

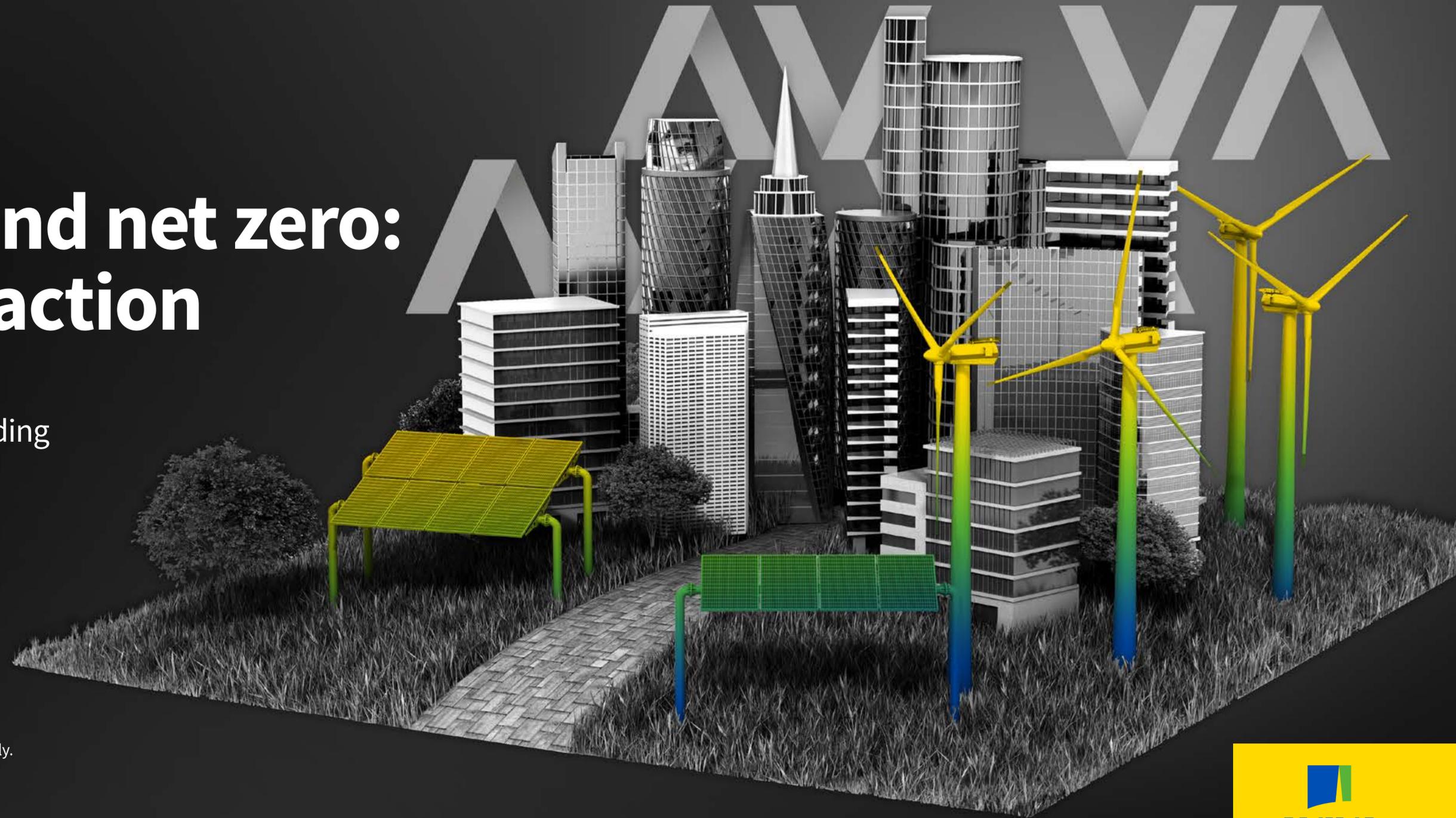
REAL ASSETS STUDY 2021

Real assets and net zero: Ambition vs action

How are global investors responding
to an evolving landscape?

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It is not to be distributed to, or relied on by retail clients.

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Foreword by Daniel McHugh

One of the revelations over recent years has been climate change's transition from being perceived as something relatively far off and abstract into a critical issue – one that demands urgent attention.

Devastating wildfires, floods and other climate-led environmental catastrophes are happening with increasing frequency across the globe. What was once intangible has now become far more concrete in people's minds. Perhaps not uncoincidentally, broader environmental, social and governance (ESG) factors, have also made a meteoric rise up the respective agendas of investors, regulators, intermediaries and end clients. The days of writing off ethical-based investing as a fad are long gone.

No asset class is untouched or immune from these trends and real assets have a pivotal role to play as we transition our societies and economies toward a more sustainable future.

Indeed, the tangible nature of real assets are often held up as their defining features; one of their greatest strengths. You can see, feel and touch them. Buildings, hospitals, railways, roads, wind farms, solar, broadband infrastructure, data centres all represent critical parts of our daily lives.

The ownership and funding of these assets not only supports key development progress but can provide valuable investment returns. And with net-zero pledges gaining increasing traction from governments, companies, financial institutions and pension schemes, the level of public and private spending on transition infrastructure can only increase. This will provide significant opportunities in the years ahead.

Our annual survey of key decision-makers in insurance companies and pension schemes aims to give you a sense of where the real assets sector is headed; to offer you a window into the collective wisdom of the minds shaping the investment decisions of tomorrow.

It offers a unique insight into the challenges and risks, as well as providing perspective into the opportunities that lie in wait. Projected asset class appetites feature alongside aggregated views on longstanding barriers to real asset investment – such as regulatory, inflation and interest rate worries.

I hope you enjoy reading the analysis and please do get in touch if you would like to discuss any aspects of it.



Daniel McHugh
Chief Investment Officer, Real Assets
Aviva Investors

“

Our annual survey aims to give a sense of where the real assets sector is headed; offering you a window into the collective wisdom shaping the investment decisions of tomorrow – offering unique insight into the challenges and risks, as well as providing perspective into the opportunities that lie in wait.”

Methodology

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| <p>We spoke to</p> <p>1,119</p> <p>investment decision makers</p> | <p>Representing over</p> <p>€2tn</p> <p>assets under management</p> | <p>Spanning</p> <p>56</p> <p>countries globally</p> |
|--|--|--|

How the research has evolved

| | | |
|---|--|--|
| <p>2020 research</p> <p>1,067 respondents</p> <p>Countries: 34</p> <p>Insurance: 532</p> <p>Pension: 535</p> | <p>2019 research</p> <p>252 respondents</p> <p>Countries: 9</p> <p>Insurance: 127</p> <p>Pension: 125</p> | <p>Research was conducted online, allowing respondents to complete the survey at a time and on a device most convenient to them.</p> <p>For more information: Dan.Healy@fticonsulting.com</p> |
|---|--|--|

This research was conducted in August 2021, with 1,119 investment decision-makers in insurance companies and pension funds. Breakdown of respondents: 584 insurance fund and 535 pension fund investment decision makers across Europe (565), North America (336) and Asia (218).

Results were weighted so insurance funds and pension funds are represented in equal proportion, in each of the regions. Countries within these regions include those listed below.

Europe:



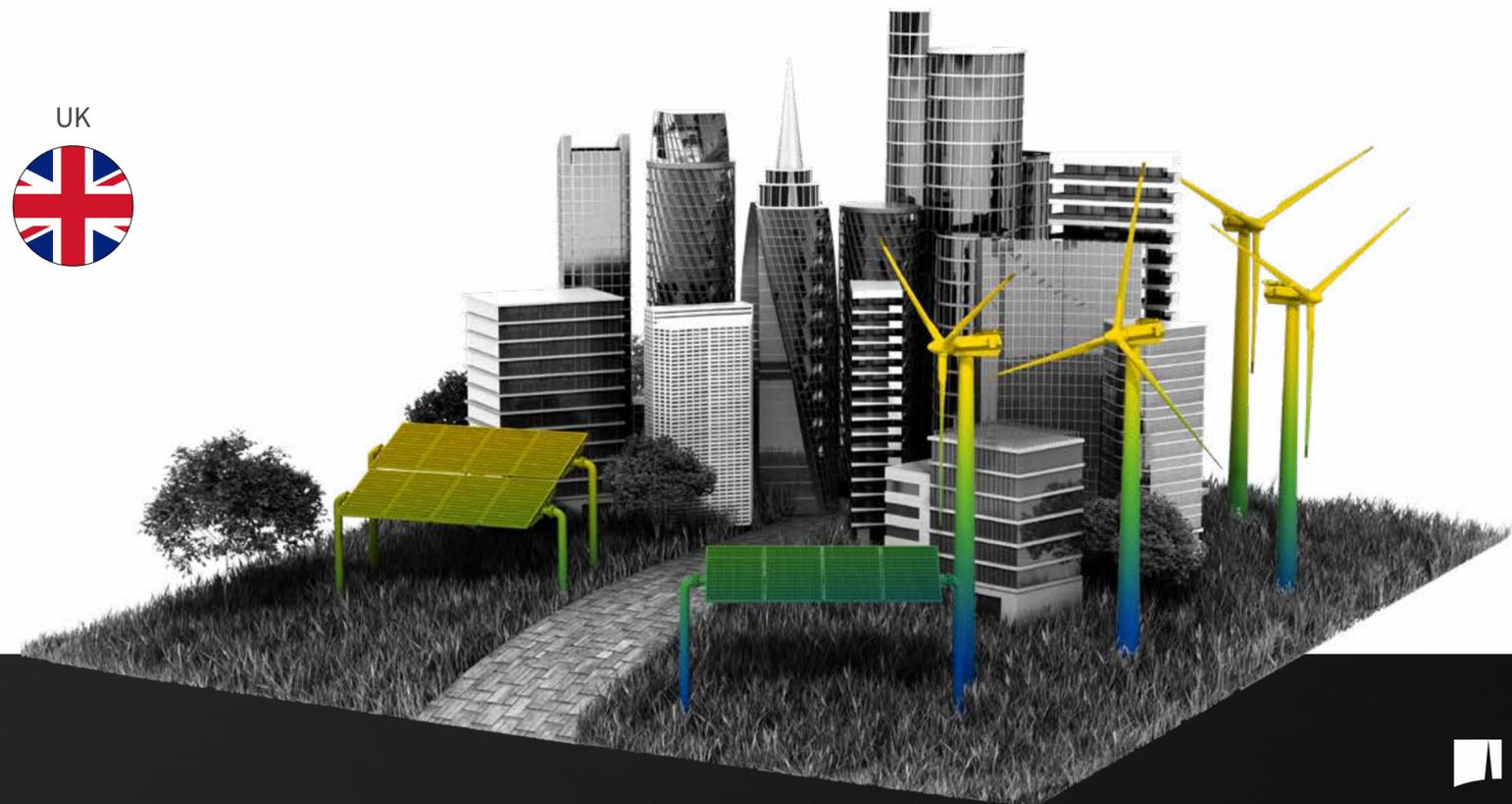
North America:



