GLOBAL CLIMATE 500 INDEX 2016

INSURANCE SECTOR ANALYSIS

ASSET OWNERS DISCLOSURE PROJECT

EMBARGOED 21 JULY 2016

ABOUT AODP

The Asset Owners Disclosure Project (AODP) is an independent global not-for-profit organisation that recognises the specific financial risk attributes of climate change. AODP has developed the world's leading reporting framework for institutional investors encompassing the disclosure and management of climate risk.

The AODP Global Climate 500 Index rates the world's 500 biggest asset owners - pension funds, insurers, sovereign wealth funds, foundations and endowments – on their success at managing climate risk within their portfolios, based on direct disclosures and publicly available information. Asset owners are scored on three key capabilities: Engagement, Risk Management and Low-Carbon Investment. They are graded from AAA to D while those with no evidence of action are rated X.

This year AODP has raised the bar, requiring greater evidence of action and no longer giving credit purely for transparency or commitments.

Leaders	**Top 5%**	**A - AAA**
Challengers	**Top 10%**	**B - BBB**
Learners	**Top 20%**	**C - CCC**
Bystanders	**Top 50%**	**D**
Laggards	**Zero score**	**X**

Further information on the methodology can be found in the appendix.

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INSURERS MUST WAKE UP TO THE RISKS OF CLIMATE CHANGE AND BACK THE LOW-CARBON ECONOMY

Climate change poses a double threat to the insurance industry. It faces mounting costs from claims relating to the physical impacts of climate change and knock-on events such as the disruption of global supply chains. At the same time, the investment portfolios that enable it to meet claims are themselves exposed to climate risks in the transition to the low-carbon economy.

Speaking to insurers last year, Mark Carney, Governor of the Bank of England and Chairman of the international Financial Stability Board, warned that investors face "potentially huge" losses from climate action that could leave vast reserves of fossil fuels as worthless stranded assets.

Climate risk is now a mainstream issue for institutional investors. The FSB has set up a task force chaired by former New York Mayor Michael Bloomberg which will make recommendations to the G20 on how asset owners, the companies they invest in and financial intermediaries should report the potential impact of climate change on their bottom line.

The global commitment to limit climate change to two degrees also presents asset owners with new opportunities. In the same "Tragedy of the Horizon" speech Governor Carney observed: "Financing the de-carbonisation of our economy is a major opportunity for insurers as long-term investors."

AODP's annual Global Climate 500 Index rates the world's 500 largest asset owners on their success at managing climate risk in their portfolios, grading them from AAA to D, while "laggards" taking no action are rated X. It reveals that as a group the world's biggest insurers are ignoring warnings on climate risk and lagging behind pension funds on the three key capabilities required to protect their portfolios: risk management, engagement and low-carbon investment.

Insurers are way behind pension funds in protecting their portfolios from climate risk. Only one in eight is taking tangible action compared with one in four pension funds.

This special report focuses on 116 insurers with $15.3 trillion of investments and compares their performance with 324 pension funds with $15.9 trillion. These two groups account for over 80% of the $38 trillion of assets covered by the Index.

The Index identifies 31 asset owners who are leaders on managing climate risk, rated A+. They include 26 pension funds, but just one insurer, Aviva. Across the Index just 14 insurers, one in eight, are taking tangible action to manage climate risk in their portfolios, rated C+, compared with one in four pension funds.

Insurers perform worst on their core competency, managing risk. Just 1% consider the risks of stranded assets.

Insurers perform worst and lag furthest behind pension funds on what should be their core competency: risk management. While they may be considering the effects of climate change on their liabilities, the vast majority of insurers are overlooking the impact of the low-carbon transition on their investment portfolio. Just 1% consider the risks of stranded assets, compared with 6% of pension funds.

They also underperform on engagement. Only 8% of insurers have staff dedicated to integrating climate risk into the investment process, half as many as pension funds.

Just $30 billion of insurance assets on the Index are in low-carbon investments compared with $93 billion of pension assets. Among those asset owners who disclose low carbon investments, on average these represent just 0.8% of insurance portfolios but 3.5% of pension portfolios.

Insurers are exposed to additional risk because generally their asset allocation is far more concentrated into fixed income than pension funds. This leaves them exposed to the climate capacity of ratings agencies who are only starting to re-assess this risk. Such exposure can have major consequences for the whole financial system as identified by the FSB after the sub-prime mortgage crisis. Insurers' lack of asset class diversification also means that company engagement is restricted to a minimum although their direct company risk is retained through corporate bond risk.

The Index also reveals big differences between regional markets. European insurers outperform insurers in the Americas and Asia Pacific on risk management, low carbon investment and engagement, and they make up 11 of the 14 insurers taking tangible action on climate change. However, a quarter of European insurers are doing nothing, with $730 billion completely unprotected, 10% of regional insurance assets.

In the Americas, three in five insurers (61%) are taking no action on climate change putting $954 billion at risk, nearly a third (32%) of regional sector assets.

In Asia Pacific nearly half the market (44%) is taking no action, putting $2.5 trillion at risk, more than half of regional assets (52%).

Most asset owners are only starting to get to grips with the huge implications of climate change for their investments and far more action is needed across the board, but there can be little excuse for the world's biggest insurers to lag so far behind pension funds. By failing to protect their investments they are threatening their long-term capacity to cover future claims and placing the security of millions of clients at risk.

As long as few insurers take action on climate risk, there is a danger of a systemic failure which could have catastrophic effects on the wider economy.

Insurers manage a third of the world's investment capital, so their actions can have a profound impact on the global economy. As long as few insurers take action on climate risk, there is a danger of a systemic failure which could have catastrophic effects on the wider economy. Conversely, by investing just a fraction of their portfolios in low carbon assets, insurers could play a key role in the transition to a low carbon economy and battle against climate change.

The Paris Climate Summit signalled the end of the fossil fuel age by pledging to limit warming to a maximum two degrees. The insurance industry now needs to wake up to the real risks of climate change, take urgent action to protect its trillions of dollars of investments, and in so doing help finance a smooth transition to a low-carbon economy.

