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Climate Risk Management for Insurers – Benchmarking of Emerging Best Practice



Solvency II Wire

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1. Introduction

This paper evaluates the current state of climate risk integration within the European insurance industry by analysing the climate-related public disclosures of some of the largest European and UK insurers. By focusing primarily on investment approaches and drawing from a wide range of disclosures across the market including the Solvency and Financial Condition Reports (SFCRs) and other publicly disclosed information, it identifies areas of best practice as well as gaps in climate risk disclosure and integration.

This paper is a collaboration between Royal London Asset Management and Solvency II Wire, building on our combined insurance expertise, relationships, and data sources.

Overview

Climate change and its associated risks and opportunities continues to demand attention and actions across society as a whole. Beyond the ecological threat it poses to our planet, climate change is widely recognised as a systemic economic risk and is high on the agenda of the Financial Stability Board (FSB), the International Monetary Fund, several inter-governmental bodies and national regulators.

The insurance industry is uniquely positioned (and exposed) within the financial services industry in relation to climate change due to the nature of its business.

The challenges insurers face managing climate risk include:

- **In-house expertise** – increasing demands on existing resources and a reliance on third party inputs to manage a highly specialist and evolving area of expertise.
- **Data issues** – low data quality and availability on both the asset and liability sides of the balance sheet.
- **Modelling requirements** – increasing expectations to undertake climate-related scenario and stress testing analysis to help understand insurers' exposure to climate-related risks.
- **Reporting and risk management** – lack of clear standardisation of climate-related metrics.
- **Credible definition of objectives** – defining high-level beliefs and objectives around climate risk remains highly subjective and there is a need to integrate the downstream impact on wider risk, capital, investment and underwriting approaches.

- As a large global industry, it is a contributor to carbon emissions through its operating activities and offices.
- As an institutional investor, it has the power to allocate capital to more climate-aware assets and strategies, and drive and support changes in corporate behaviour through ongoing stewardship and engagement. As an illustration, a recent publication by the International Association of Insurance Supervisors (IAIS) suggests that as much as 35% of the global insurance industry's investment assets could be considered 'climate-relevant' i.e. exposed to climate risks¹.
- As a carrier of risk, insurers are further exposed to climate-related and natural catastrophe claims.

The integration of climate risks into all aspects of insurers' business is therefore a key strategic focus, driven by both direct emerging regulatory requirements, and pressures from other stakeholders such as non-executive directors (NEDs), shareholders and policyholders. Very recent developments include the latest status update from the FSB around climate risk reporting; the recommendation from the European Commission around insurers undertaking long-term climate risk scenario analysis; and the UK Government revealing its 'Greening Finance Roadmap' to mitigate greenwashing through enhanced disclosures and green taxonomy, and to support a transition to a greener financial system.

¹ IAIS Global Insurance Market Report, Special Edition: [The Impact of Climate Change on the Financial Stability of the Insurance Industry, September 2021](#)

Engaging with climate change requires insurers to invest extensive time and resources. While the scale and pace of progress varies depending on the size of insurer and their location, significant extra effort is still required for the vast majority.

Reporting climate-related risk

Reporting and disclosure of climate risk information has been identified as one of the key components that are essential for tackling climate change.

As noted by the FSB Task Force on Climate-related Financial Disclosures (TCFD): “Without reliable climate-related financial information, financial markets cannot price climate-related

risks and opportunities correctly, and may potentially face a rocky transition to a low-carbon economy.”²

Objectives

Given the growing relevance of climate change to the insurance industry and the importance of reporting and disclosure, this paper sets the following objectives:

- Evaluate the **current state and quality of climate-related public disclosures of the European insurance industry.**
- Establish and **evaluate current market ‘best practice’** of climate change management and disclosure based on reporting by some of the larger market players.

Methodology

Owing to the lack of standardisation of both requirements and definition of metrics, we conduct benchmarking analysis of the various forms of public disclosure of some of the largest European insurers and assess these against the broad trends in regulatory disclosures and the Solvency II public disclosures.

“Without reliable climate-related financial information, financial markets cannot price climate-related risks and opportunities correctly, and may potentially face a rocky transition to a low-carbon economy.”²

² TCFD website fsb-tcfd.org/about



Key requirements and incentives on climate-related risks

The main drivers requiring or encouraging insurers to focus on climate risk management can be categorised into three areas:

1. Broader climate-related

initiatives – such as the TCFD recommendations that are being

encouraged or required for larger institutional investors in an increasing number of countries

2. Requirements from global or pan-continental bodies – such as the European Insurance and Occupational Pensions Authority (EIOPA) likely stipulation that insurers should recognise climate-

related risks as part of the review of the Solvency II framework

3. Expectations from national regulators and bodies – such as the climate change management requirements set by the Prudential Regulatory Authority (PRA) in the UK

Insurance focused	
 	• Likely requirement to recognise sustainability risks when setting investment strategy and risk and capital management frameworks • European Commission recommending long-term climate scenario analysis.
	• Supervisory Statement (3/19) around climate risk management • Letter from PRA to insurance company CEOs requiring management of climate change risks by end of 2021
	• Consulting around post-Brexit changes to insurance regime • Call for evidence - includes questions around whether SCR calculation should encourage long-term growth and climate change objectives
	• Climate Risk roadmap setting out carbon reduction plans across UK insurance sector • Four thematic pillars driving roadmap • Yearly review

Wider initiatives	
	• COP 26 UN Climate Change Conference in November 2021
 	• Mandatory climate change disclosures for large proportion of UK asset owners in line with TCFD
	• Climate Biennial Exploratory Scenario (BES) recently been published • In 2022, PRA and the BoE exploring enhancements to the regulatory capital frameworks for climate-related risks.
	 

Legislation and regulation governing climate change is continually and rapidly increasing and evolving. The level at which it is imposed also varies considerably between jurisdictions.

For example:

- The European Commission has recently proposed amendments to the Solvency II directive, requiring insurers to conduct scenario analysis for long-term exposure to climate risks (see publication on 21st September 2021³).
- In the UK, the PRA requires that insurers should have fully embedded climate risk management approaches by the end of 2021.