Asia:



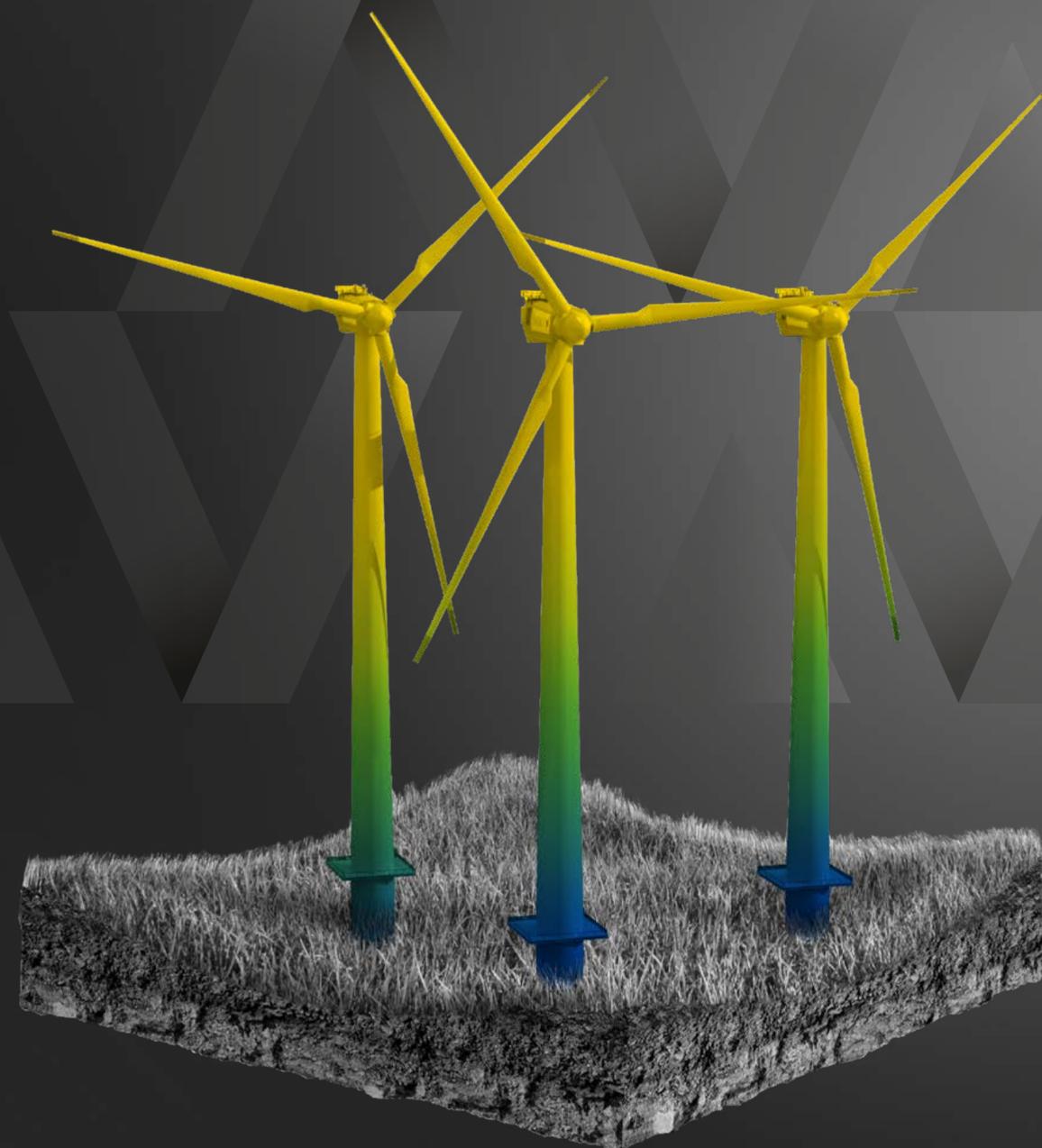
Note: As a consequence of rounding up percentage results, the answers to some questions might not always add up to 100%. The breakdown of respondents outlined above applies across all graphs in this document unless otherwise stated.



REAL ASSETS STUDY 2021

Executive summary

The opportunities and challenges posed by the ESG agenda have been brought into sharp focus by COP 26. In a year defined by the climate emergency, investors are upping their net-zero commitments and taking increasingly sophisticated measures as they face the tough task of reshaping their real assets portfolios.



Executive summary

Global institutional investors have dramatically raised their ambition to achieve net zero in their real asset portfolios over the last 12 months. Our poll of more than 1,100 global institutional investors shows that 51 per cent of pension funds and insurance companies are now planning to achieve net zero in their portfolios by 2050 – up 12 percentage points on last year’s study.

These investors represent over €2 trillion of assets under management and span 56 countries across Europe, North America and Asia, so they have a major influence.

At the same time, they are increasingly aware of the stark challenges they will face in becoming net zero across infrastructure, real estate and private debt investments.

Environmental pressures are described as ‘discouraging’ by more than 80 per cent of the institutions polled, which will give governments around the world pause for thought as they pursue the twin goals of net zero and ‘building back better’.

On the one hand, investment in infrastructure is seen as key in driving job creation; at the same time, investment in new infrastructure is seen as the asset class likely to pose the biggest obstacle to institutions achieving net zero.

Even with retro-fit increasingly in vogue, investors see sustainability challenges in real estate, with the higher costs of improving properties’ environmental credentials currently adding to steep materials and labour costs on new developments.

The good news is that in the space of a year, global institutional investors have rapidly raised their game in the way they tackle sustainability issues. Warnings that there is no time to waste in minimising the effects

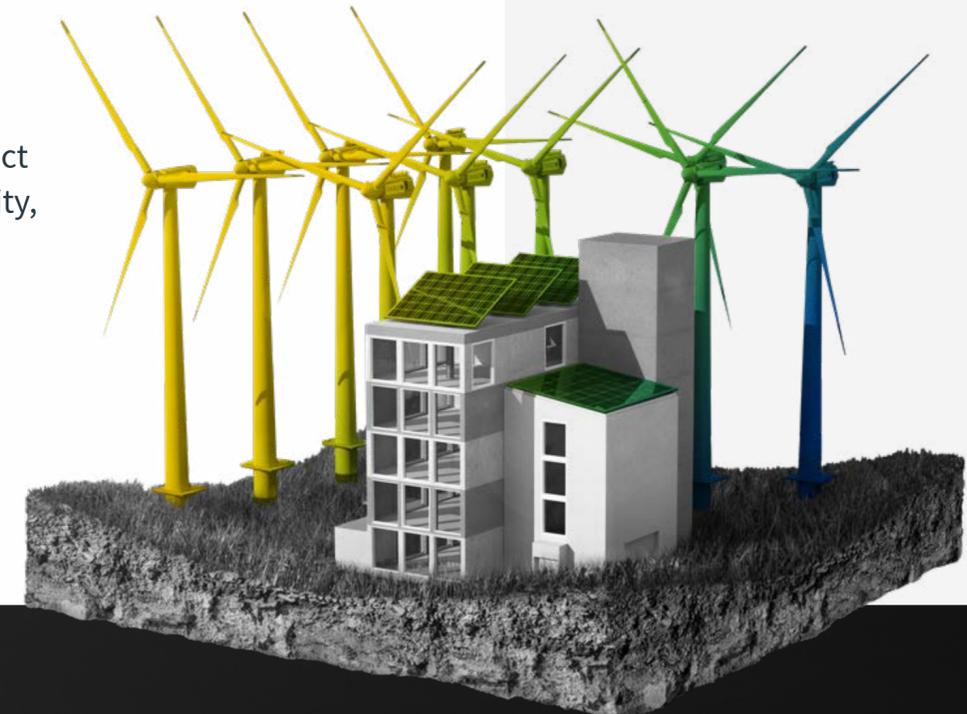
of the climate emergency have concentrated minds beyond alignment to global agreements and more direct action.

Clever financing solutions have jumped to the fore ahead of measures like carbon offsetting as investors begin to deliver real world answers to major challenges.

For this year’s study, we also spoke to infrastructure experts at London CIV, Deloitte, CBRE and onshore wind, solar and energy storage pioneers Aer Soleir, and Aviva Investors’ own real assets team.

So, just how have real assets fared during the past year in the face of the twin threats of COVID-19, and the knock-on impact on economic activity, and the climate emergency?

51%
of pension funds and insurance companies are now planning to achieve net zero in their portfolios by 2050 – up 12 percentage points from last year.



80%
of the institutions
we polled described
environmental pressures
as discouraging.

Real estate has held up far better during the COVID-19 pandemic than after the global financial crisis, with overall values falling by seven per cent compared with 44 per cent between October 2008 and March 2009.

While all real estate values broadly fell at the same rate in 2008-2009, there have been some strong performers during the pandemic, mitigating some of the steeper losses. And although global real estate adviser CBRE is forecasting a 5.3 per cent decline in UK office rents in 2021 and a 9.5 per cent fall on retail rents this year, it reckons warehousing will boom with 59 million square feet of new space needed by 2025. It also forecasts that house prices will rise by 5.9 per cent this year⁽¹⁾.

Infrastructure also has its strong points, with investment in digital proving robust even as transport-related assets have taken a once-in-a-generation hit.

Aviva Investors' Real Assets House View 2021⁽²⁾ explained that greenfield infrastructure benefits from an attractive risk premium, which digital infrastructure and rural broadband are particularly well positioned to capture.

