs. In October 2022, they published the [State of Blended Finance 2022: Climate edition](#) report, which focused on blended finance for climate change. Some of the findings of this report include:

- Since 2011, climate oriented blended finance transactions have accounted for around 50 percent of deals and have seen two thirds of funding totalling around USD\$7 billion.
- The majority of climate focused blended finance is focused on mitigation, with adaptation comparatively underrepresented.
- Institutional investors are increasing their investments in climate blended finance (from 18 percent of commitments in 2016–2018 to 25 percent in 2019–2021) notably driven by private equity investors and venture capitalists.
- There has been a decline in aggregate finance for climate blended finance recently, between 2019–2021 \$13.8 billion was invested, compared to \$26.5 billion in 2016–2018.

The report also notes the substantial challenges ahead in unlocking the billions required for a transition to a low carbon economy, which include:

- Lack of coordination, preventing blended finance from scaling appropriately
- Managing development trade-offs between climate and other development goals
- Siloes between mitigation, adaptation and conservation finance
- Low levels of investor education and expertise
- Low levels of participation from investors from EMDE markets
- Lack of climate data and transparency

Studies assessing whether public finance does attract private finance tend to show a **positive effect**, including evidence for public finance catalysing investment into renewable energy from institutional investors.

In interviews for this paper, there was substantial interest in the potential for blended finance approaches to draw in superannuation capital. For example, many interviewees felt that structuring investment so that public finance took a ‘first loss’ position would attract superannuation investors. However, there was uncertainty around how blended finance arrangements work in practice, and several interviewees noted the need for Australian investors to build capacity and knowledge around such deal structures. Despite these uncertainties, there was substantial interest in collaboration, discussion and peer-learning to occur between the superannuation sector and institutions with expertise in blended finance such as Development Finance Institutions (DFIs).

There are a number of DFIs active in the Asia-Pacific region including the Asian Development Bank, the Asian Infrastructure Investment Bank, China Development Bank, Japan International Cooperation Agency, Korea Development Bank and the World Bank including its subsidiary the International Finance Corporation.

In discussions with Australia-based interviewees it was often noted that unlike some of Australia’s peers, Australia does not have a Development Finance Institution (DFI) to potentially act as an intermediary or partner in such deals. DFIs in comparable countries include: OeEB (Austria), BIO (Belgium), BMI-SBI (Belgium), FinDev Canada (Canada), IFU (Denmark), Finnfund (Finland), AFD/Proparco (France), KfW/DEG (Germany), CDP/SIMEST (Italy), FMO (Netherlands), Norfund (Norway), SOFID (Portugal), COFIDES (Spain), Swedfund (Sweden), SIFEM (Switzerland), CDC Group (United Kingdom), and OPIC (United States).

Australia’s Department of Foreign Affairs and Trade (DFAT) operates an investment vehicle, the Emerging Markets Impact Investment Fund (EMIIF), which is a development financing mechanism for the Australian Government. It is designed to provide catalytic finance and technical assistance for small to medium enterprises in South Asia, South East Asia and the Pacific. Its initial capitalisation was \$40 million, and while it is a relatively new initiative, if EMIIF continues to grow and scale it may be a natural partner for the Australian superannuation sector.

The Australian government is also actively working to facilitate investment flows in the ASEAN region (noting eight of ten ASEAN member states are EMDEs). For example, the annual [ASEAN Investment Report](#) is supported by the Australian government through the ASEAN-Australian Development Cooperation Program Phase II.

## The Danish Climate Investment Fund financing clean energy projects in emerging markets

The [Danish Climate Investment Fund](#) (KIF) is a public-private collaboration between PensionDanmark, the Danish Foreign Ministry, IFU (Denmark's Investment Fund for Developing Countries), and a number of other institutional investors.

Launched in 2012, KIF offers risk capital and advice for climate investments designed to reduce greenhouse gas (GHG) emissions in official development assistance (ODA)-eligible countries. KIF provides equity and mezzanine financing to projects that are then co-financed by additional international and local investors. In addition, there is a requirement for Danish investors or expertise, services or technology to be included in each project.

To date, KIF has invested in projects including large scale wind in Jordan, solar in Mauritius, solar in Brazil, and financed the development of the biggest windfarm in Africa at Lake Turkana in Kenya.

### 5.3 Increasing offtake certainty for RE projects

In the context of renewable energy investments, the importance of offtake agreements to stabilise and guarantee ongoing revenue is a key mobilising factor for investors.

Potential mechanisms to mobilise investment in renewable energy in EMDEs include:

- Fiscal and financial instruments, such as direct investment, feed-in tariffs (FITs) and power purchase agreements (PPAs)
- Market-based instruments such as emissions trading schemes
- Regulatory instruments, such as renewable energy portfolio standards (RPSs)

Other sources point to the usefulness of long-term offtake agreements in the form of PPAs, noting the importance of having confidence in the counterparty. This was reflected in interviews for this paper, with several interviewees noting the importance of long-term offtake agreements, the need for certainty around the offtake counterparty (noting the risk of default), and the usefulness of PPAs as a mechanism to mobilise investment in renewable energy.