In addition, there is increasing recognition by regulators that the supervisory approach needs to be proportionate to the resources and exposures of each insurer. For example, in the UK the PRA has recently indicated that for smaller firms it will take an approach based on the business model and levels of exposure to climate risk rather than a one size fits all approach.⁴

Regulatory framework of climate risk disclosures

The tone for regulatory climate-related disclosures in the financial sector was set in 2017, with the publication of a framework for public disclosure of climate-related risks and opportunities in mainstream financial filings by FSB TCFD⁵.

The guidance of the so called 'TCFD Framework' was adapted to the specific characteristics of the insurance industry by the Sustainable Insurance Forum (SIF) and International Association of Insurance Supervisors (IAIS)⁶.

The FSB publishes regular updates on the state of climate risk reporting. Some of the highlights from the report published on 14th October 2021 include:

- Insurance is now a leading sector in climate risk disclosures (out of the eight sectors assessed by the TCFD), significantly increasing its average level of disclosures by 11% between 2019 and 2020.
- Europe remains the leading region for disclosures.

- The TCFD provides further guidance for insurers on describing the impacts of climate-related risks as well as the processes for identifying and assessing climate-related risks.

The TCFD Framework recommendations dovetail with the principles of public disclosures set out in Europe's Solvency II regulatory framework.

At present, there are limited requirements to publicly disclose quantitative data on climate risk related exposure and investment (beyond certain countries such as the UK). However, the narrative section of the disclosures, the Solvency and Financial Condition Report (SFCR), must contain information about identification, management and impacts of all material risks.

To that end and given the rising recognition of climate risk as an emerging material risk for most insurers, it would be expected that it would feature prominently in the Solvency II public disclosures.

³ European Commission publication on 21 September 2021: ec.europa.eu/info/publications/210922-solvency-2-communication_en

⁴ Speech by Charlotte Gerken, executive director, PRA on 4 October 2021 to the Association of Financial Mutuals: bankofengland.co.uk/speech/2021/october/charlotte-gerken-speech-at-the-association-of-financial-mutuals-conference

⁵ TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures, June 2017: fsb-tcfd.org/publications

⁶ IAIS and SIF: Issues Paper on Climate Change Risks to the Insurance Sector 2018.

Annex: Recommendations of the FSB TCFD Issues Paper on Climate Change Risks to the Insurance Sector, page 73.



2. What areas have we benchmarked

To help understand peer context, both in terms of the level and nature of disclosures as well as the increasing focus on climate-related risks and current 'best practice' around climate risk management, we have analysed information in two main areas:

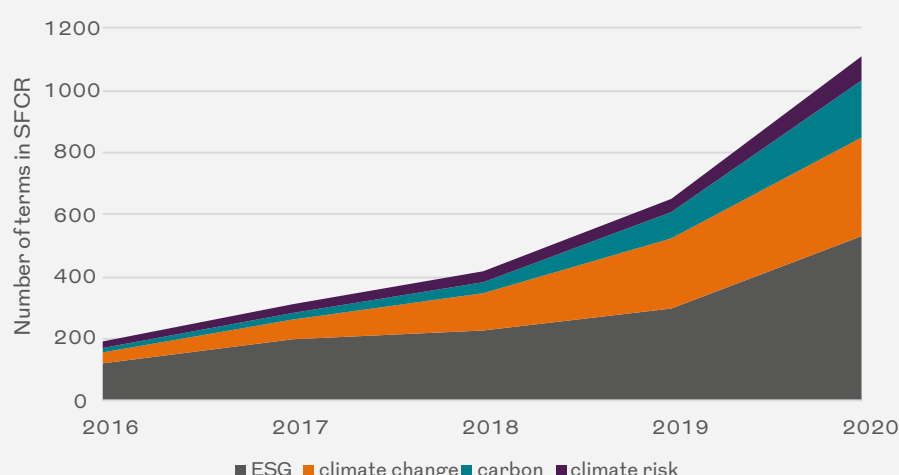
i. Overall trends over time in the European insurance industry's disclosure of climate-related risks, by undertaking some analysis around the universe of historical Solvency II disclosures.

ii. A more detailed review of the approaches taken by a sample of the largest Continental European and UK insurers to provide more granular insights into disclosures and identify current practice and future 'best practice'.

i. Overall European insurance industry trends – Solvency II disclosures

The Solvency II disclosures serve as a useful data source for pan-European analysis given the standardisation in both the reporting templates and the structure of the SFCR reports.

Climate Risk related terms in the SFCR by year



Source: Solvency II Wire Data.

The analysis uses keyword searches of a selection of climate-related terms to identify broad trends on insurers' risk radar. Over 12,000 SFCR reports published by c 3,100 European insurers (solo and group) between 2016 - 2020 were analysed.

The following terms were selected as representative indicators likely to feature in any text on climate change: ESG (environmental, social and governance), climate change, carbon and climate risk⁷.

The chart above shows a significant rise in the use of climate-related terms in the SFCRs, indicating the growing importance of climate change in disclosing material risks.

For example, the number of SFCRs featuring the term 'ESG' has risen from 6% of all SFCRs in 2016 to 22% in 2020⁸. Similarly, 'climate change' instances have risen from 2% to 13% respectively.

While the occurrence of climate-related terms in the SFCRs is clearly on the rise, a substantial number of insurers have not, to date, included any reference to climate change in their reports although we expect this is highly likely to change for most going forwards.

⁷ The SFCR analysis was conducted using the Solvency II Wire Data insurance database. Search terms were translated into the languages of the major markets. Some duplication may arise due to those entities that publish a single group SFCR for all solos.

⁸ The number of SFCRs analysed varies each year depending on the number of reporting entities and quality and availability of the reports.

ii. Benchmarking of specific insurers

The research covers the most recent climate risk reporting and disclosures of 20 large insurance groups across Europe (10 are UK based⁹ and 10 are based in Continental Europe) and analyses the quality, proportion and comparability of the data provided, as well as the actual practices being disclosed.