This is due to growing demand for data and opportunities in the sector, with the added bonus of supporting economic activities in rural locations. There are risks, however, with the selection of the right technology and operating partners for greenfield infrastructure considered crucial.

Overall, investment in real assets has continued to rise around the world despite the pandemic.

Almost half of global institutional investors expect to increase investment in real assets over the next 12 months. Robust income streams and reinvention triggered by COVID-19 in infrastructure and real estate are among the drivers for this growing interest.

Our previous two studies in 2019 and 2020 showed the sector coming of age, with global institutional investors recognising the attractiveness of its long-term, stable cashflows and an illiquidity premium over more traditional, liquid assets.

The last 18 months spanning the COVID-19 pandemic have shown real assets are valued just as much for their defensive qualities, consistent performance and relative lack of volatility compared to equities and traditional fixed income investments.

(1) <https://www.cbre.co.uk/research-and-reports/UK-Market-Outlook-Midyear-Review-2021>

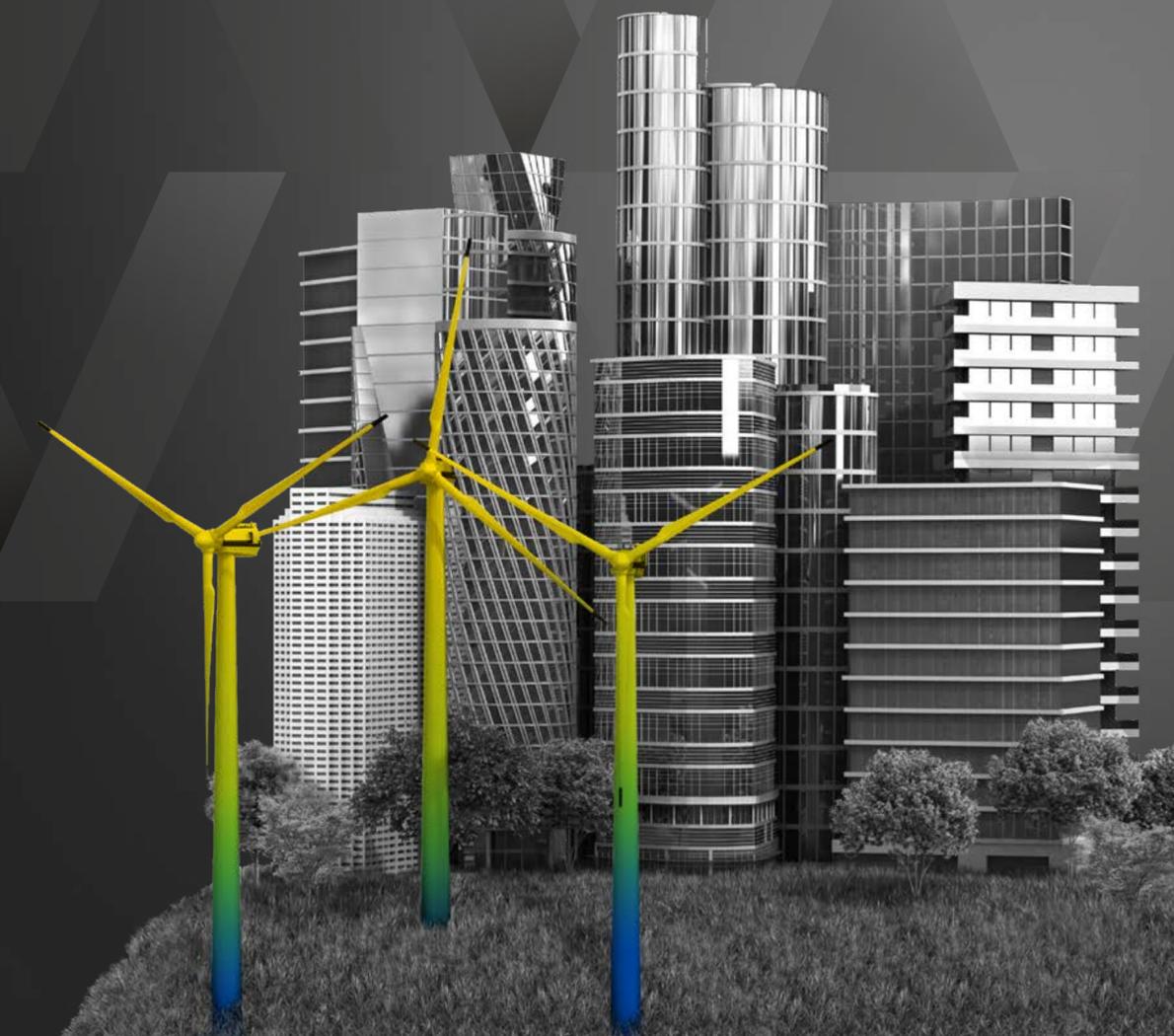
(2) <https://www.avivainvestors.com/en-gb/about/company-news/2021/02/aviva-investors-real-assets-house-view-2021/>

Aviva Investors' Real Assets House View 2021 explained that greenfield infrastructure benefits from an attractive risk premium, which digital infrastructure and rural broadband are particularly well positioned to capture.

REAL ASSETS STUDY 2021

Appetite for real assets – opportunities and challenges

Real assets have proved resilient during the pandemic, with green energy, broadband and logistics real estate among the star performers.



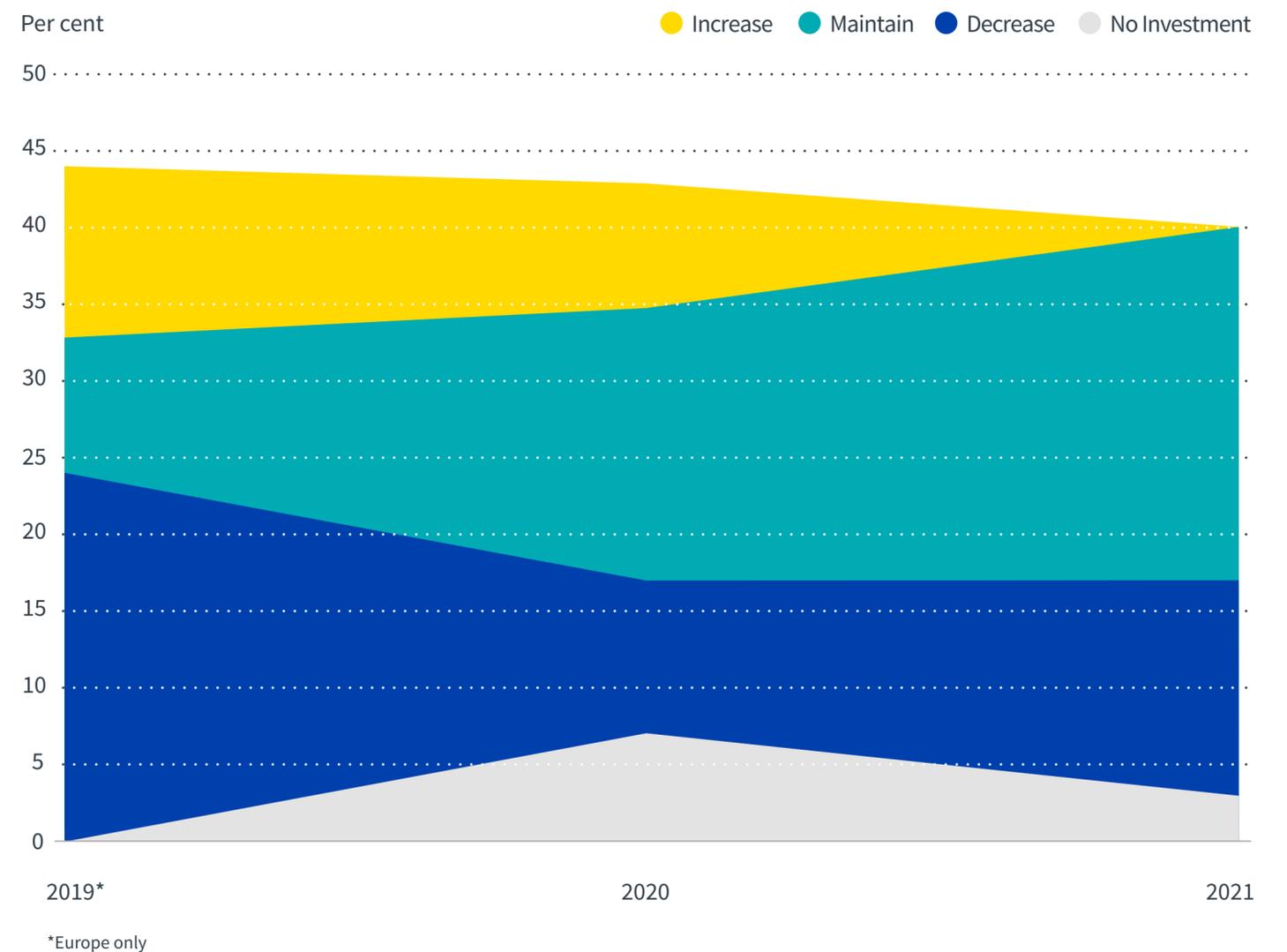
Appetite for real assets – opportunities and challenges

Interest in real assets has risen again in 2021, continuing the trend seen in the 2019 and 2020 studies. In Europe, the appetite for real assets is particularly strong, with the sector favoured by more pension funds and insurers than any other asset class over the next year, although equities are equally favoured by pension funds in Europe.

The situation is replicated around the world, with Singapore, Abu Dhabi, Australia and Norway among the countries that invest heavily in real assets at home and abroad.

One cause for encouragement to investors is the improving policy environment Governments around the world are looking to attract private capital to support their build-back better after the pandemic and net-zero initiatives, from Joe Biden’s infrastructure bill in the US to the European Union’s €800 billion Next Generation recovery plan.

How do you expect to change your allocation to real assets over the next 12 months?