FIGURE 01 / 2016 AODP GLOBAL CLIMATE INDEX SECTOR PARTICIPANTS

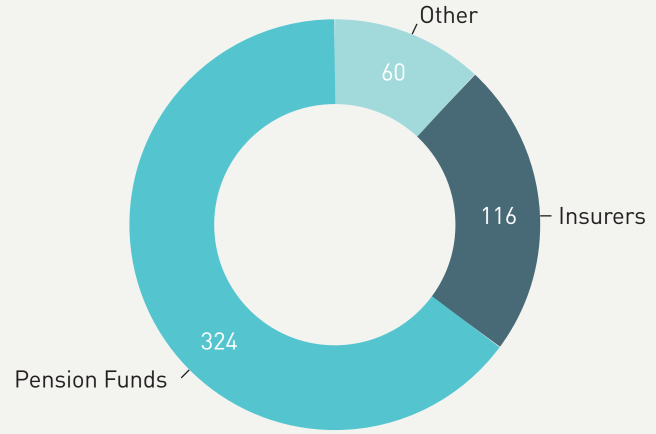
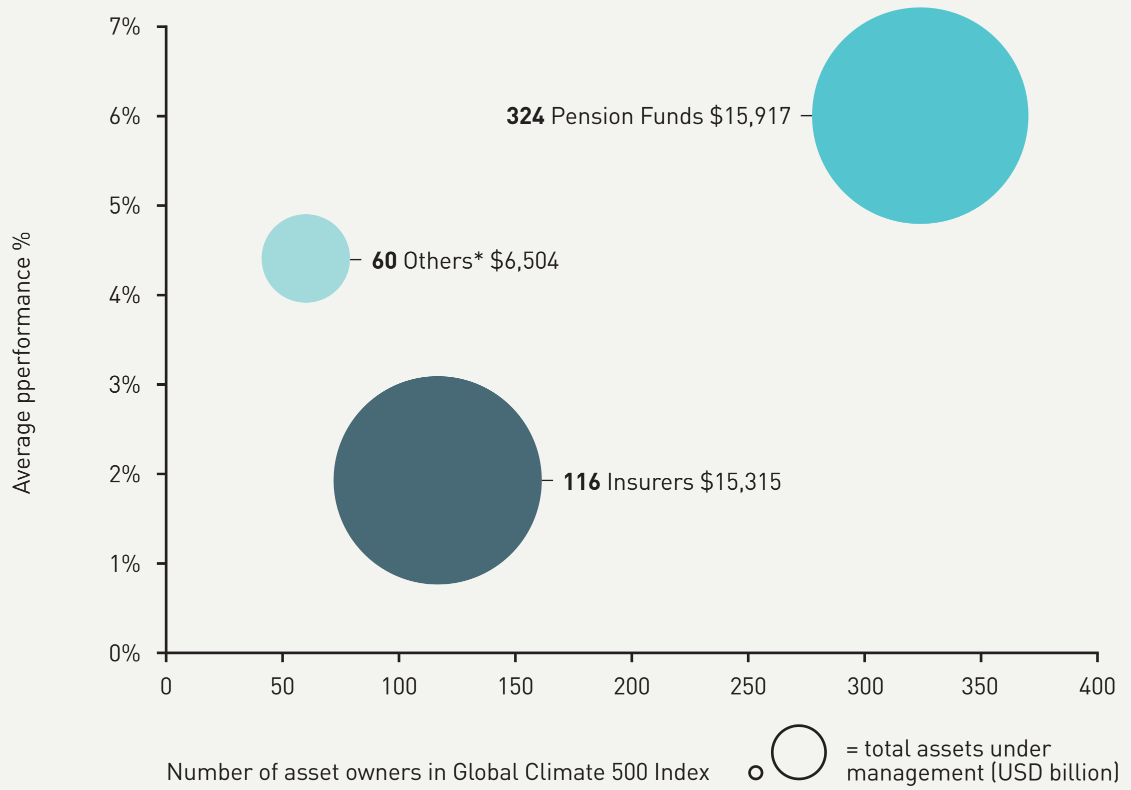


FIGURE 02 / 2016 AODP GLOBAL CLIMATE INDEX OVERALL SECTOR PERFORMANCE



* Others include: Sovereign Wealth Funds, Foundations and Endowments

INSURERS ARE LAGGING BEHIND PENSION FUNDS ON CLIMATE RISK

- Only one in eight insurers takes tangible action to manage climate risk compared with one in four pension funds.
- Global leaders on climate risk include one insurer, but 26 pension funds.
- Two fifths of insurers are taking no action to protect their portfolios, exposing $4.2 trillion to climate risk.

AODP's Global Climate 500 Index rates the world's 500 biggest assets owners, with $38 trillion under management on their success at managing climate risk. It includes 116 insurers with $15.3 trillion of investments and 324 pension funds with $15.9 trillion of investments.

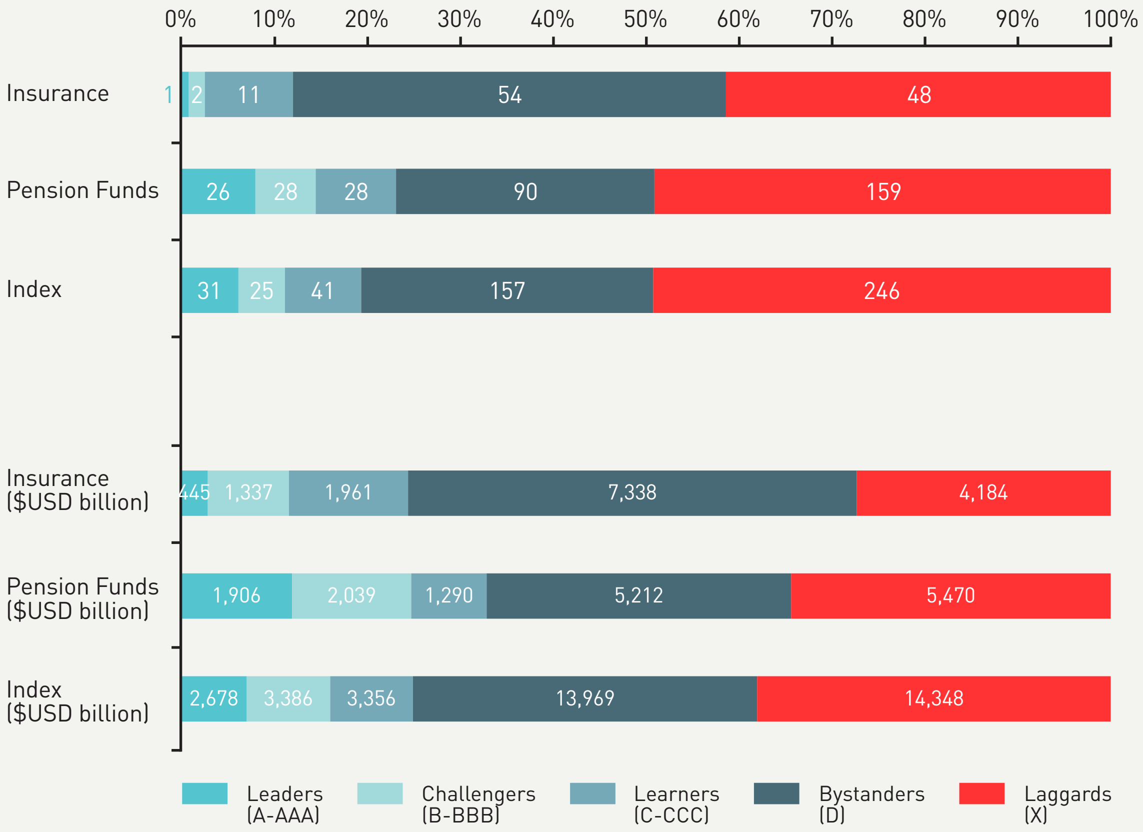
Insurers are lagging way behind pension funds in protecting their portfolios from climate risk. Just one in eight (12%) with a quarter of Index insurance assets is taking tangible action to manage this risk, rated C+ (learners, challengers and leaders), compared with nearly one in four pension funds (23%) with a third of pension assets. Global leaders on climate risk, rated A+, include just one insurer, but 26 pension funds.