For this benchmarking, we have focused on the following key areas that are now typically being addressed across various governance reports, accounts, websites and public announcements.

Area	Measure being benchmarked	Question(s) being addressed
Objectives	A. Net zero targets	What is the stated path for the insurer to reach net zero carbon emissions and the target date(s)?
	B. Carbon footprint	What is the current level of carbon emissions associated with the business?
	C. Management of climate risks	What is the overall strategy for considering physical and transition (and potentially liability) risks?
Risk management and reporting	D. Data coverage – investments	For how much of the investments can climate metrics be reliably reported in a timely manner?
	E. Climate VaR (Value at Risk), stress tests and scenarios	Are the insurers calculating and disclosing risk management metrics and at what level are these?
Integration within investments	F. Carbon intensity of investments	What is the current Weighted Average Carbon Intensity (WACI) of the investments?
	G. Use of 'green' assets	How are green assets being used within the investment portfolio (proportion held and types)?

⁹ Including the UK subsidiary of Canada Life.

3. Benchmarking outputs

A. Net zero targets

Not publicly disclosed/defined: Mapfre, Tryg, Sampo, Canada Life, Lloyd's

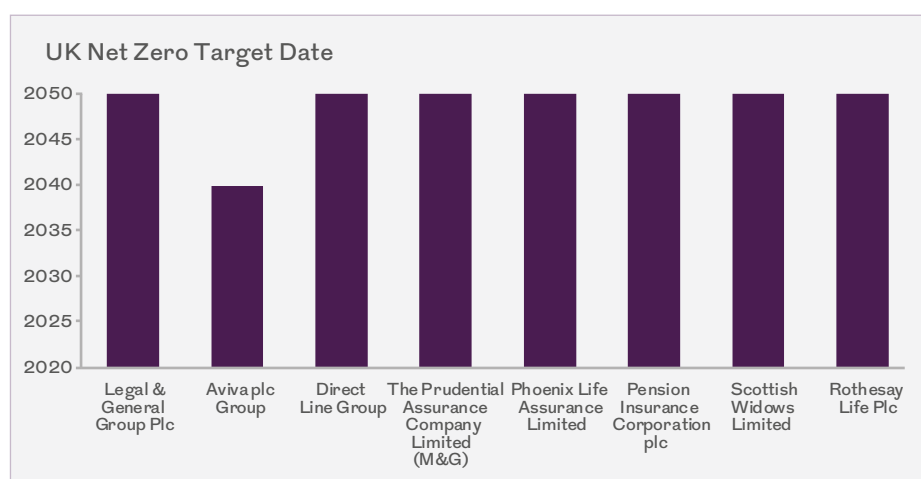
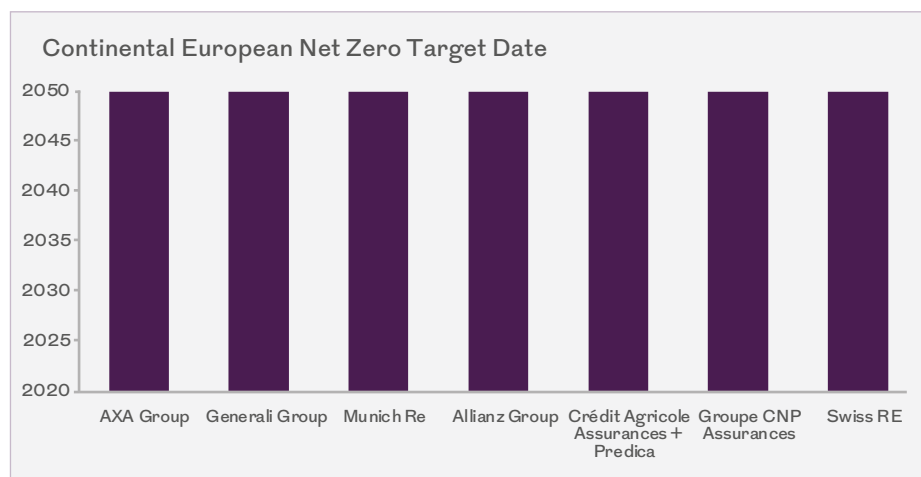
Where high level climate change objectives are disclosed, these tend to be framed in terms of achieving net zero greenhouse gas emissions from investments by 2050, consistent with the Paris agreement¹⁰ target to limit global warming to 1.5°C compared to pre-industrial levels.

Most of the insurers surveyed were currently looking to align with the Paris agreement by targeting net zero by 2050. One insurer, Aviva, is targeting a net zero position by 2040. We expect that for the largest insurers, where there is more visibility and higher expectations around their approaches, others may also look to bring forward their net zero targets.

Some insurers set separate net zero targets for business operations and their asset portfolio. For example, Mapfre is looking to achieve net zero for operations by 2030.

Many insurers are also disclosing intermediary targets. For example, by 2025 Allianz is looking to reduce greenhouse gas emissions of its equities and corporate bonds portfolios by 25% relative to 2019. Over time we expect to see more insurers define these supplementary objectives to provide for more meaningful targets.

While setting targets is a positive step forward, there needs to be a robust



Source: RLAM (see appendix for further details)

framework for assessing consistency of actual approach with the targets. We believe methodologies for climate alignment and scenario stress-testing for asset portfolios and businesses need further development. We note there are various mechanisms – such as the Science Based Targets initiative¹¹ – that are helping here. However, for smaller insurers, setting credible net zero objectives and monitoring adherence is likely to remain a challenge.

SFCR Analysis “net zero” targets

Of the large insurance groups analysed above, five provided information about net zero targets in their SFCR (Allianz, Generali, M&G, Phoenix & Scottish Widows). Broadly speaking the information replicated data published elsewhere.

Overall, in 2020 the term ‘net zero’ appears in 26 SFCRs. As with the large insurance groups, some insurers provided interim target information as well as involvement in other wider initiatives they were part of.