### 5.4 Selecting a debt or pooled funds approach to minimise risk

Rather than directly investing in projects like renewable energy, another way investors can gain exposure to climate solutions in EMDEs is via other asset classes such as debt or pooled funds. This includes investing in a 'fund of funds', a strategy designed to minimise risk by holding a portfolio of investment funds rather than equities or debt. Another option would be focusing on emerging market debt, including sovereign bonds, or securitised credit.

The [Assessing Sovereign Climate-Related Opportunities and Risks](#) (ASCOR) initiative seeks to create a common framework for investors to be able to assess sovereign debt risks and opportunities, with one of the potential outcomes being the encouragement of financial flows to lower income countries. Once complete, ASCOR may prove a helpful framework for investors to use when considering sovereign debt in particular.

## Mobilising finance for renewable energy and storage in India

According to the Institute for Energy Economics and Financial Analysis (IEEFA) and Climate Energy Finance (CEF) analysis, India's renewable energy capacity has gone from a few megawatts in 2010 to ~163 gigawatts by August 2022. It is [anticipated](#) that India will exceed its own target of 50 percent renewable energy by 2030, reaching 405GW by 2039/2040.

A range of factors have likely contributed to India's relatively rapid deployment of renewable energy including its climate and energy targets, supported by detailed policy infrastructure. The changing economics of solar and wind have also favoured India, with Bloomberg NEF [reporting](#) India's renewables as among the cheapest in the world.

Another major driver is the launch of a series of government-backed tenders for renewable energy and storage. Some of these have included:

- The state-owned Solar Energy Corporation of India (SECI) launching three tenders for renewable energy – the most recent was in 2022 and sought 2,250MW in generation. SECI are entering into a 25-year offtake agreements with successful developers.
- State owned NTPC and SECI have also both issued tenders for energy storage, with India requiring substantial storage to meet its 2030 target.
- The Indian government has also announced that Indian Railways will invite tenders for about 40GW of renewable energy in the coming years to support its net zero ambitions.

There are also a number of listed companies in India issuing tenders for PPAs to support their own net zero ambitions.

To date, pension funds notably invested in climate in India include Canada Pension Plan Investment Board, Norway KLP, Ontario Teachers' Pension Plan Board, APG Asset Management NV, and Caisse de dépôt et placement du Québec.

## 5.5 EMDE markets with positive climate and policy settings

From an investment perspective, it is clear that risks in EMDEs are not homogenous and differ widely depending on the region and/or market, political environment, geopolitical risk and a range of other factors. Some of the factors that appear to create the right conditions for investors to invest in climate solutions in EMDEs include:

- Ambitious 2030 nationally determined contributions (NDCs) set by countries, backed by national political and community support.
- National net zero targets bound to a timeframe around mid-century or soon thereafter.
- Sectoral targets underpinning NDCs and net zero targets such as specific renewable energy or electric vehicle uptake targets.
- Policy frameworks to achieve NDCs and net zero targets, including support for both renewable energy generation and grid infrastructure as well as roadmaps or commitments regarding other material emissions sources such as industry and transportation.
- Commitments to phase out incumbent high emissions activities such as fossil fuel generation and internal combustion engine vehicles.
- A commitment or approach to a 'just transition' and balancing the social aspects of climate change and development such as energy security.
- Policy consistency across jurisdictions (states and cities) and not contradictory.

The OECD's [Policy Framework for Investment](#) provides a comprehensive view on the policy settings which create ideal conditions for investment, including conditions for green growth.

## 5.6 Boosting expertise and capacity within the pension and superannuation sector

Expertise in EMDE investing in climate solutions appears to be a key precursor to mobilising investment at an institutional level. While to an extent, pension funds can outsource some of this expertise by working with investment managers, many interviewees noted that in-house experience, knowledge and expertise is an important precursor to pursuing any investment strategy.

Pension funds will still need to have sufficient internal knowledge about deal flow, market level characteristics, risk return dynamics, and specific asset classes or industries, in order to assign a mandate for an emerging markets strategy to an investment manager. Accordingly, many noted that it was likely that larger pension funds are typically more likely to take such investments. Notably the Canadian, Dutch and Norwegian pension funds mentioned in this paper already taking steps to invest in climate in EMDEs are all larger by AUM than the largest Australian super fund. Despite this, there are a range of ways superannuation funds could begin to build greater knowledge and capacity such as:

- Knowledge sharing with international counterparts who have successfully done climate deals in EMDEs.
- Collaboration and communication with the development finance sector including DFIs and MFIs active in APAC, and the EMIIF DFAT investment mechanism.
- Communities of practice such as those facilitated by IGCC, AIGCC and similar organisations.