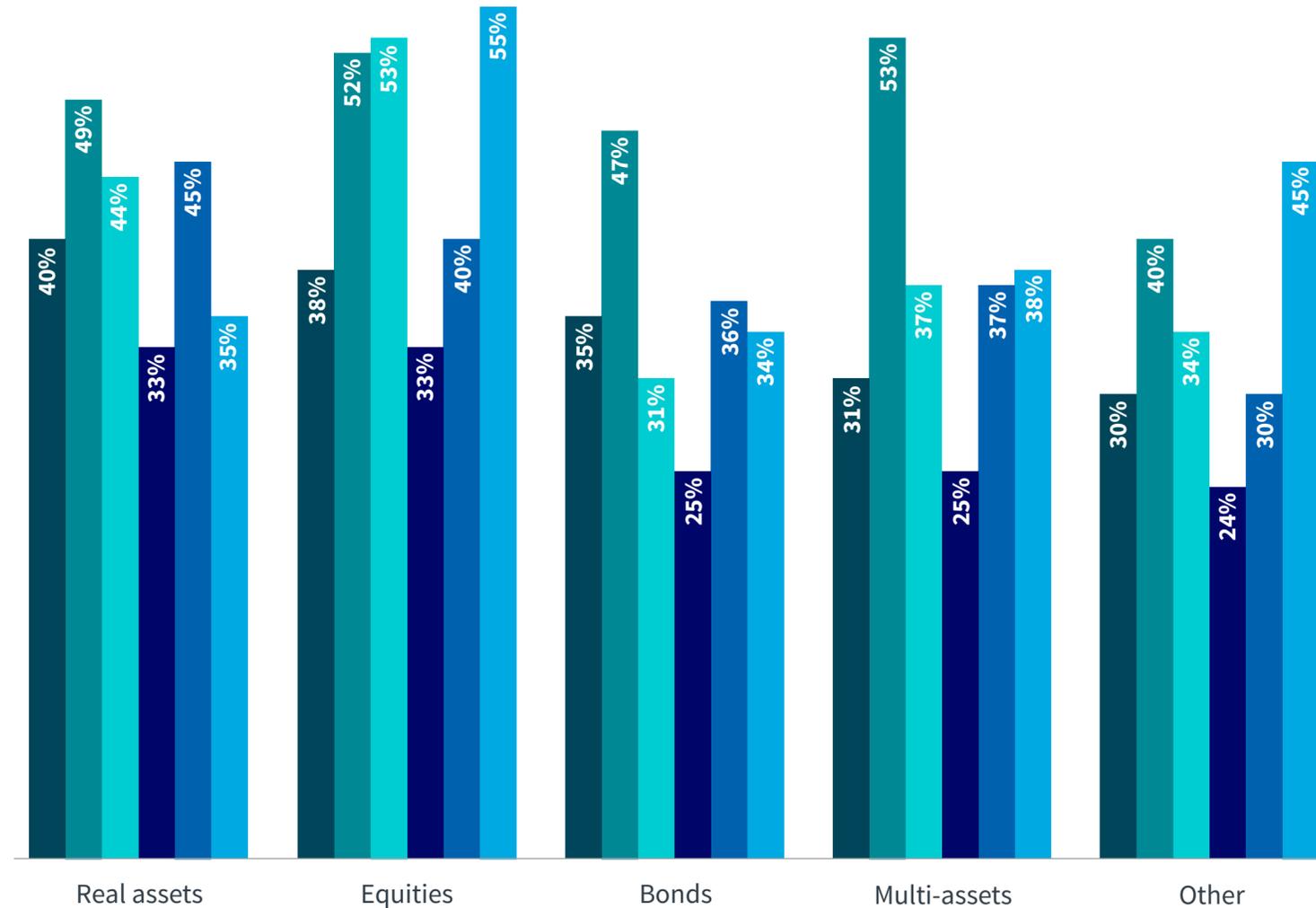


Percentage of respondents planning to increase allocation to the following investments in the next 12 months

Another case in point is the UK, which in October issued its Net Zero Strategy⁽³⁾ paper, providing much-needed clarity on its priorities to reduce emissions in power, transport, industry and buildings, as well as making a compelling case on the benefits this will provide to the economy.

The strategy is clear on the importance of private capital, anticipating this will provide the bulk of the additional investment needed, which is forecast to increase to £50-60 billion per annum over the next ten years.

The argument for real assets was also strengthened by the Bank of England's Productive Finance Working Group⁽⁴⁾. In September, it said that if appropriately managed, investment in longer-term, less liquid assets has the potential to generate better returns for investors, including those saving for retirement through defined contribution pension schemes.

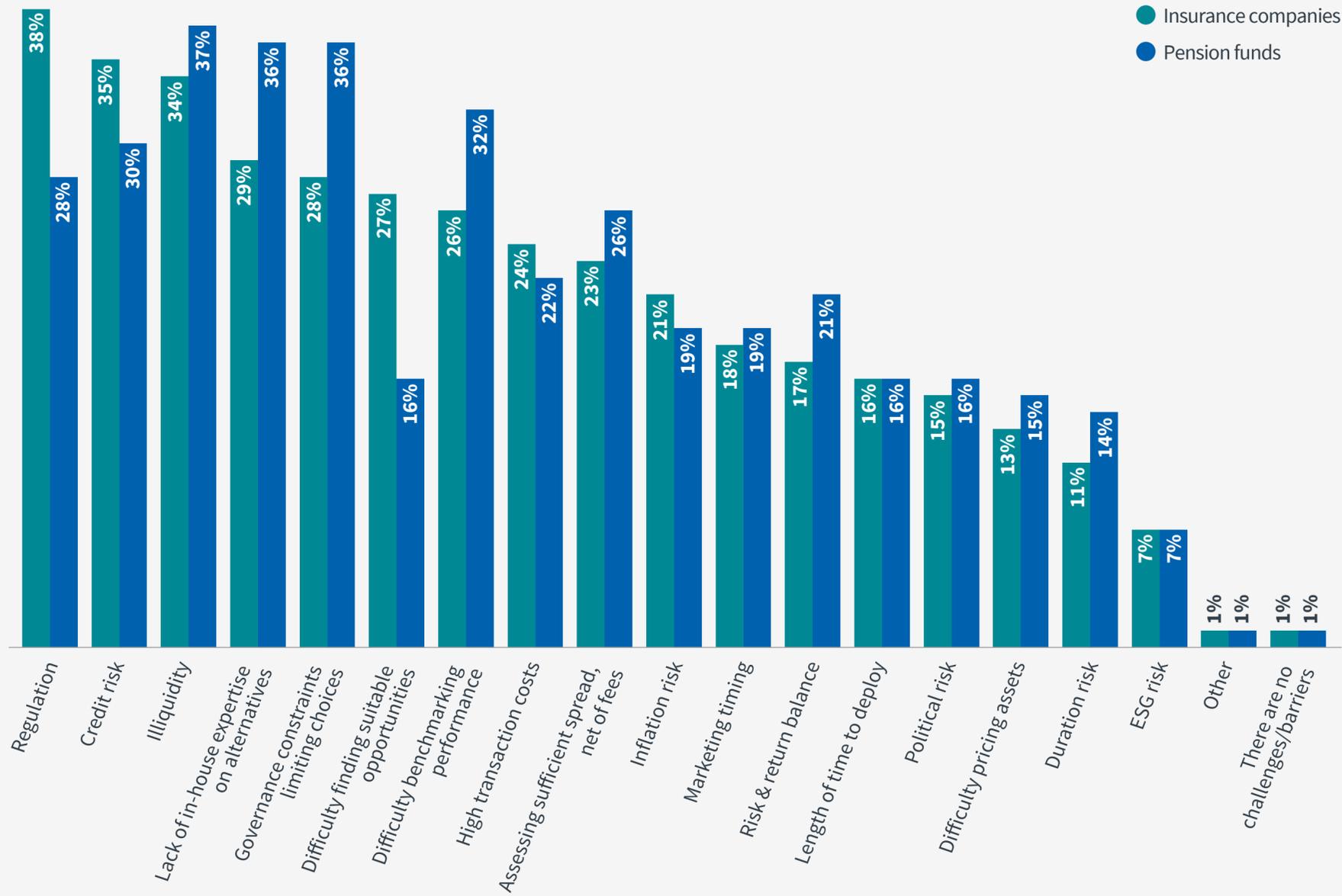


The UK's Net Zero Strategy forecasts that additional investment is set to increase to **£50-60 billion** per annum from private capital over the next ten years.

(3) <https://www.gov.uk/government/publications/net-zero-strategy>

(4) <https://www.bankofengland.co.uk/report/2021/a-roadmap-for-increasing-productive-finance-investment>

What would you identify as the biggest challenges/barriers to your institution either investing in, or increasing its allocation to, real assets?



Aviva Investors’ managing director for infrastructure, Darryl Murphy, says digital infrastructure currently appeals to investors most, with steady returns to be made in assets seeking to improve connectivity across the country.

In the short term, there is still an appetite to invest in renewables, and in the medium term hydrogen and carbon capture and storage investments will appeal, but Murphy also points to short to medium-term challenges for other infrastructure assets – particularly airports.

In real estate, Lee Bruce, head of fund valuation at global adviser CBRE, says long-income, industrial and residential real estate assets have the best defensive characteristics and will appeal for some time yet.

He says: “Even sectors significantly exposed to COVID restrictions like hotels and gyms are recovering in ways that couldn’t have been predicted. For institutional investors it still makes sense to have a good balance of real estate in their portfolios.”

Regulation continues to be seen as a challenge by some investors, particularly insurers, with ongoing debate about punitive capital charges in parts of the real assets market. Given that some of the areas affected include those that will support governments’ net-zero ambitions, we can expect this issue to come to a head in 2022 and 2023.

With COVID-19 having boosted the prospects for some asset classes – digital infrastructure or industrial real estate, for example – and having hit others hard, there also continues to be concern over the availability of assets to invest in.

REAL ASSETS STUDY 2021

Increased sophistication in ESG

Measurement and quality of reporting are on the rise, as is understanding the social value potential for real assets.



Increased sophistication in ESG

Wildfires, floods and record temperatures over recent years have concentrated the minds of global institutional investors on climate change, while COVID-19 also brought increased focus on social issues.