More insurers than pension funds recognise climate risk as an issue, by 59% to 51%. Nevertheless, two fifths of the world's biggest insurers show no sign of action, leaving $4.2 trillion exposed to climate risk. Nearly half of pension funds are "laggards" putting $5.5 trillion at risk.

Insurers are specialists in risk management, their business models built around forecasting the probability of loss-making events. However, while they may understand the implications of climate change in their underwriting, these experts are failing to join the dots on the investment side.

If insurers face significant losses to their investments as a result of climate change, it will reduce their long term capacity to cover future claims and put clients' policies in jeopardy. Given the relatively few insurers currently taking action, there is a risk of systemic failure which could have catastrophic effects on the wider economy.

FIGURE 03 / 2016 AODP GLOBAL CLIMATE INDEX SECTOR PERFORMANCE



ONLY 14 INSURERS ARE TAKING TANGIBLE ACTION ON PORTFOLIO CLIMATE RISK

- Aviva is the only insurer rated A for climate risk action.
- European companies dominate the list of 14 insurers taking tangible action.
- Three Japanese insurers are the biggest laggards with nearly $1.5 trillion exposed to climate risk.

Only 14 of the 116 insurers on the Index are taking tangible action to reduce portfolio climate risk, with a C+ rating. They manage $3.8 trillion, a quarter of Index insurance assets.

Aviva, rated A, is the only insurer to make it into the group of global leaders, leading the way on climate risk. Allianz, previously in this group, has slipped to a B rating.

European companies dominate the list of insurers taking most action on climate risk, accounting for 11 of the 14 companies. They include two members of ClimateWise, a global industry initiative which has worked to raise awareness of the risks of climate change and encourage action (see right).

The biggest group of insurers is rated D – 54 companies with $7.5 trillion AUM. This group recognise climate risk but are only taking small steps to manage it.

Almost as many laggards - 48 companies with $4.2 trillion AUM - are taking no action to protect their portfolios. The largest 10 Laggards manage $2.9 trillion, and are predominantly large Asian based insurers.

TABLE 01 / 2016 AODP GLOBAL CLIMATE INSURANCE TOP PERFORMERS

2016 RATING	2016 INSURANCE RANKING	2016 / 2015 CHANGE	OVERALL RANKING	ASSET OWNER NAME	COUNTRY	AUM (USD BILLION)
A	1	0	22	Aviva Insurance*	UK	$445
BBB	2	^ 1	40	AXA Group	France	$592
B	3	v 1	51	Allianz Group*	Germany	$744
CCC	4	-	59	The People's Insurance Company (Group) of China Limited (PICC)	China	$122
CC	5	^ 45	67	Old Mutual Group	UK	$149
CC	6	-	72	MAIF	France	$18
CC	7	^ 5	74	Folksam Group	Sweden	$45
CC	8	^ 15	79	Hartford Financial Services Group	USA	$73
CC	9	-	81	Crédit Agricole Assurances (CAA)	France	$367
C	10	-	87	CNP Assurances Group	France	$440
C	11	^ 41	88	Standard Life Group	UK	$233
C	12	v 6	90	Storebrand ASA	Norway	$44
C	13	v 9	93	Prudential Insurance	USA	$420
C	14	-	96	Achmea Holding	Netherlands	$50
Total Top Performers						**$3,743**
Total Insurers						**$15,315**

* ClimateWise members

TABLE 02 / 2016 AODP GLOBAL CLIMATE INSURANCE LARGEST LAGGARDS

ASSET OWNER NAME	COUNTRY	AUM USD MILLION
Japan Post Insurance (Kampo Seimei)	Japan	$602
Nippon Life Insurance Company (Nissay)	Japan	$438
Zenkyoren (JA Kyosai)	Japan	$436
China Life Insurance	China	$357
New York Life Insurance Company	USA	$230
Sumitomo Life Insurance Company (Sumisei)	Japan	$226
Chunghwa Post	Taiwan	$205
MassMutual (Insurance)	USA	$139
Talanx	Germany	$119
Ageas Group	Belgium	$117
Total		**$2,869**
TOTAL X RATED	**48**	**$4,184**

INSURERS WAY BEHIND PENSION FUNDS ON ALL APPROACHES TO CLIMATE RISK

1% Insurers' average score for Risk Management, compared to 5% for pension funds.

2% Insurers' average score for Engagement compared to 8% for pension funds.

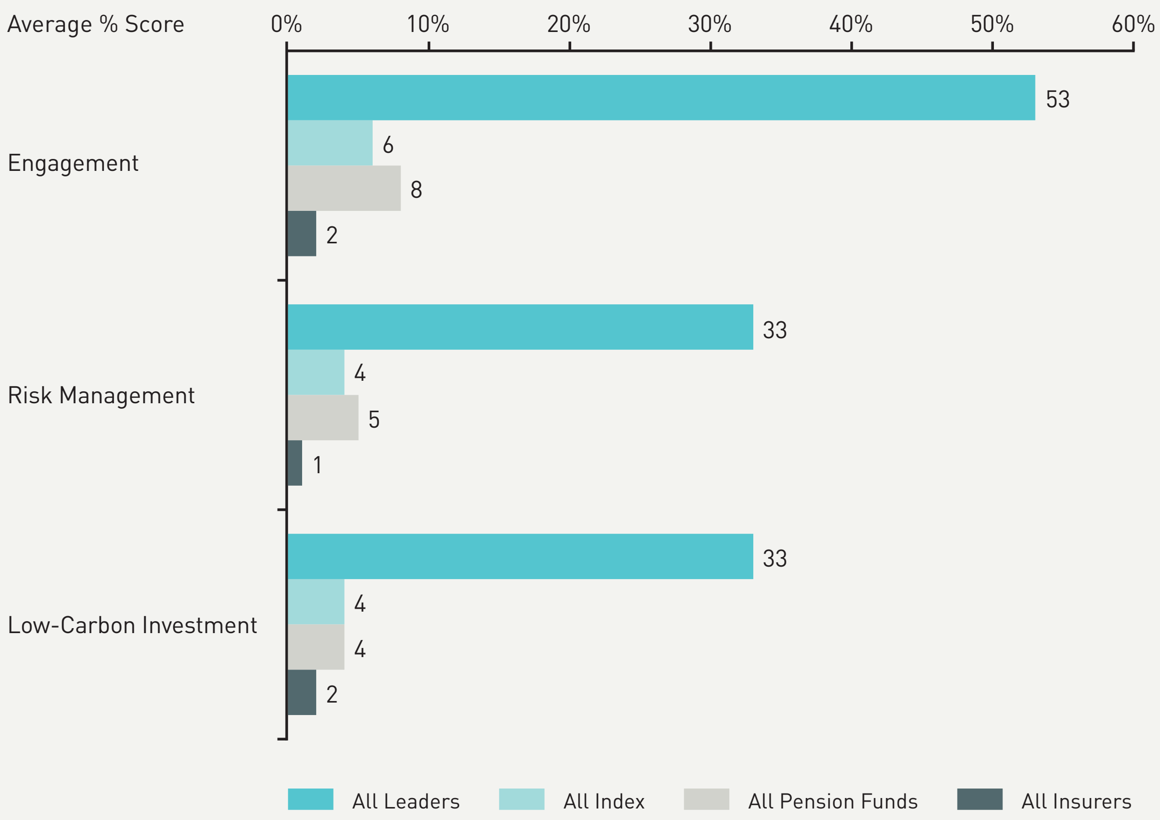
2% Insurers' average score for Low Carbon Investment compared to 4% for pension funds.