¹⁰ The Paris Agreement: unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

¹¹ Science Based Targets: sciencebasedtargets.org

B. Carbon footprint

Carbon Footprint not publicly disclosed/defined: Groupe CNP Assurances, Swiss Re, Mapre, M&G, Phoenix, PIC, Scottish Widows, Canada Life, Rothesay

The majority of the insurers surveyed have disclosed some measures around the overall 'carbon footprint' of their businesses, albeit the precise nature of the metric disclosed varied significantly between insurers.

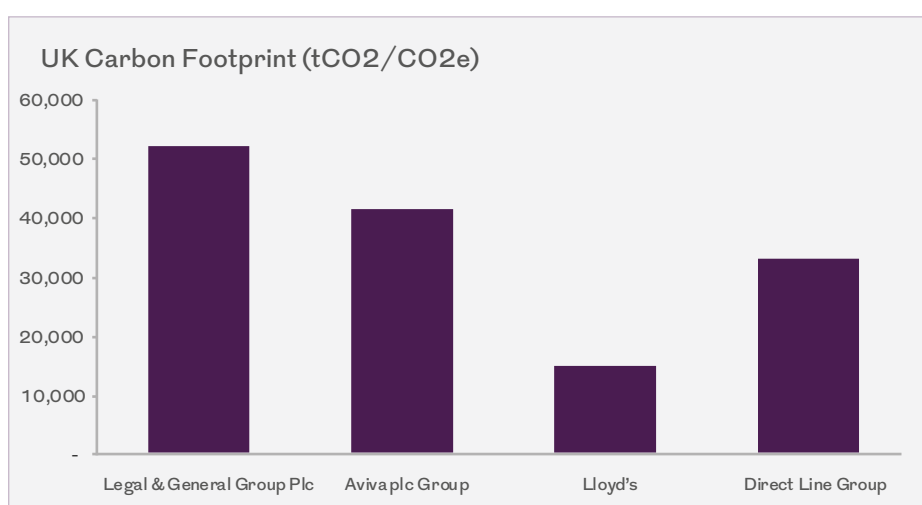
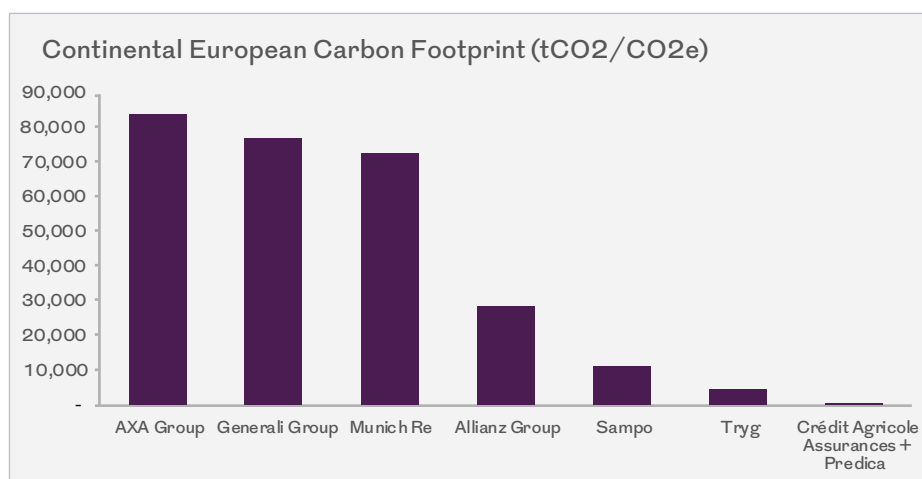
The types of metrics being reported include: the overall carbon footprint of the business; the carbon intensity of investments; the carbon emissions of operating activities; and emissions per employee.

Of the insurers surveyed, AXA disclosed the highest overall carbon footprint (at 88,647 tCO₂e) with Tryg stating the lowest level (4,457 tCO₂e).

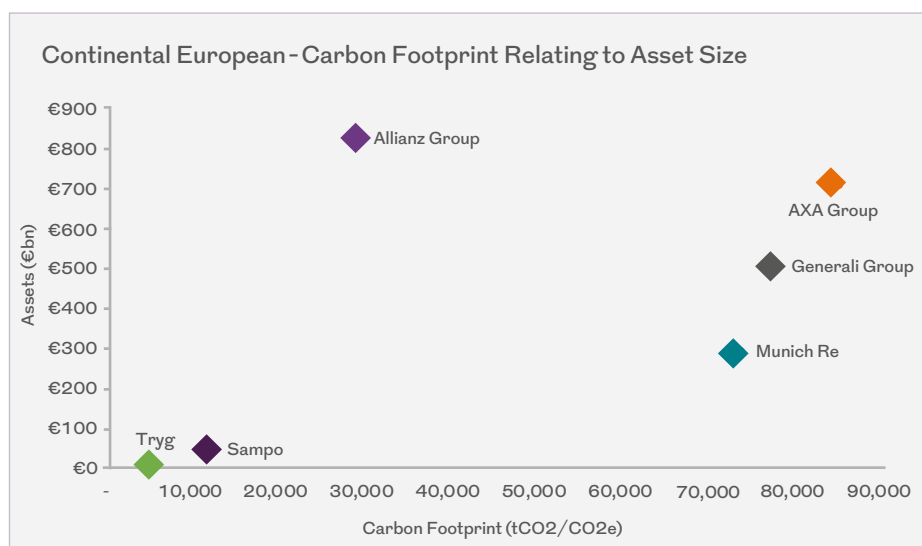
Broadly speaking it is expected that the size of the carbon footprint would have a positive correlation with the size of the insurer.

The charts opposite and on the next page show the relationship between carbon footprint and total assets (based on the overall Solvency II balance sheet). As expected, there is a generally a positive relationship with the larger insurers (by asset value) having a higher overall carbon footprint, although it does point to some interesting outliers.

For example, while the total assets of Allianz Group and AXA Group are quite similar (€828bn and €715 bn respectively) the latter's carbon footprint is almost triple in size 29k tCO₂e and 85k tCO₂e respectively.