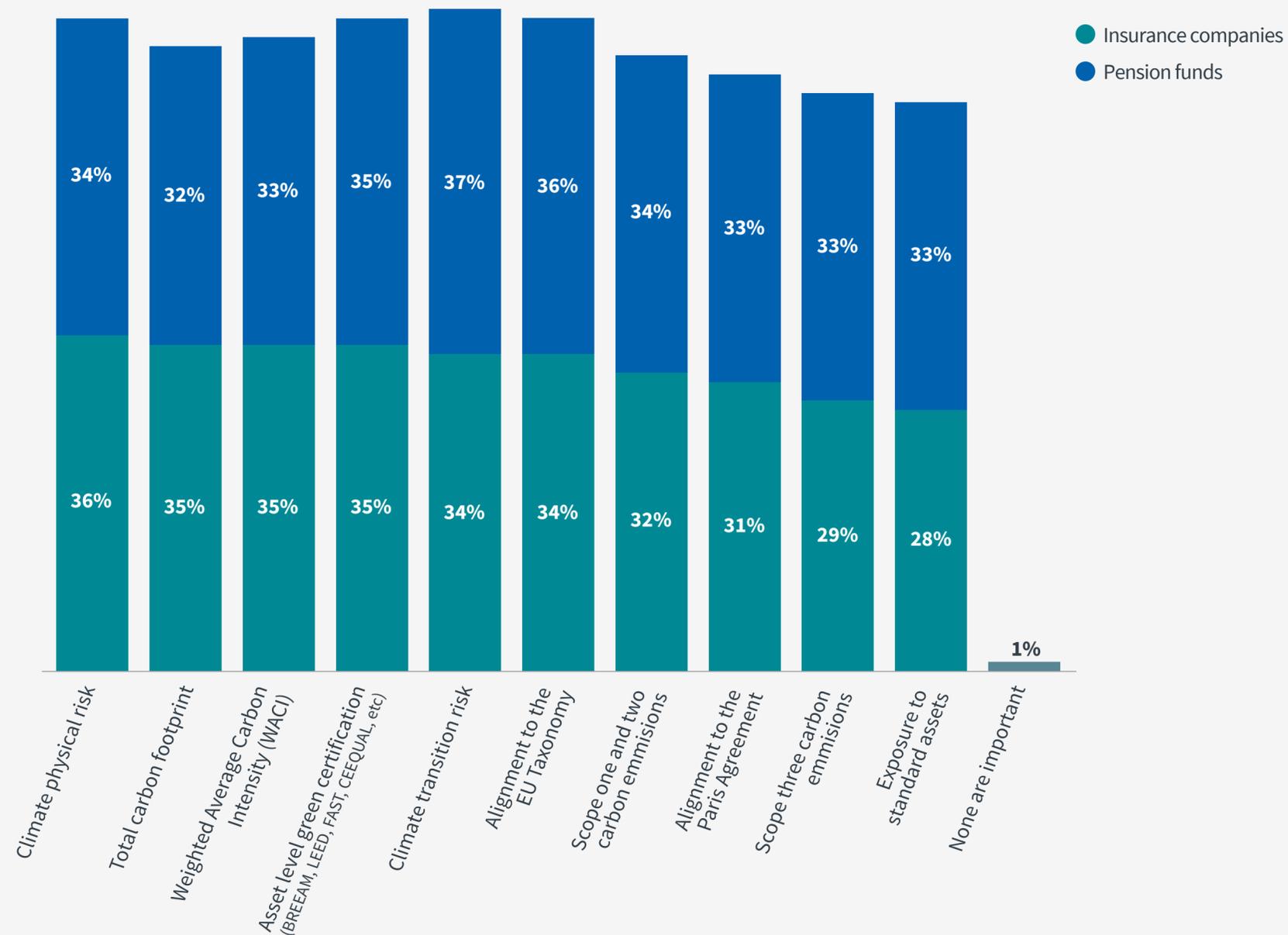
Insurance companies and pension funds have different key performance indicators when assessing climate change, with physical risk the leading issue for insurers and climate transition the leading issue for pension funds.

For global investors, integrated ESG investing is no longer just about signing up to frameworks and crystal ball gazing over future risks and returns – there has now been a shift towards the quality of reporting, with an emphasis on demonstrating the impact of sustainability considerations.

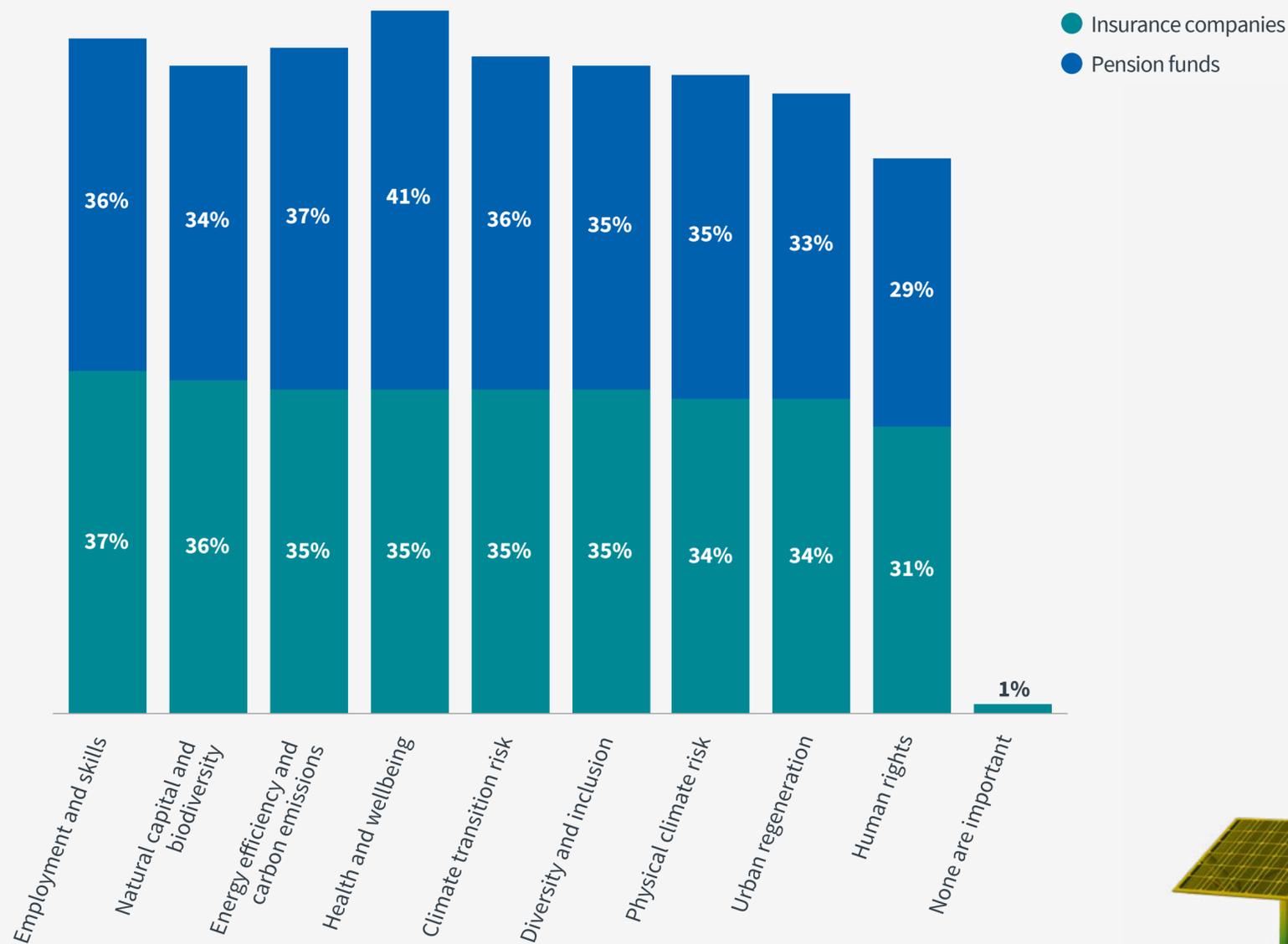
This should allow investors to benchmark the effectiveness of asset managers’ ESG credentials by focusing on real world impacts such as verifiable carbon reductions.

Measurement and green certification are critical to both insurers and pension funds, with asset-level certification such as BREEAM, LEED, CEEQUAL and FAST gaining in weight.

Which of the following are the most important real asset climate-focused KPIs to your organisation?



Which underlying ESG factors do you feel are particularly important for asset managers to focus on in real assets investing?



Alasdair Grainger, net zero director at Grant Thornton, says: “It isn’t just about asset-level actions like recycling or turning the lights off anymore. How our clients’ capital is invested is fundamental, and will have life-changing impacts for all of us if we don’t change quickly.”

“Because infrastructure is multi-generational and will be around long after 2050, it’s about trying to impress on individuals and organisations just how deep and fast the change in society needs to be to avoid disaster,” he adds.