The Global Climate 500 Index evaluates asset owners on three key capabilities for managing portfolio climate risk, Engagement, Risk Management and Low Carbon Investment.

Low average scores reflect the fact that most asset owners are only starting to get to grips with climate risk, if at all. However, as a sector, insurers' performance lags way behind pension funds, and the index average, in all three areas. Insurers' performance is worst on what should be their core competency - managing risk.

Across the Index, the group of 31 leaders outperforms the rest by a long way. However, Aviva, the sole insurance leader, only matches the 26 pension fund leaders on Engagement and underperforms in Risk Management and Low-Carbon Investment.

FIGURE 04 / 2016 AODP GLOBAL CLIMATE INDEX CAPABILITIES



ENGAGEMENT: INSURERS LACK CLIMATE EXPERTISE IN THEIR INVESTMENT TEAMS

8%

of insurers have a role dedicated to integrating climate change risk into the investment process, half as many as pension funds.

97%

of insurers appear to lack a strategy for engaging investee companies on climate risk.

The Engagement capability assesses how asset owners work with investee companies and stakeholders throughout the investment chain to reduce exposure to climate risk. On average insurers score 2% compared with 8% for pension funds.

Only 8% of insurers have a role dedicated to integrating climate change risk into the investment process, compared to 16% of pension funds. This is a key indicator of how an asset owner perceives the importance of managing climate risk, and is a distinguishing performance factor of leaders across all sectors.

Insurers also appear to lack a strategy for engaging investee companies on climate risk. With portfolios heavily weighted towards fixed income, insurers don't have the same opportunities as pension funds, but there are still ways to engage. Yet only 3% of insurers have a policy setting out how they engage with investee companies on climate change issues compared with 15% of pension funds.

This lack of focus may also explain why insurers are far less active in backing climate change resolutions: just 3% disclosed their support, compared with 16% of pension funds.

FIGURE 05 / PROPORTION OF ASSET OWNERS WITH ROLE/TEAM INTEGRATING CLIMATE CHANGE RISK INTO INVESTMENT PROCESS

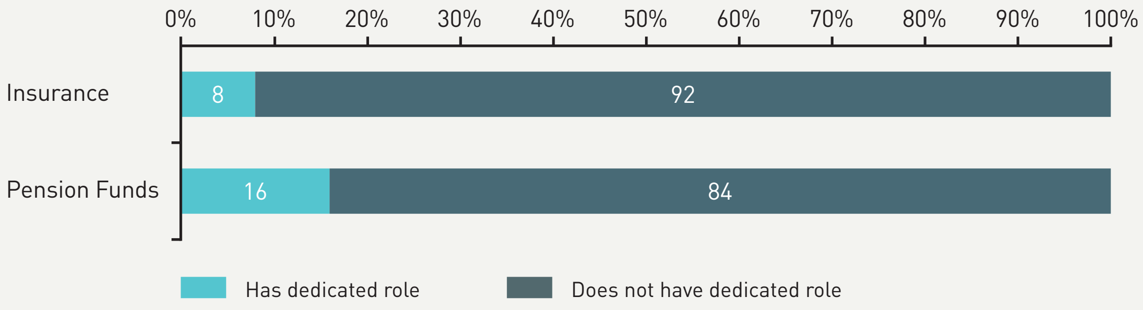
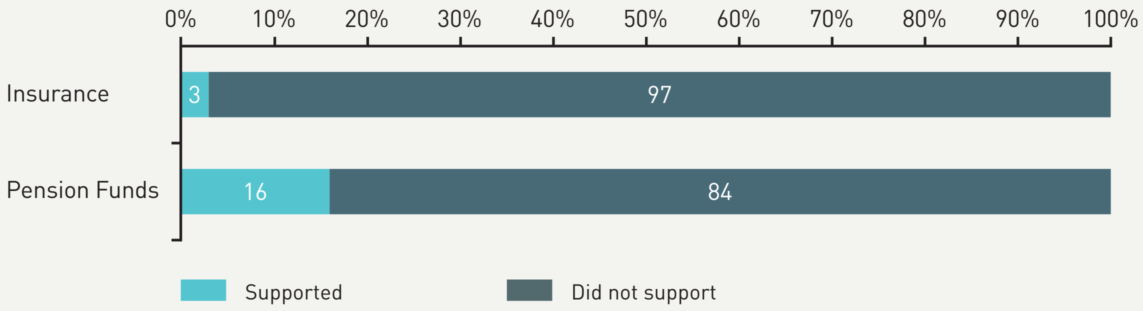


FIGURE 06 / PROPORTION OF ASSET OWNERS SUPPORTING CLIMATE CHANGE RELATED SHAREHOLDER RESOLUTIONS



RISK MANAGEMENT: INSURERS FAIL TO APPLY RISK EXPERTISE TO INVESTMENTS

- Just 1% of insurers are assessing the risk of stranded assets compared with 6% of pension funds.
- 5% of insurers measure portfolio carbon emissions, compared with 13% of pension funds.

Insurers are specialists in risk management, but they are not translating their underwriting expertise into their investments and identifying the risks associated with high-carbon assets in their portfolios. On average insurers score just 1% on this capability compared to 5% for pension funds.

Mark Carney, Governor of the Bank of England and chairman of the international Financial Stability Board, warned in his Tragedy of the Horizon speech to the insurance industry that investors risk "potentially huge" losses from climate action that could leave vast reserves of fossil fuels as worthless stranded assets. However, just 1% of insurers are assessing the risk of climate change related stranded assets compared with 6% of pension funds.