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## 6. Conclusions and recommendations

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The findings of this paper point to three key opportunities to move this issue forward:

1. Certain market and policy settings (e.g. policy mechanisms such as long-term PPAs, stable climate and energy policies) help create an attractive risk-return profile to investors in RE in EMDEs.
2. Superannuation investors may currently lack familiarity and expertise in RE investing in EMDEs, suggesting a role for capacity-building and peer-learning.
3. Using blended finance approaches and/or working with DFIs and the Australian government may prove advantageous for Australian superannuation investors looking to support investment in the climate transition in EMDEs.

### 6.1 Recommendations for pension and superannuation funds

- Seek opportunities to boost capacity, knowledge and expertise within investment teams on energy, climate and EMDE investing. This could be in the form of seeking new expertise internally or externally or building new teams, upskilling existing teams or by joining trade delegations to particular markets.
- Engage with investment managers on climate and EMDE investing including considering exposure to lower risk asset classes such as emerging market debt or pooled funds.
- Consider setting targets to invest in climate solutions and/or invest in EMDEs and commit to reporting annually against these targets in sustainability and/or stewardship reports.
- Seek collaborations with the development finance sector, including DFAT and DFIs operational in the Asia-Pacific region including the Asian Development Bank, the Asian Infrastructure Investment Bank, China Development Bank, Japan International Cooperation Agency, Korea Development Bank and the World Bank including its subsidiary the International Finance Corporation. This could be supported by partners like AIGCC and IGCC.
- Consider developing investment strategies for EMDE markets that have mature climate and energy policies and a suite of policy settings and fiscal mechanisms that reduce risk and drive consistent risk adjusted returns.
- Join and contribute to global collaborations which aim to develop new frameworks, metrics and standards for EMDE investment or seek to improve data availability or disclosures from EMDEs.

### 6.2 Recommendations for the Australian government

- Build partnerships, collaboration and expertise that will help support the superannuation industry's interest in EMDE investment.
- Continue to conduct outreach in the ASEAN region and offer opportunities for pension and superannuation investors to build expertise in these markets.
- Consider collaborations with development finance and climate finance institutions in the APAC region, including working via DFAT.
- Set targets or develop formal commitments to leverage public finance to crowd in private finance for climate in neighbouring countries.

### 6.3 Recommendations for the development and climate finance sector

- Build understanding and capacity related to the pension and superannuation industry, including the regulatory and risk context in which the industry operates and how this shapes risk appetite.
- Consider ways to collaborate and share knowledge with pension and superannuation funds, particularly to share market-level expertise and help boost the capacity and expertise within the sector.
- Address the knowledge gaps in the investment sector around blended finance, including showcasing examples of where it has worked effectively.

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## 7. Glossary

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**Asia Pacific region (APAC):** typically used to refer to the region of the world bordering the Western Pacific including Australia, New Zealand, the Pacific Islands, South Asia, East Asia and Southeast Asia.

**Assets under management (AUM):** the total market value of the investments that a person or entity manages for its beneficiaries.

**Blended finance:** the strategic use of development or aid finance for the mobilisation of private finance towards sustainable development projects or outcomes in emerging markets and developing economies.

**Climate solution investment:** an investment in an economic activity, good or service that contributes substantially to the emissions reduction required under a [1.5 °C pathway](#).

**Concessional loan:** a loan made on better than market terms, typically in order to achieve sustainable development outcomes.

**Development finance institutions (DFIs):** are specialist development banks or investors created to support development and investment in developing countries. They are typically majority owned and financed by governments.

**Emerging markets and developing economies (EMDEs):** this paper has adopted the definition of 'Emerging Economies' as used by the IEA which includes countries eligible for OECD official development assistance, except for the People's Republic of China.

**Feed-in tariffs (FITs):** a policy instrument designed to support (in this case) renewable energy projects by providing a guaranteed, higher than market rate for operators of renewable energy projects.

**Fund of funds:** an investment strategy of holding a portfolio of other investment funds rather than investing directly in equity, debt or other securities.

**Multilateral finance institutions (MFIs):** an international financial institution chartered by two or more countries for the purpose of driving economic development in developing countries.

**Pension fund:** a fund established for the purposes of saving for retirement, into which financial contributions are paid by employers.

**Power purchase agreement (PPA):** an agreement between a power generator and a purchaser to supply (usually) renewable energy.

**Renewable energy (RE):** renewable sources of electricity generation including wind (on and offshore), solar (large and small scale), marine, geothermal and hydropower.

**Superannuation fund:** an Australian pension fund, into which financial contributions are paid by employers for employees' retirement.

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