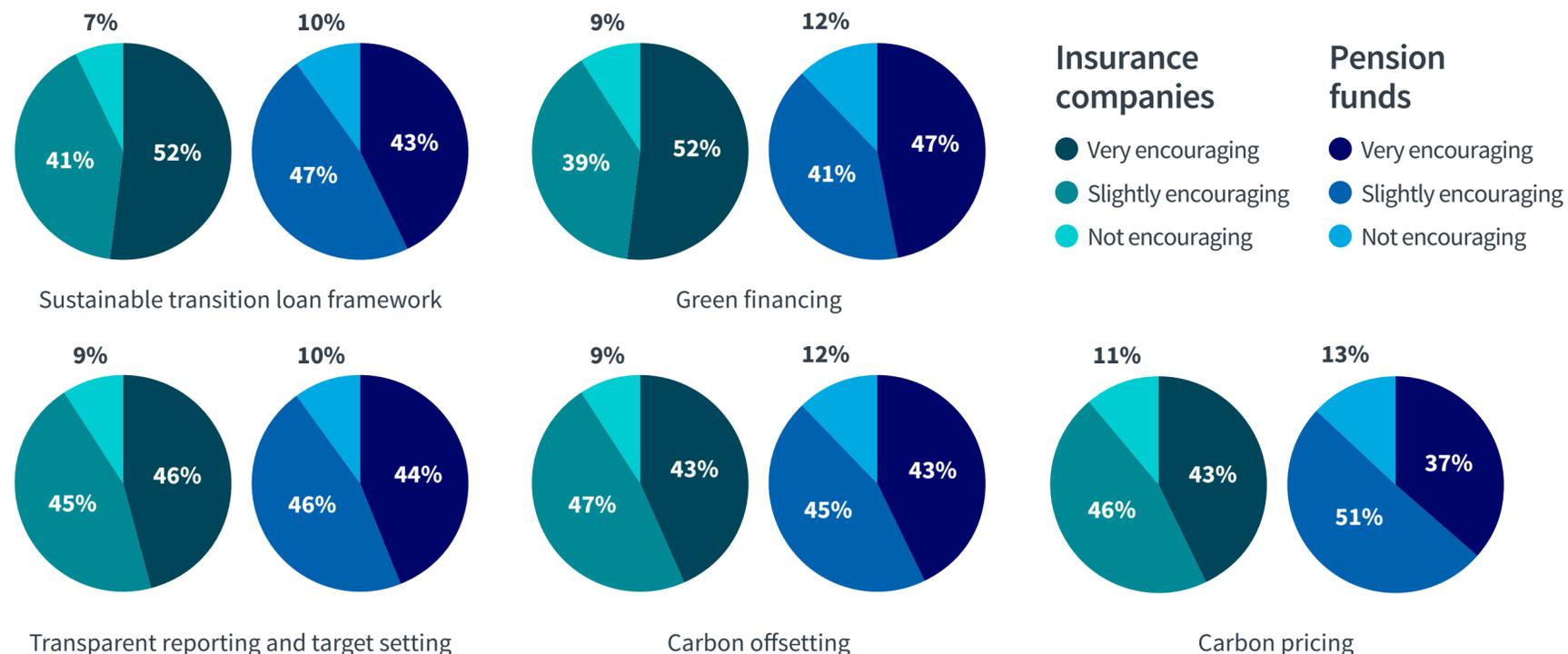
Signing up to global climate initiatives was once seen as the way for investors to show commitment to addressing climate change, but institutions now need to take more responsibility for delivering against those frameworks themselves, using advanced financing tools such as sustainable transition loan frameworks.

The COVID-19 pandemic has also transformed investors’ perceptions of the ‘S’ in ESG, with an awakening to the responsibilities that real assets have to communities. This helps explain why employment and skills and health and wellbeing were such important issues for investors in this year’s study, issues that were well down their priority list in 2019.

According to the Urban Land Institute (ULI) and PwC’s ‘Emerging Trends in Real Estate: Europe 2021’ ⁽⁵⁾ survey of 995 experts, four fifths believe demand for impact investments will increase over the next three to five years and 58 per cent say incorporating social impact in their portfolios will grow in 2021.

(5) <https://www.pwc.com/gx/en/industries/financial-services/asset-management/emerging-trends-real-estate/europe-2021.html>

How encouraging to invest in real assets would the following be to improve environmental credentials?



There is no point in having 20 per cent of your capital make an impact and 80 per cent not.

Jason Fletcher, chief investment officer at the London CIV, a local authority pension pool, says:

“Overall we have been surprised by how well real assets have performed over the last year. We are also increasing our commitment to responsible investment, with our key focus being on the environment, human rights and transparency. We will be favouring asset managers who have an emphasis on ESG investing – and they can’t move fast enough in our view.”

Another pension fund manager told the ULI and PwC: “We just try and have social value in everything we do. There is no point in having 20 per cent of your capital make an impact and 80 per cent not.”

Delivering social value can be as challenging as attempting to deliver strong returns through sustainable investment, however.

Aviva Investors’ head of ESG for real assets Ed Dixon points out that to deliver social value, investment managers must look at the potential for doing harm as well as the opportunity to deliver positive impact⁽⁶⁾.

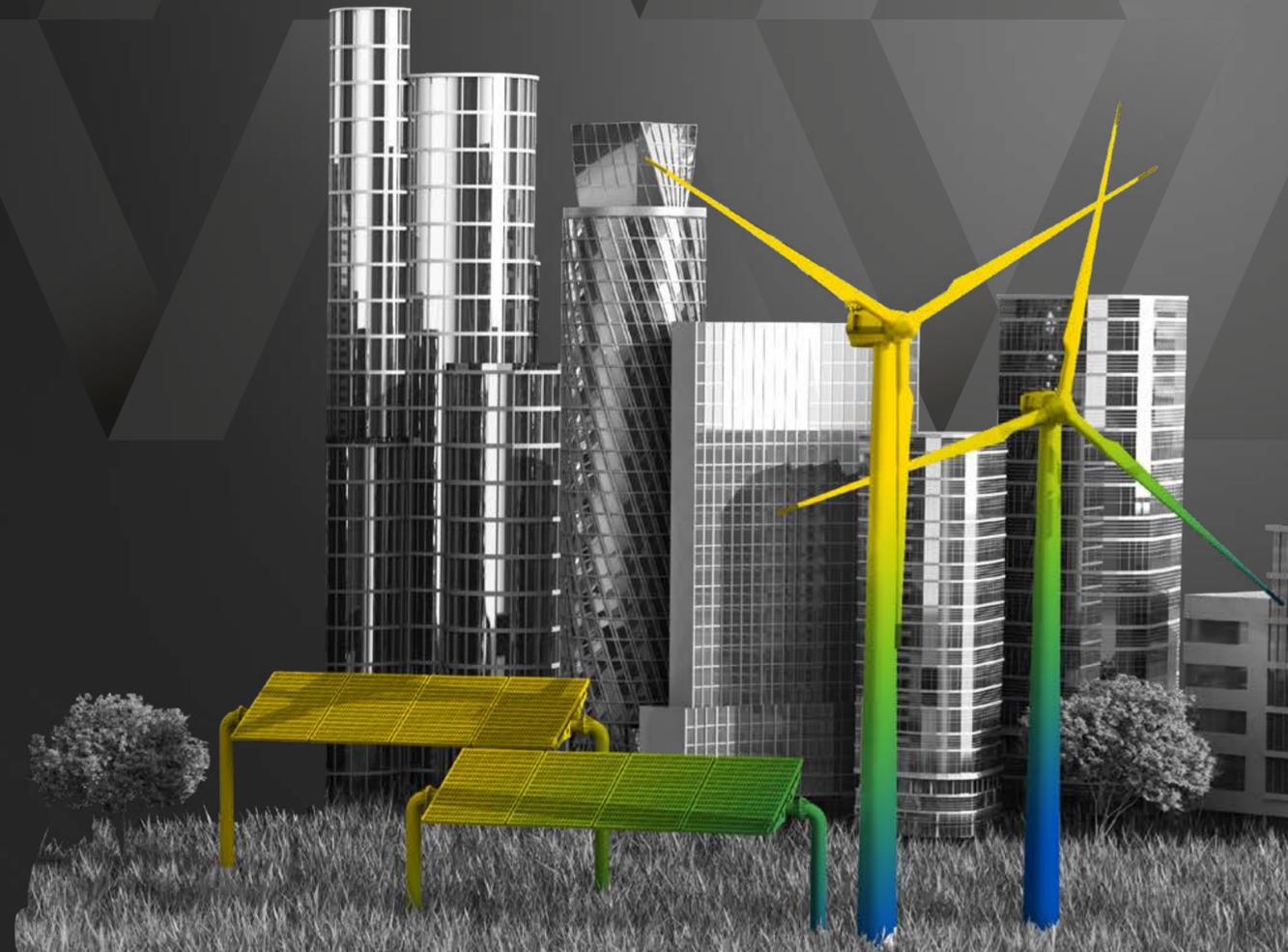
For example, did construction sites that stayed open at the depths of the COVID-19 pandemic do more harm than good, with 150 outbreaks of the disease reported from sites that stayed open, putting employees on site at risk? Dixon stresses the need to set out transparent social goals from the outset of a project – from financing to procurement, construction and operation, right through to decommissioning.

(6) <https://www.avivainvestors.com/en-gb/views/aiq-investment-thinking/2021/06/social-value/>

REAL ASSETS STUDY 2021

Ambitious net zero targets

Global institutional investors are setting more ambitious net zero targets as the realities of climate change become clear.



Ambitious net zero targets

Pension funds and insurance companies have both increased their commitments to achieving net zero in the last year, with a combined 51 per cent aiming to achieve net zero by 2050 and pension funds making the most dramatic declarations.

In December 2020, Aviva Investors Real Assets announced its Net Zero Pathway, with a goal of achieving net zero by 2040⁽⁷⁾.

Goals for the 2020-2025 period include investing £2.5 billion in low-carbon and renewable energy infrastructure, originating at least £1 billion of sustainable transition loans, reducing real estate carbon intensity by 30 per cent and energy intensity by ten per cent and creating at least 50 per cent of new pooled strategies with sustainable or impact labels.

A tipping point has been reached, with more than 52 per cent of insurers and 50 per cent of pension funds now planning to achieve net zero before 2050. Furthermore, 92 per cent of insurers and 93 per cent of pension funds have made a commitment to reach net zero at some point in the future.

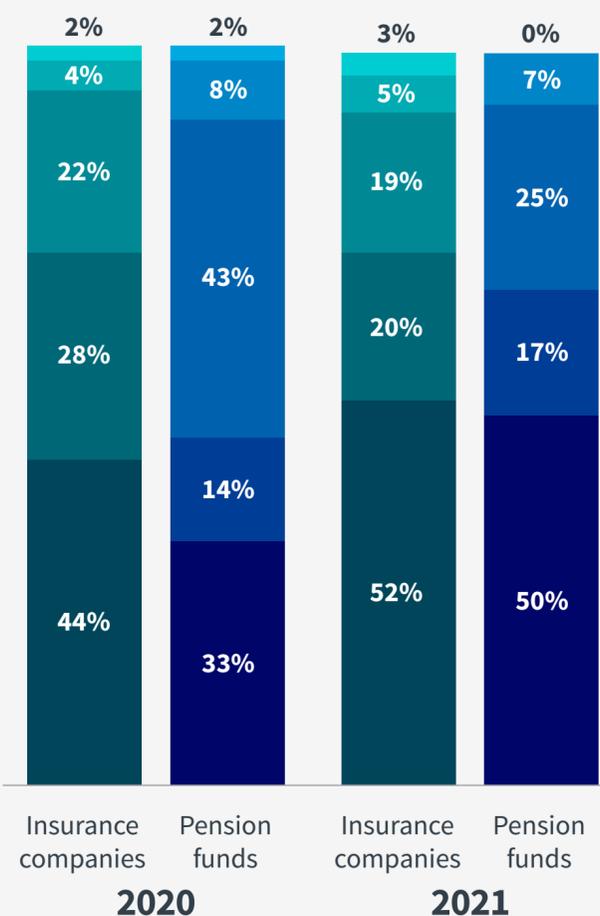
According to global real estate agency JLL's 'Decarbonising the Built Environment'⁽⁸⁾, published in June 2021, 79 per cent of real estate occupiers are prioritising location searches for buildings that will help reduce their emissions.