To properly manage climate risk asset owners should understand the extent of their high-carbon investments. However, only 5% of insurers are measuring carbon emissions in their portfolio compared with 13% of pension funds.

FIGURE 07 / PROPORTION OF ASSET OWNERS WHO ASSESS RISKS OF CLIMATE-RELATED STRANDED ASSETS

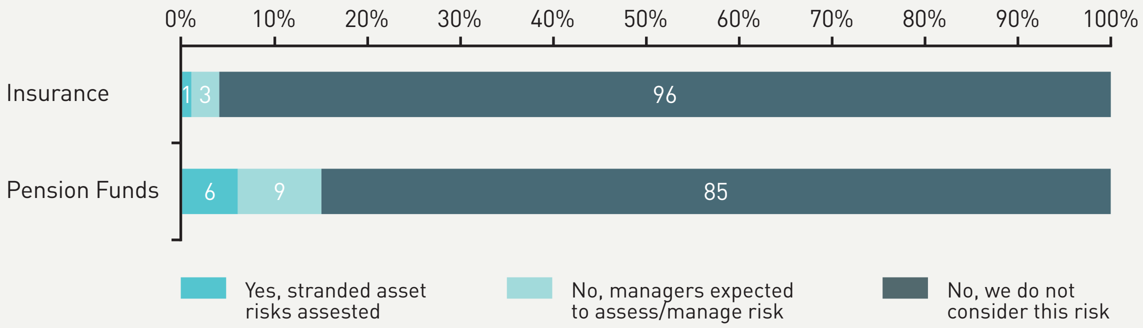
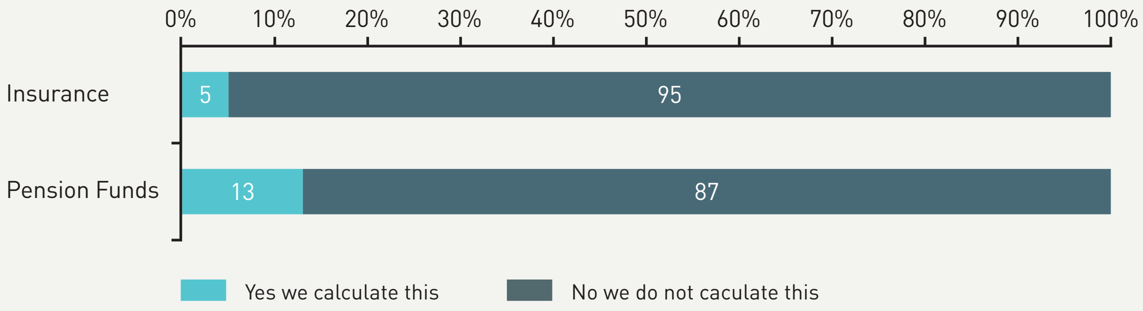


FIGURE 08 / PROPORTION OF ASSET OWNERS CALCULATING PORTFOLIO CARBON EMISSIONS



LOW-CARBON INVESTMENT: INSURERS MISS OPPORTUNITIES IN GREEN ECONOMY

- 0.2% of insurance assets – just $30 billion – are identified as low carbon investments compared with $93 billion of pension assets.
- Among asset owners disclosing low carbon investments, insurers invest an average of 0.8% of their portfolios compared to 3.5% of pension portfolios.

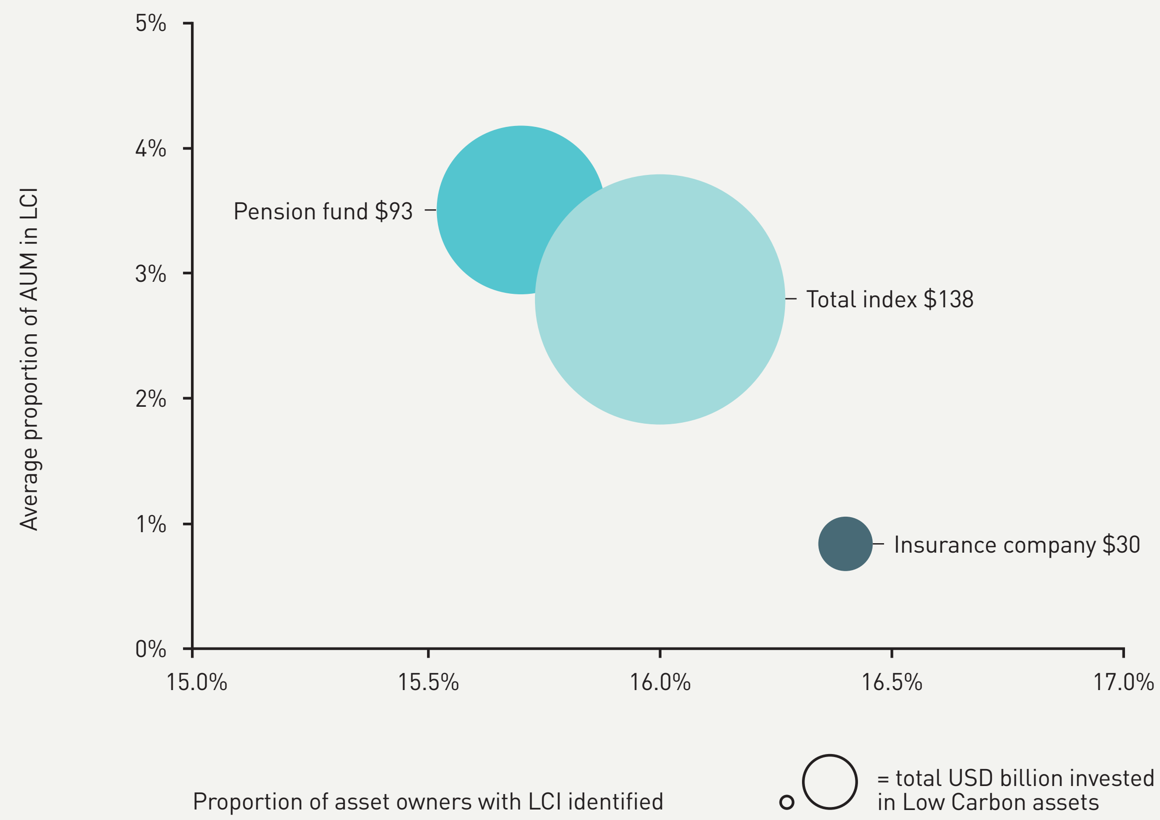
The third key approach to managing climate risk is to invest in the low-carbon economy. World leaders have committed to limiting climate change to a maximum two degrees and Mark Carney has said: "Financing the decarbonisation of our economy is a major opportunity for insurers as long-term investors."

However, just 0.2% of the $15.3 trillion of insurance assets on the Index – $30 billion – is invested in low-carbon. Three times more pension assets are invested in low-carbon – a total $93 billion.