Source: RLAM (see appendix for further details)



Source: RLAM (see appendix for further details)

Although the metric does not take into consideration differences in business models and exposures, it does highlight some interesting differences between companies and may help with comparability and understanding each company's risk exposure. Moving forward, it may be used to track progress towards net zero targets.

There is also the potential for a lack of consistency in how the metrics are disclosed – for example if they include Scope 1, 2 and 3 emissions data or just a subset of these? In general, the lack of disclosure around methodology hampers comparability between insurers.

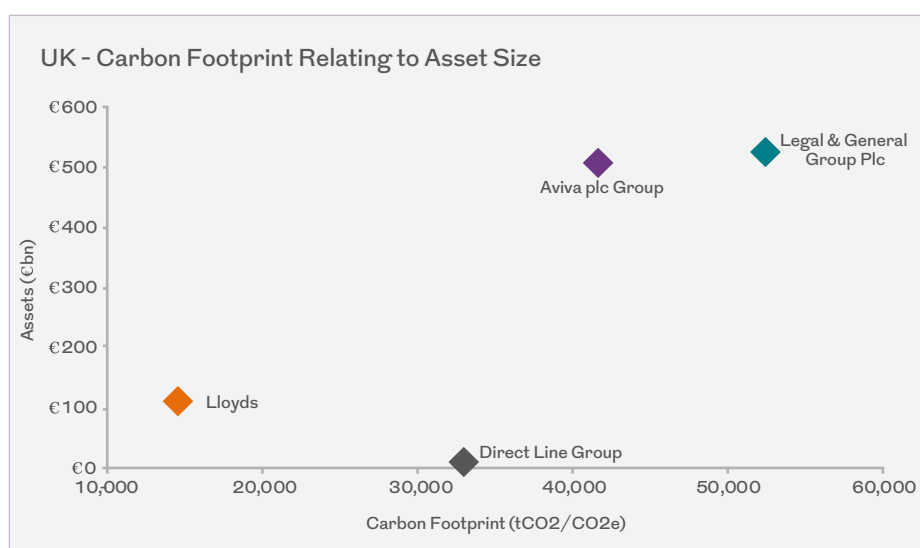
From reviewing the accounts and other public disclosure documents and statements of the larger insurers, we believe that more standardisation in the metrics being considered would be highly beneficial in facilitating greater comparability between insurers. This is an area where various initiatives – such as the TCFD requirements – are likely to be useful.

SFCR Analysis - carbon footprint

Five of the large insurance groups reported information about their carbon footprint in the SFCR (Allianz, AXA, Generali, CNP, Reassure & Scottish Widows). Of these only Generali, CNP & Scottish Widows reported actual figures. As with 'net zero' targets these were mostly duplications of data published elsewhere.

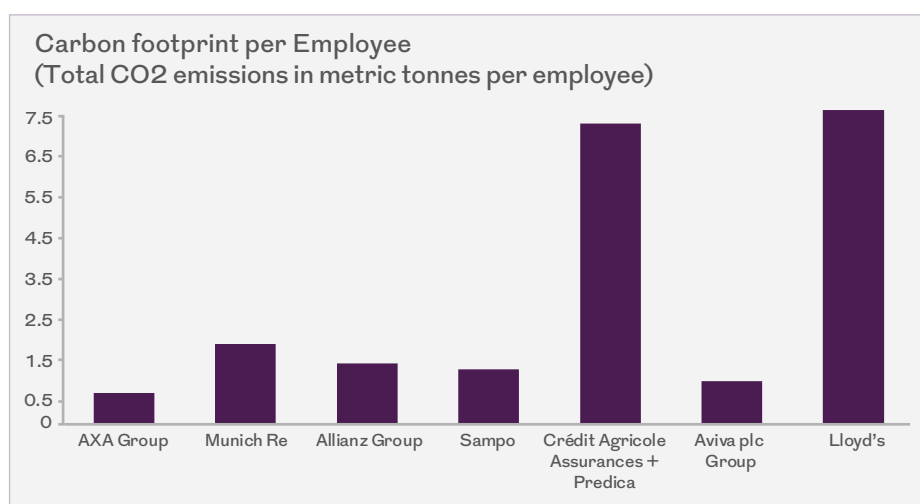
The term 'carbon' appears in 160 SFCRs, while 'carbon footprint' can be found in about 30 reports, of these only a handful provided figures.

Other SFCRs that include information about carbon footprint and carbon emissions often reported this as percentages or specific reductions in the operations of the business. For example, Zürich Versicherungs-Aktiengesellschaft



Source: RLAM (see appendix for further details)

When considering carbon footprint per employee (see chart) this ranged from 0.7 for AXA Group to 7.3 for Lloyd's.



Source: RLAM (see appendix for further details)

disclosed the emissions of its vehicle fleet and Scildon N.V. stated increases in purchases of green electricity relative to the previous year.

C. Management of climate risks

Most climate risk frameworks make a distinction between physical risks (the direct impact of more frequent or severe weather events, such as flooding, droughts and storms on society and the economy) and transition risks (exposure to sectors facing shifts in asset values or

higher costs of doing business during the transition towards a greener economy). In addition, many insurers face liability risks from claims relating to both physical or transition risks.

The majority of the insurers considered stated that they evaluate physical and transition risks separately, although in practice we expect that all the groups will have done this even if not disclosing.

The balance between physical and transition risks varies between insurers – for example, insurers writing non-life

business around natural catastrophe risks will be relatively more exposed to physical risks. For insurers with longer term investment portfolios (e.g., longer maturity corporate bonds), transition risks are likely to be relatively higher than for those with shorter maturity portfolios.

Examples of the approaches being taken to mitigate these risks include:

- **Physical risks** – Credit Agricole stated it will manage physical risk by adopting a new governance policy and modelling methods for exposed activity sectors and certain geographic locations; and implementing an ongoing oversight process to continually evaluate the risks in line with the changing climate.
- **Transition risks** – CNP stated that it looked to manage transition risks in its investments through specific investment exclusions and an investment policy designed to promote energy and ecological transition.