(7) <https://www.avivainvestors.com/en-gb/capabilities/real-assets/real-assets-net-zero-carbon-pathway/>

(8) <https://www.jll.co.uk/en/trends-and-insights/research/decarbonizing-the-built-environment>

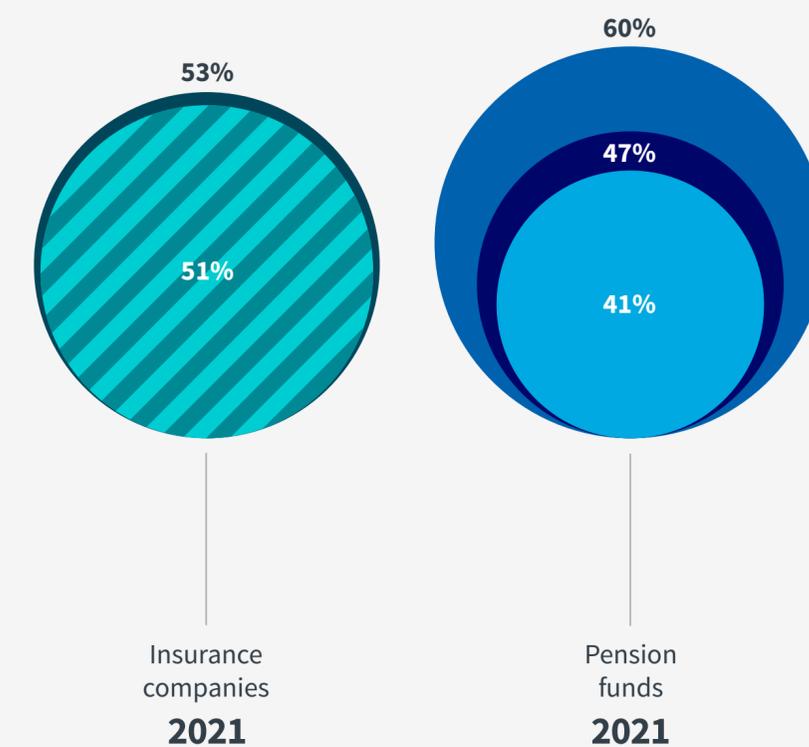
Has your organisation made a commitment to achieve net zero?

- Yes, before 2050
- Yes, but not before 2050
- Not yet but we have a plan to make a commitment to achieving net zero in the future
- No, we expect our managers to have a plan in place on our behalf
- No, we're no currently planning to commit to achieving net zero



Percentage answering "Yes, before 2050" per organisation type

- Europe
- North America
- APAC



Ambitious net zero targets

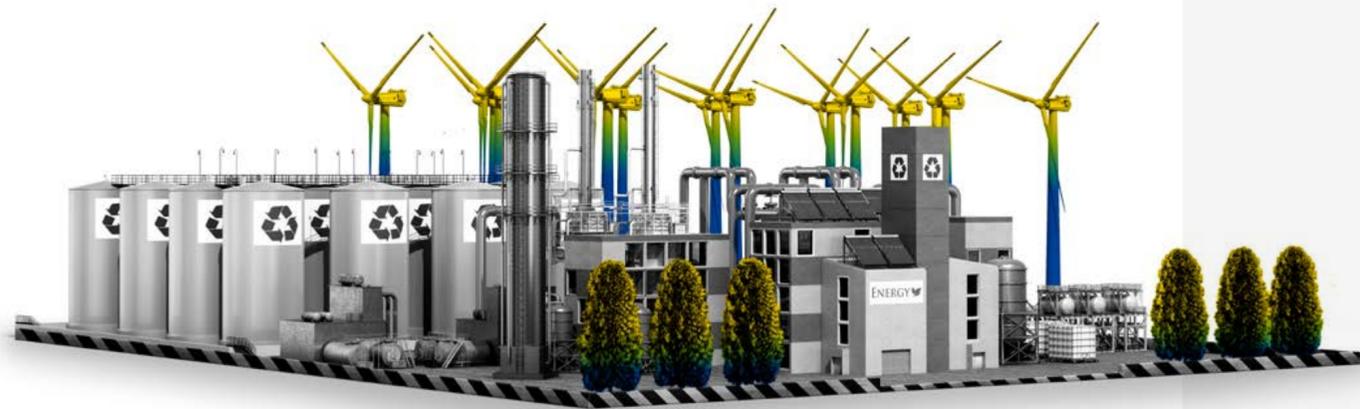
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Lee Bruce, head of fund valuation at global real estate agency CBRE, says: “Any chief investment officer or senior fund manager will say ESG is their number one – or at least top three – issue.

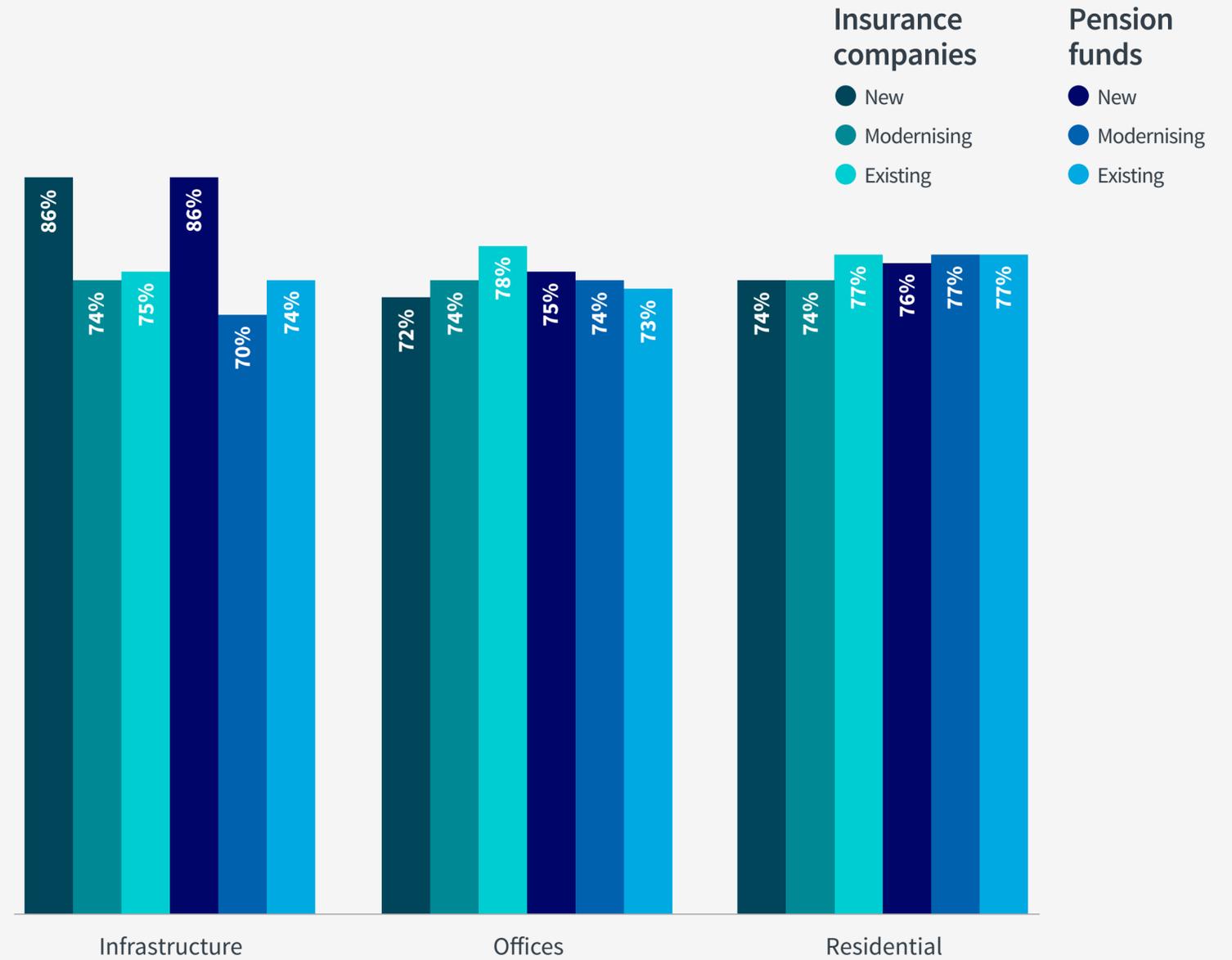
“The biggest issue is regulation coming down the line, forcing more transparent reporting, because if you are not aligned with ESG principles you won’t attract money.”

However, the reality of net-zero investing is also made very clear by the respondents to this year’s study. Although they are aiming high, pension funds and insurance companies are fully aware of the challenges of achieving net zero in a world that has traditionally achieved its best returns through carbon-intensive activities like energy and property development.

While infrastructure offers an array of opportunities for net-zero-aligned investments, particularly in renewable energy, this is not without challenges, with new office developments also considered problematic. Retro-fitting offices is becoming increasingly popular, where developers can achieve asset-level certification to evidence the sustainable design qualities of these projects.