Amongst asset owners with low-carbon investments, insurers are committing far less than pension funds. Nineteen insurers disclose low-carbon investments but these average just 0.8% of AUM, while 51 pension funds have low-carbon investments accounting for an average 3.5% AUM. If just the 19 insurers were to match this rate of investment more than $100 billion of capital would flow into the low-carbon economy.

Insurers have an opportunity to take the lead in driving towards the low carbon economy, because insurance AUM is concentrated in a relatively small number of very large asset owners, and a growing number of insurers have publicly committed to investment in this sector. If all 116 insurers matched a 3.5% rate it would see more than half a trillion dollars of low carbon investment.

FIGURE 09 / LOW CARBON INVESTMENT



MOST INSURERS ARE STILL LEARNING HOW TO MANAGE PORTFOLIO CLIMATE RISKS

The 14 insurers who are taking tangible action on climate risk are taking a variety of approaches.

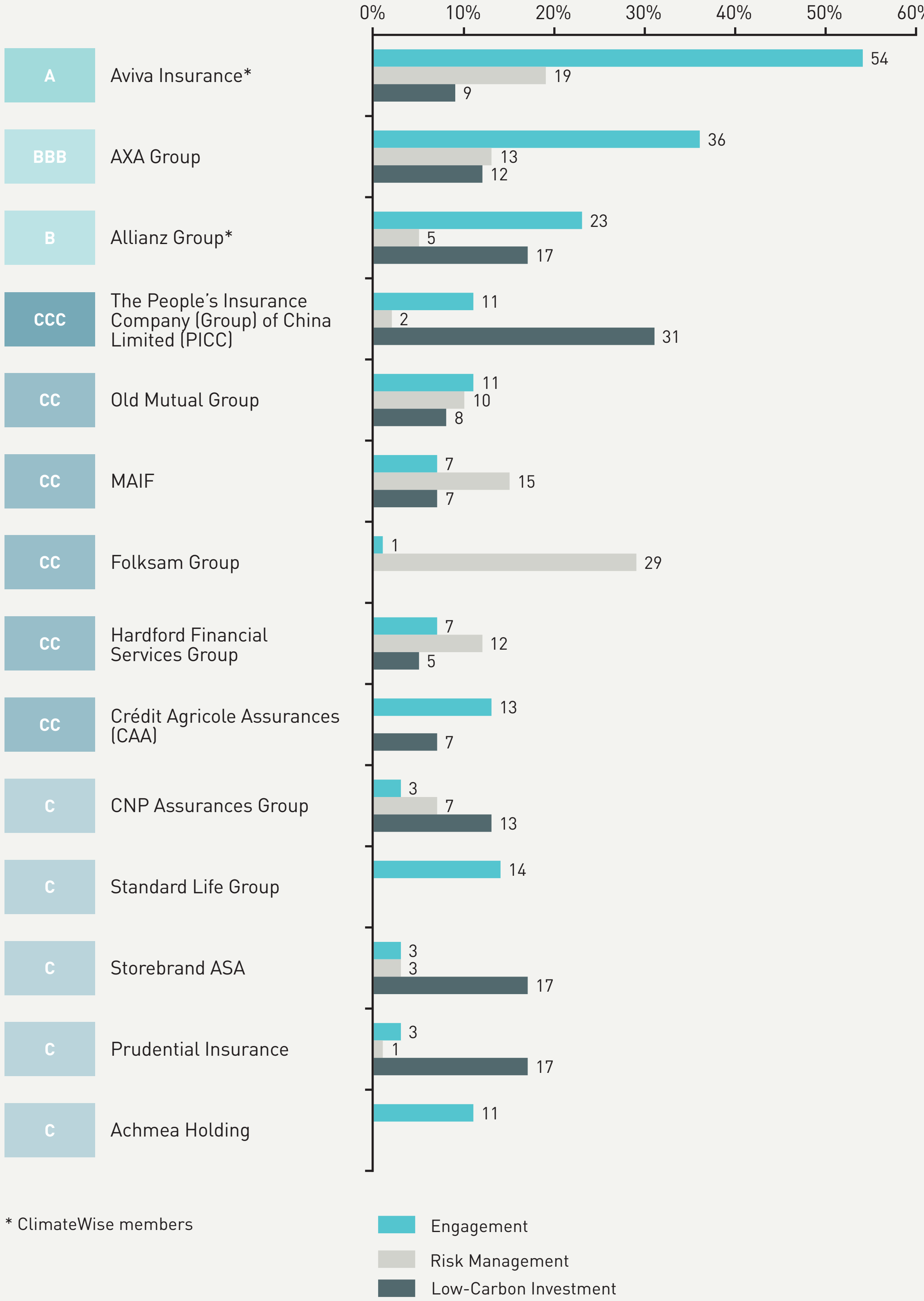
This is to be expected, especially in this early adoption phase when organisations are selecting the strategies they feel most useful to their individual needs.

Engagement is generally the strongest of the three capabilities. Aviva performs well across all three approaches and performs particularly very well on this front, scoring for both policy actions and active engagement throughout the investment chain.

In Risk Management, Folksam is the leader followed by Aviva. Each uses different approaches in managing risk, from understanding portfolio emissions intensity, potential carbon related losses and stranded assets.

Low-Carbon Investment assesses both the variety of asset types and the proportion of portfolio capital directed into these investments. China's Peoples Insurance Company tops the table here for its investment in renewables, adaptation and low carbon financial products, however, like most asset owners, it is not directing a significant proportion of its portfolio towards the low-carbon economy (←3%).

FIGURE 10 / TOP INSURANCE PERFORMERS CAPABILITIES



* ClimateWise members

EUROPEAN INSURERS LEAD THE GLOBAL INDUSTRY ON CLIMATE RISK MANAGEMENT

- Three in four European insurers recognise climate risk.
- Half of Asian insurance assets - $2.5 trillion – are exposed to climate risk.
- Three fifths of American insurers are ignoring the climate risk.

European insurers are setting the standard when it comes to managing the risks of climate change in their investments.

EMEA

Eleven insurers (22% of the market) with 41% of regional insurance assets are taking tangible action. Half (53%) recognise climate risk but are taking little action, rated D. One in four (25%) with a tenth of regional assets are laggards, providing no evidence of addressing the issue. All insurers are European except one in South Africa.