We expect disclosures on mitigating climate-related risks to both increase in volume and detail, and to include consideration for physical and transition risks separately.

The exact exposure of an individual insurer to physical and transition climate-related risks will vary depending on many factors:

1. **How the climate change environment actually develops** in terms of temperature increases and associated environmental impact.
2. **The actions that governments, corporates and broader society take** to manage this (recognising that this will have some influence on how 1. emerges)
3. **Asset exposures:** amount of investment risk taken; which asset classes and the features of these (e.g. liquidity, duration, geography, sector); mitigating actions taken by insurer
4. **Underwriting exposures:** balance between life / non-life and health

risks; nature of the risks within each of these (e.g. for non-life, certain sectors such as home insurance may be more susceptible to climate change through flood risk); specific actions taken by an insurer around mitigating these risks

5. **Operating exposures:** impact on offices, processes, people from climate change and associated environmental consequences

In the table below we provide some high-level commentary around the potential climate-related risk exposures of the larger insurers we have surveyed.

The commentary is based on the broad structure of their businesses and in particular on the balance of risks in the insurers' Solvency Capital Requirements (SCRs) disclosed in the SFCR report. The exact climate risk exposures will likely be much more nuanced in line with the factors described above.



Breakdown of Solvency II SCR	Health	Life	Non life	Market	Structural climate risk exposures
Allianz Group	3%	7%	9%	81%	Higher market risk leading to increased transition risk on assets. Non-life exposures likely involve more physical-related climate risk.
Sampo Group	9%	7%	20%	63%	
Generali Group	1%	14%	20%	64%	
Crédit Agricole Assurances	3%	8%	4%	85%	Higher market risk, with exposures across health, life and non-life, where life the highest contributor to overall underwriting risk. Main climate risk exposure is likely to be represented by transition risks on assets through longer duration credit and fixed income assets as well as the broader exposure attached to a higher level of risk assets and a disorderly transition.
Groupe CNP Assurances	7%	16%	2%	75%	
AXA Group	0%	25%	32%	43%	Balance of SCR between life, non-life and market risks. Will be subject to transition risks on assets and physical risks on non-life business.
Mapfre Group	4%	15%	36%	45%	
Munich Re	0%	26%	35%	40%	
Tryg A/S	27%	-	44%	28%	Health and non-life risks more dominant – likely to be more exposed to physical risks with more moderate exposure to transition risk in assets.
Direct Line	-	-	66%	34%	Mainly physical risks in non-life underwriting exposures (eg home insurance subject to flood risk) but with some smaller transition risk exposures on assets.
Aviva plc Group	2%	33%	7%	58%	These are all exclusively or predominantly life focused insurers As such, the main climate risk exposure is likely to be represented by transition risks on assets through longer duration credit and fixed income assets as well as the broader exposure attached to a higher level of risk assets and a disorderly transition.
Legal & General	1%	32%	-	67%	
M&G plc	-	20%	-	80%	
Pension Insurance Corporation	-	25%	-	75%	
Phoenix	-	50%	-	50%	Many of these insurers have been looking to invest in environmentally focused assets (eg wind farms and solar power) as part of their assets backing their long-term liabilities
Rothsay	-	36%	-	64%	There will be some smaller exposure to mortality risks under a high warming scenario and the exposure to ‘excess heat’ deaths relative to the number of ‘excess cold’ deaths needs to be considered
Scottish Widows	-	76%	5%	19%	
Canada Life Group (U.K.)	9%	37%	1%	52%	Mainly physical risks in non-life underwriting exposures (eg home insurance subject to flood risk) but with some smaller transition risk exposures on assets
Lloyd's of London	4%	-	67%	30%	

*Figures subject to rounding. The proportions shown are based only on the disclosed health, non-life, life and market risks in isolation and do not allow for other factors such as operational risk, diversification between these risks or the loss absorbency of technical provisions or deferred taxes

**Swiss Re has not been included due to lack of data availability

SFCR Analysis Management of climate risks

Most of the groups (apart from Tryg, Sampo, PIC & Canada Life) made some mention of climate risk in their SFCRs, although there was little distinction between the types of climate risks mentioned above, and the amount and quality of information varied significantly across those that reported.

Analysis of key terms relating to climate risk management shows that overall there is relatively little information published in the SFCRs on the approach to managing climate risks (see chart on page 6).

The term 'climate change' only appears in 13% of SFCRs (10% in 2019), while 'ESG' appears in 22% (12% in 2019).

In line with findings for the large groups, the quality and amount of information varies significantly across the sample.

Information often consists of a mention of climate risk as part of other risks, of which the company is aware or is making some provision for.

A number of insurers did provide more extensive climate risk information. Two notable examples are LV= Group and Nordea Life Holding. The latter provided one of the most extensive sets of information relating to the impact and climate risk management (see Appendix: SFCR Examples).

D. Data coverage – investments

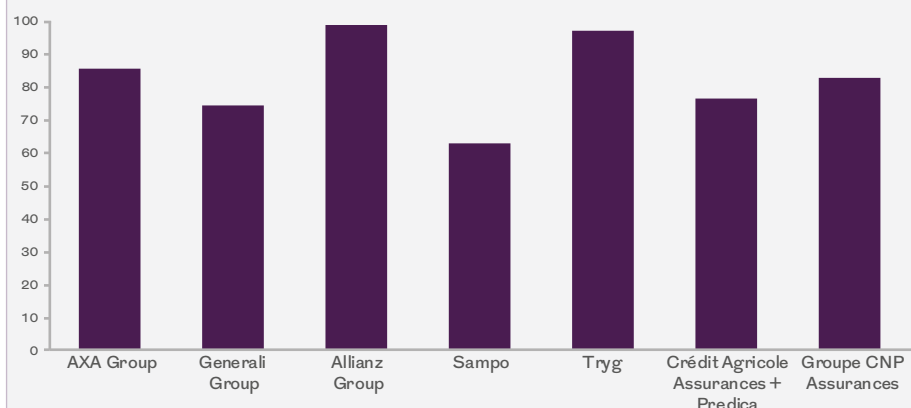
One of the key challenges facing investors around measuring and monitoring climate-related risks is the available data for investment portfolios – specifically the level of coverage, its accuracy, and timeliness.