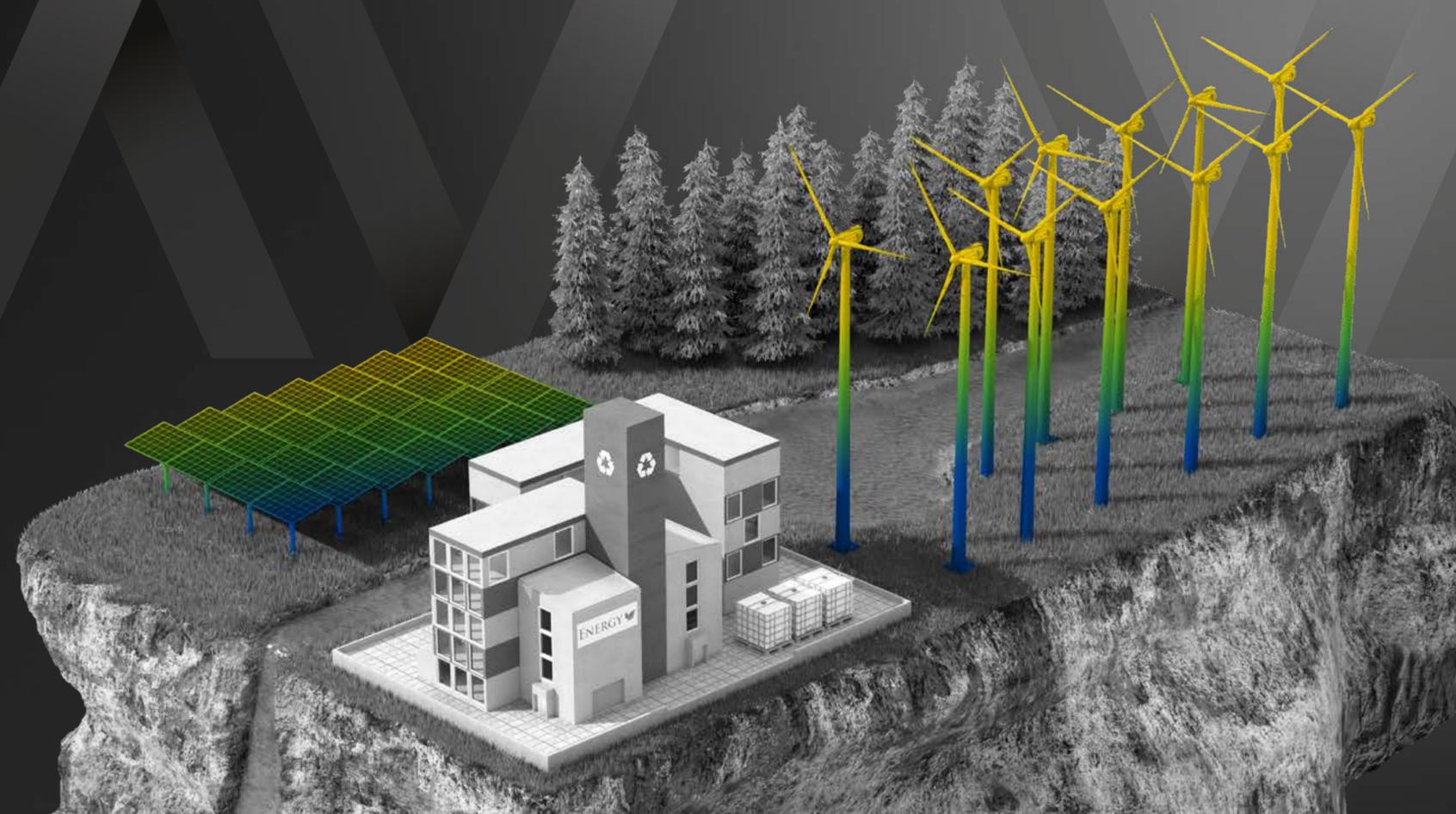
Percentage of respondents who said that environmental pressures against investing in these stages and types of real assets were ‘very’ or ‘slightly’ discouraging



REAL ASSETS STUDY 2021

The 2020s landscape

Outdated working practices will fall by the wayside, green industries will come to the fore and the real assets landscape will be transformed this decade.



The 2020s landscape

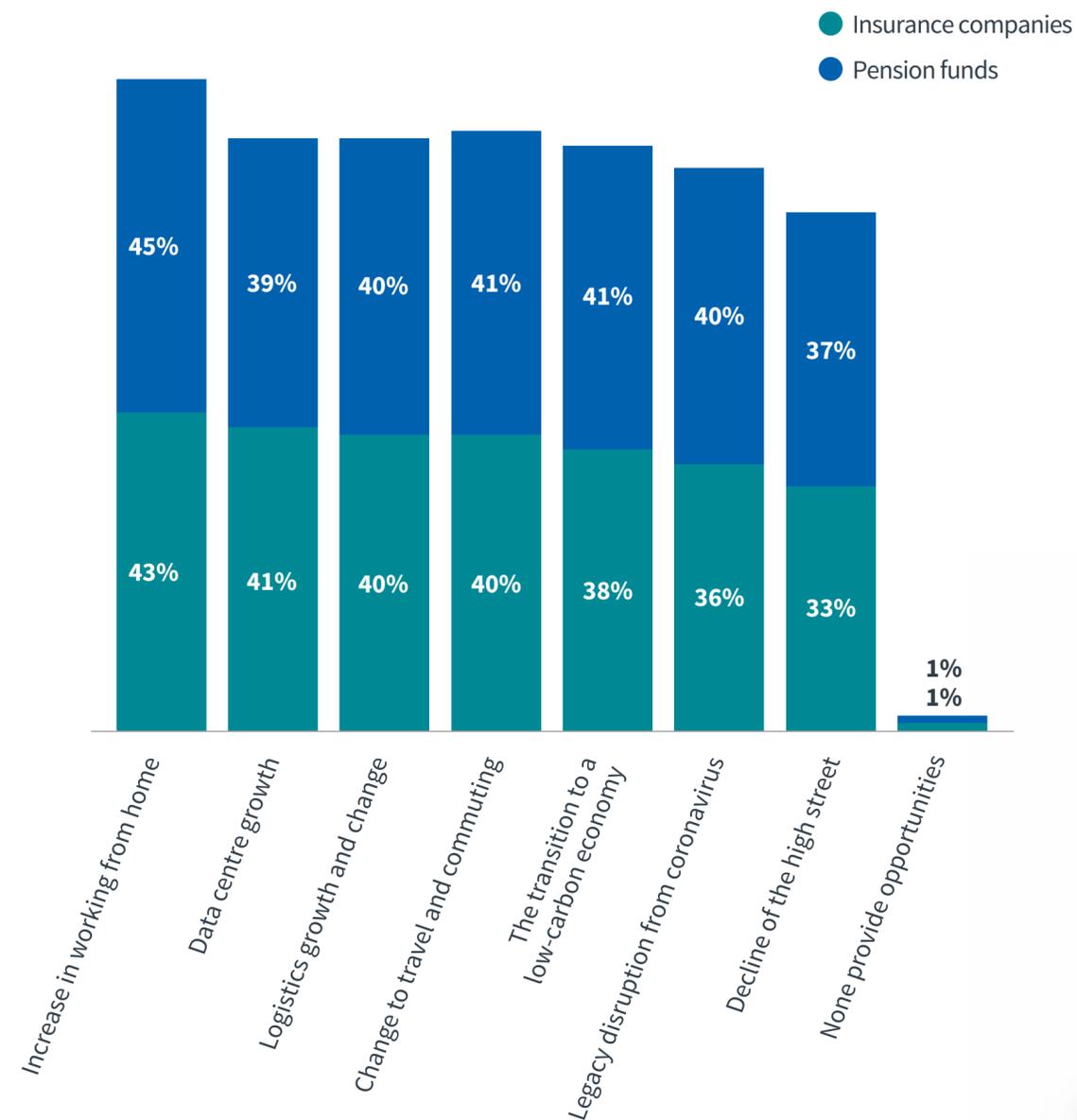
While the challenge of achieving net zero is at the forefront of investors' minds, some experts believe the payback is potentially huge.

Andy Kinsella, one of Europe's leading experts in renewable energy and founding partner and chief executive officer at onshore wind, solar and energy storage developer Aer Soleir (Irish for 'clear air'), is convinced the risk is worth the rewards.

“Our response to the threat of the climate catastrophe will involve a once-in-a-generation recovery, where trillions of dollars will be spent to stimulate the green economy. It is critical the recovery is not a colourless one: it has to be green.”

The transition to a low-carbon economy is seen by global investors as one of the long-term trends presenting the greatest opportunities for real assets investment. But the post-COVID-19 world could also trigger a seismic shift that will help to drive returns in the long run, as a rapid acceleration of existing trends turbo-charges productivity across the globe.

Which of the following long-term trends provide the great opportunities for real asset investing?



The transition to a low-carbon economy is seen by global investors as one of the long-term trends presenting the greatest opportunities for real assets investment.



Weaker industries and outdated working practices are expected to be replaced by technology and green recovery prospects, with the changes driven by home working leading to a wave of new opportunities.

Aviva Investors' paper '*Remote working is on the rise, but the office remains indispensable*',⁽⁹⁾ argues that cities promote innovation and technology clusters thrive when inventors live near each other.

But some elements of the office will change. Aviva Investors' UK head of real estate research Jonathan Bayfield notes: "The days of battery hen-style cellular office desks are over. Agility is key...teams need spaces where they can form organic, temporary hubs for projects and space to co-work and collaborate, as well as places for individual tasks."

It is hard to think of another period where real asset markets have faced such drastic changes. But with governments around the world due to spend heavily on infrastructure, and real estate having proved its resilience, the sector's importance to asset allocators is clear and only likely to grow further.

“

The days of battery hen-style cellular office desks are over, teams need spaces where they can form hubs for projects and space to co-work and collaborate.”

Jonathan Bayfield

UK head of real estate research, Aviva Investors



(9) <https://www.avivainvestors.com/en-gb/views/aiq-investment-thinking/2020/10/remote-working-office-indispensable/>

Our real assets capabilities

Real assets play a crucial role in shaping our evolving society. We deliver outcome-oriented solutions spanning real estate, infrastructure and private debt, leveraging our scale to access markets across Europe and deploy capital more efficiently.

- One of Europe's largest managers of real assets with c. 300 professionals across five locations
- £44.4bn managed across real estate, infrastructure and structured and private debt (as at 1 October 2021)
- ESG factors are considered as part of the wider investment management process (non-binding)*

*Please note the Investment Manager retains discretion over asset or stock selection subject to the Baseline Exclusions Policy and objectives of the fund or strategy.

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