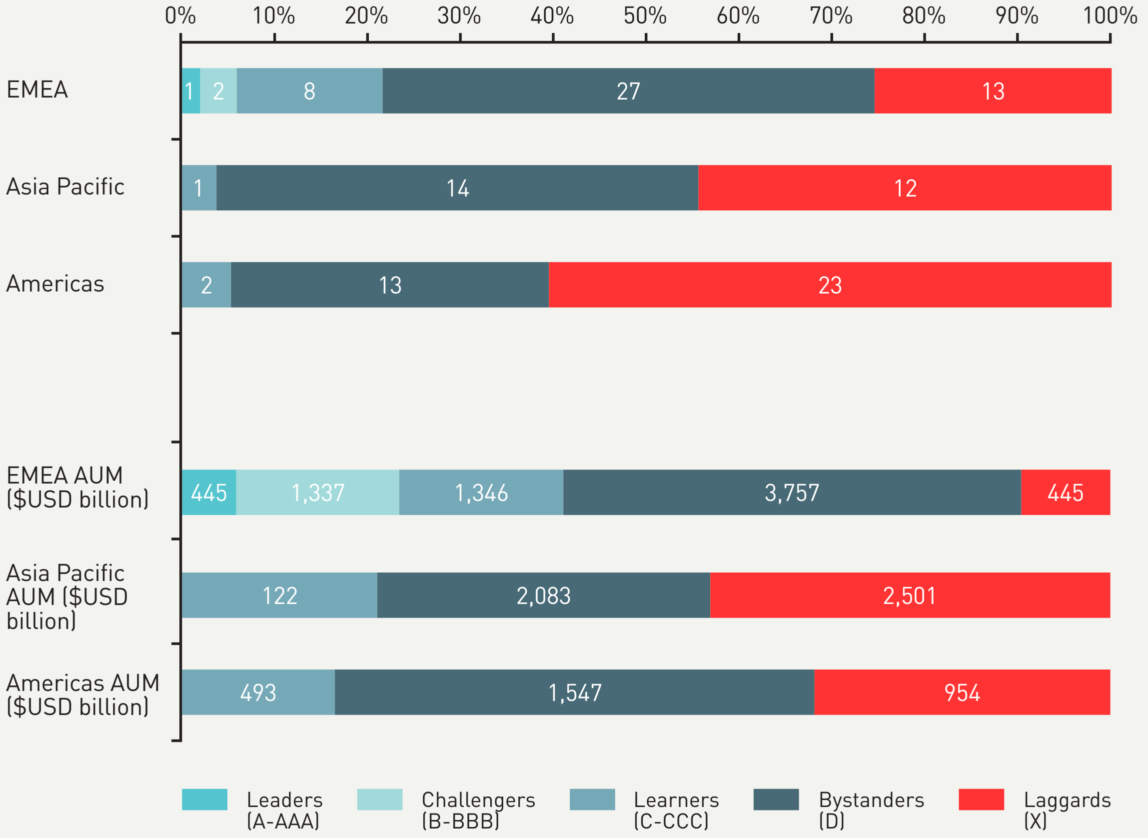
ASIA PACIFIC

Only one insurer representing 2.5% of the regional market is taking tangible action. Twelve laggards (44%) with 52% of regional assets appear to be doing nothing to manage climate risk. The 27 insurers include 14 from Japan and four from China.

AMERICAS

Only two insurers representing 16% of regional assets are taking tangible action. Three in five insurers (61%) with nearly a third (32%) of regional assets are laggards ignoring the issue. Of the 38 insurers 32 are in the US and four in Canada.

FIGURE 11 / 2016 INSURANCE ASSET OWNER BY REGION



RISK MANAGEMENT WEAKEST IN EVERY INSURANCE MARKET

- 4.4% average EMEA score on engagement is way ahead of other markets.
- 0.6% AUM - Europeans invest twice as much as Americans in low carbon and three times as much as Asian insurers.

European insurers outperform peers globally on all approaches to protecting their portfolios from the impacts of climate change. However, in all markets the average insurer is far from taking sufficient action to protect their portfolios, with average scores extremely low across all three capabilities. Risk management is the weakest competency across all markets.

EMEA

Insurers are ahead of their rivals in all three competencies. Engagement is ahead of other regions at an average of over 4%, while risk management averages 2.1% and low carbon investment 2.9%. $90 billion is invested in low carbon assets within the European insurance sector, but this represents just 0.6% of regional AUM.

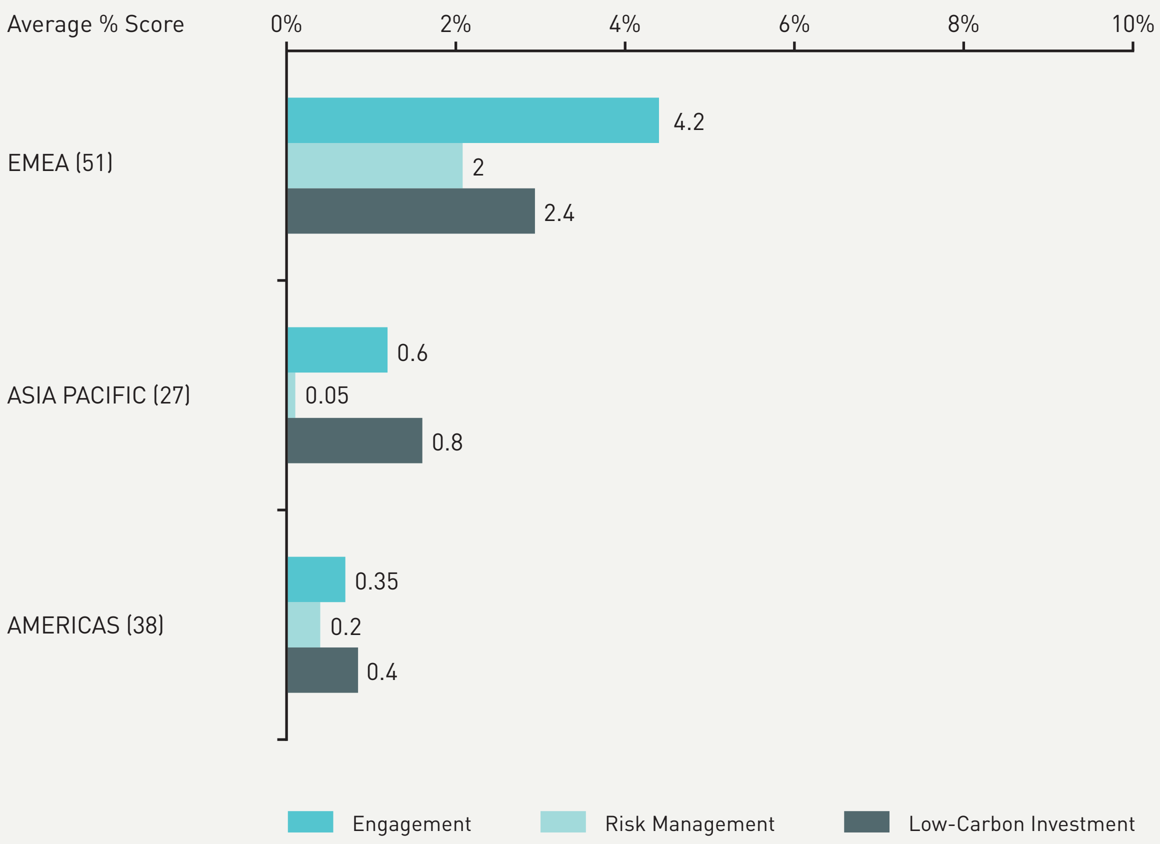
ASIA PACIFIC

Insurers are behind EMEA on engagement (1.2%) and low carbon investment (1.6%), but ahead of the Americas. However, climate risk management is almost non-existent (0.1%). Insurers in this region have identified just $17 billion in low-carbon investment, representing less than 0.2% of assets.