Whilst data coverage of climate metrics has improved for investment portfolios, this is by no means complete. The analysis showed that on average data coverage was around 81% for Continental European insurers and 74% for UK insurers for this sample. The coverage ranged from just over 60% for Sampo to nearly full coverage (97%) for Allianz.

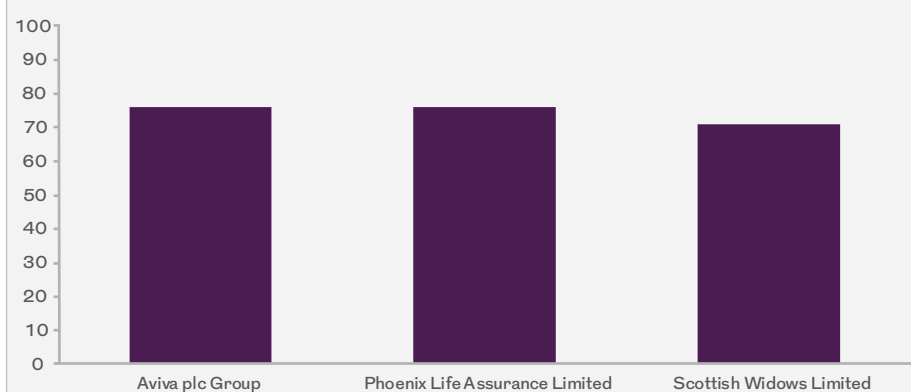
The level of coverage tends to vary by asset class, with listed equities generally having better information than fixed income and alternatives. For example, Aviva states that data coverage in 2020 in credit was 75% and in equities 87%.

Larger insurers are more likely to have in-house asset managers who manage a large proportion of assets, so we would expect the information flow to be relatively better than for other insurers. In particular, smaller insurers are more likely to use several external managers, which could lead to additional hurdles around data consistency and sufficient levels of coverage.

Continental European Data Coverage (%)



UK Data Coverage (%)



Source: RLAM (see appendix for further details)

SFCR Analysis Data Coverage

Only Scottish Widows provided data coverage information and figures in the SFCR, although the data is based on 2018 figures (see Appendix: SFCR Examples).

Not publicly disclosed/defined:
Munich Re, L&G, Swiss Re, Mapfre, Prudential, PIC, Canada Life, Rothesay, DLG, Lloyd's

E. Climate VaR, stress tests and scenarios

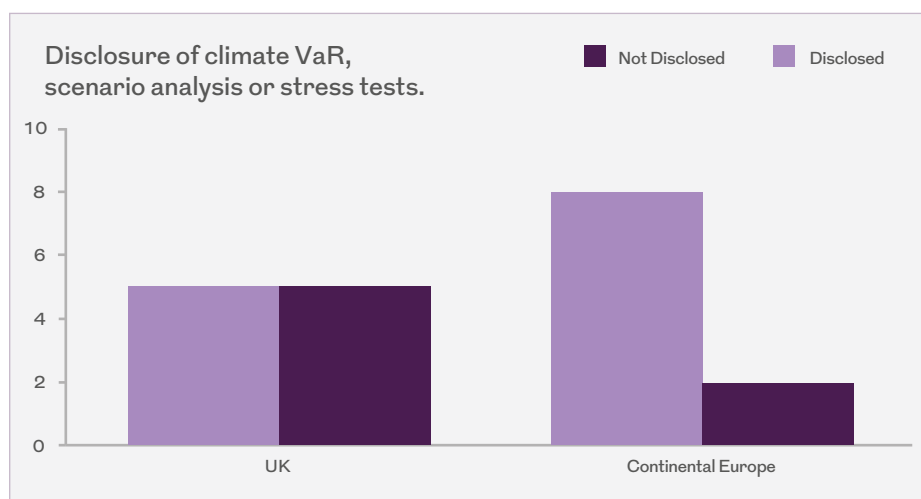
There are increasing expectations from regulators and other bodies (e.g. through the TCFD disclosures) for insurers to assess, monitor and disclose their risk exposure to climate change risks. This is normally considered by assessing the exposure of the investment portfolio value or wider business to different levels of future temperature levels through a Value at Risk (VaR) calculation, stress testing or longer-term scenario analysis.

To date climate VaR has not been widely disclosed. Only three of the insurers surveyed disclosed extensive information on their work: AXA, Groupe CNP and Aviva.

Groupe CNP stated in their sustainability report that the VaR for the physical risk of the CNP Assurances portfolio was evaluated, as at the end of 2020, to be 3% according to a “Business-as-usual” temperature scenario (projected temperature increase of between 3.5° C and 5.5° C by 2100).

Most of the insurers (13 out of 20) in the survey did state that they considered longer term scenario analysis to understand the sensitivity of their investments to different future levels of temperature increase. These scenarios ranged from future temperature increases of 1.5°C to 5°C, for example, Credit Agricole disclosed that it has created a pricing risk evaluation framework for warming increases from 2°C to 5°C.

Given the complexities involved in assessing climate-related risk, this analysis is still in its infancy, with the



Source: RLAM (see appendix for further details)

largest insurers looking to further enhance their own models and third-party providers rapidly developing their offerings to investors.

Calculations and disclosures of climate VaR are likely to present particular challenges to smaller insurers that may lack resources and expertise. They would likely have to rely on third party models or use other sources, for example, the climate scenarios underlying the Bank of England Biennial Exploratory Scenarios ¹².

SFCR Analysis Climate VaR and stress tests

The only insurer to disclose any information about climate VaR in its SFCR (including figures) is Nordea Life Holding.

Almost half of the groups provided some information about climate-related stress testing in the SFCR. In most cases this includes disclosure that tests were being conducted, but few figures were published. A number referred to other documents, such as their sustainability report.