AMERICAS

The average insurer scores less than 1% on all three competencies, putting them far behind European peers and only ahead of Asia Pacific on risk management. American insurers have $31 billion in low carbon assets, representing just 0.3% of regional asset portfolios.

FIGURE 12 / COMPETENCIES OF INSURERS BY REGION

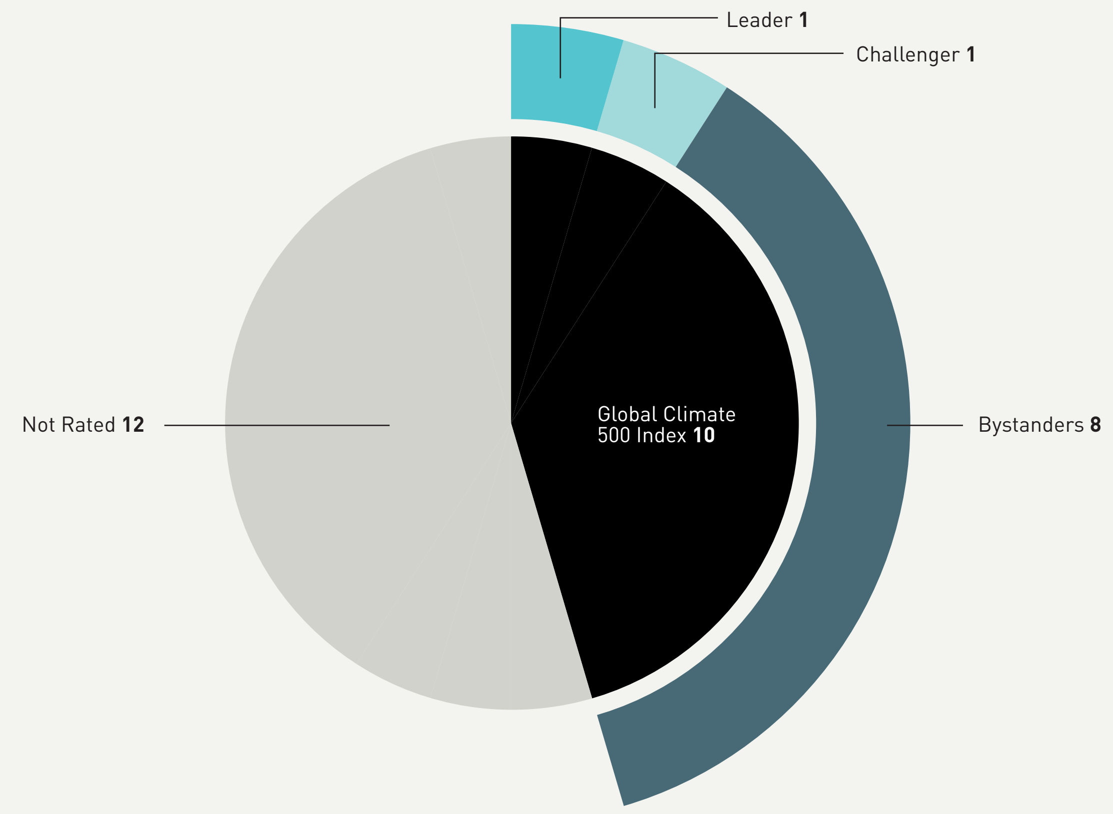


CLIMATEWISE HAS RAISED BAR ON CLIMATE ACTION BUT MEMBERS LAG ON INVESTMENT

TABLE 03 / CLIMATEWISE MEMBERS 2016 INDEX PERFORMANCE

2016 RATING	2016 INSURANCE RANKING	2016 / 2015 CHANGE	OVERALL RANKING	ASSET OWNER NAME	COUNTRY	AUM
A	1	0	22	Aviva Insurance	UK	$445
B	3	∨ 1	51	Allianz Group	Germany	$744
D	16	-	102	Prudential plc	UK	$520
D	21	-	117	Chubb Group	USA	$44
D	28	-	136	QBE Insurance Group Ltd	Australia	$27
D	28	∨ 21	136	Zurich Insurance Group	Switzerland	$339
D	37	∨ 12	171	Royal & Sun Alliance Insurance (RSA)	UK	$22
D	41	-	187	XL Group	Ireland	$42
D	45	∨ 11	192	Tokio Marine Holdings, Inc.	Japan	$170
D	52	∨ 37	204	Swiss Re	Switzerland	$146

FIGURE 13 / CLIMATEWISE MEMBERS 2016 INDEX PERFORMANCE



European leadership is evidenced further by the number of Europe-based insurers signing up as members to ClimateWise, the global industry network committed to reducing the impact of climate change on society and the insurance industry. The UK-based initiative has raised the bar on climate change action since its launch in 2007 and is dominated by European insurers.

Members commit to implement six principles in their business activities to support the transition to a low carbon, climate-resilient future. The 2015 ClimateWise independent review reveals that two of the areas where members have much work to do is incorporating climate change into investment strategies (Principle 4) and reporting on this (Principle 6).

It states: "Insurers are beginning to recognise that their exposure to climate risk can impact the value of investment portfolios as much as underwriting portfolios, increasing financial exposure and potentially correlating risks across their balance sheets."

The report adds: "Insurance companies can play a critical role in encouraging greater action and ambition regarding climate change in the companies and projects they invest in. Member initiatives regarding climate risk in investments tend to be smaller, tactical activities."

The results of our 2016 Global Climate 500 Index reflect this lack of progress. Ten ClimateWise insurance company members are big enough to be rated in the AODP Global Climate 500 Index. Aviva achieves Leader status, with an A rating, and Allianz receives a B, but eight others are rated D, taking limited action to manage portfolio climate risk.

INSURERS MANAGE A THIRD OF THE WORLD'S INVESTMENT CAPITAL, SO THEIR ACTIONS CAN HAVE A PROFOUND IMPACT ON THE GLOBAL ECONOMY. AS LONG AS FEW INSURERS TAKE ACTION ON CLIMATE RISK, THERE IS A DANGER OF A SYSTEMIC FAILURE WHICH COULD HAVE CATASTROPHIC EFFECTS ON THE WIDER ECONOMY.

CONVERSELY, BY INVESTING JUST A FRACTION OF THEIR PORTFOLIOS IN LOW CARBON ASSETS, INSURERS COULD PLAY A KEY ROLE IN THE TRANSITION TO A LOW CARBON ECONOMY AND BATTLE AGAINST CLIMATE CHANGE.

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