Other insurers provided scenario and modelling information in their SFCR, again with few providing figures and some referring to external documents. For example, Topdanmark detailed some of its stress testing results, stating: “only one out of 900 years will exceed the reinsurance cover of DKK 5.1bn in a storm event on the company’s current insurance portfolio.”

Apart from Nordea Life Holding mentioned above, other noteworthy disclosures include the impact of climate risk on the solvency ratio disclosed by Fidelis. The company expects climate change to result in a post-loss solvency ratio of 116%.

¹² Key elements of the 2021 Biennial Exploratory Scenario: Financial risks from climate change | Bank of England

F. WACI in investments

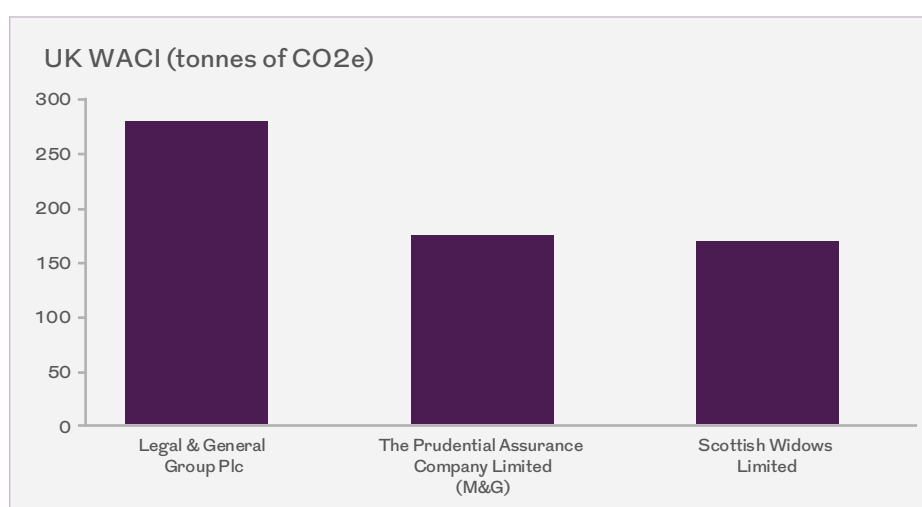
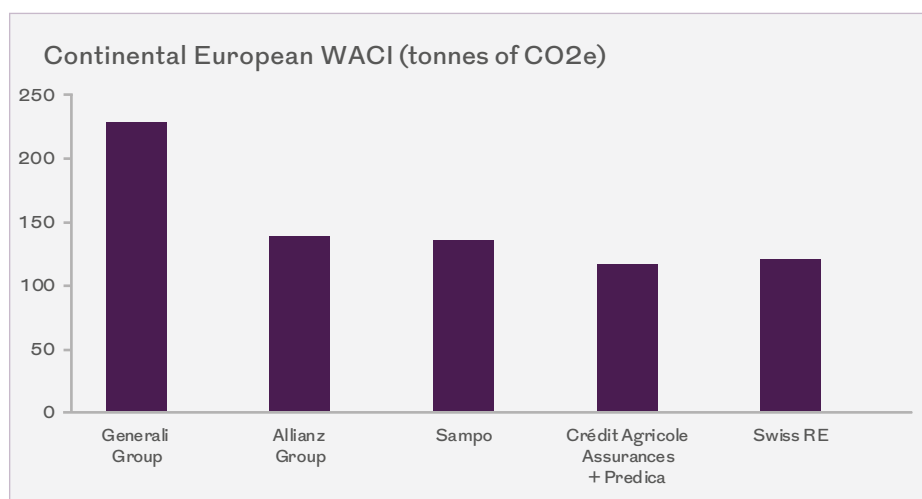
Not publicly defined/disclosed: AXA, Mapfre, Tryg, Aviva, Phoenix, PIC, Canada Life, Rothesay, DLG, Lloyd's

A key requirement for investors is to measure, monitor and disclose the current level of carbon emissions from their portfolio (and potentially other activities). One of the most prevalent metrics being used is the Weighted Average Carbon Intensity (WACI). WACI measures the exposure to carbon-intensive companies, expressed in tons of carbon dioxide equivalent per unit of revenue.

WACI is widely disclosed across most insurers in the survey, particularly in Continental Europe. The UK insurers are slightly behind here with only three of them having these metrics publicly defined/disclosed, although Prudential provided more granularity in its reporting through reporting WACI separately for equities and corporate bonds.

Among those insurers that disclosed WACI there was a reasonably high divergence. Legal & General disclosed the highest level, at 280 tonnes CO₂e/£m, more than double that of the lowest (Credit Agricole at 116 tonnes CO₂e/€m).

WACI represents a current and backward-looking measure of carbon intensity, and there is increasing focus from insurers in considering how their carbon emissions are expected to change over time. One way in which this can be achieved is by defining future WACI targets.



Source: RLAM (see appendix for further details)

None of the insurers disclosed precise targets around the warming potential of their assets, although Aviva and AXA did confirm that this being assessed. CNP stated that it is committed to maintaining the carbon intensity of its portfolio below the decreasing assessments of the OECM's 1.5°C trajectories (from 410 to 216 kg eq CO₂/MWh between the end of 2019 and the end of 2024).

SFCR Analysis WACI

No WACI information was found in the SFCRs.

G. Use of 'green' investments

Although most insurers have now (rapidly) turned attention towards considering a more environmentally aware asset strategy, there isn't a consensus view on what having a 'green' investment allocation actually means.¹³

Approaches vary from reviewing the current investment strategy and implementation approach, to ensure that environmental risks are being considered as part of a broader ESG framework, and potentially looking to apply negative screens against certain sectors or high emitters.

Other 'particularly larger' insurers appear to be taking a more active approach by setting explicit investment allocation strategies towards environmentally aware companies and sectors or ones that are expected to play a fundamental role in the transition to a lower carbon economy.

All of the large groups surveyed had already made explicit 'green' allocations, and we are expecting this trend to continue. Examples of this include:

AXA Group: In November 2019, committed to invest €24 billion in green investments by 2023. In December 2020, AXA's green investments reached €16 billion.

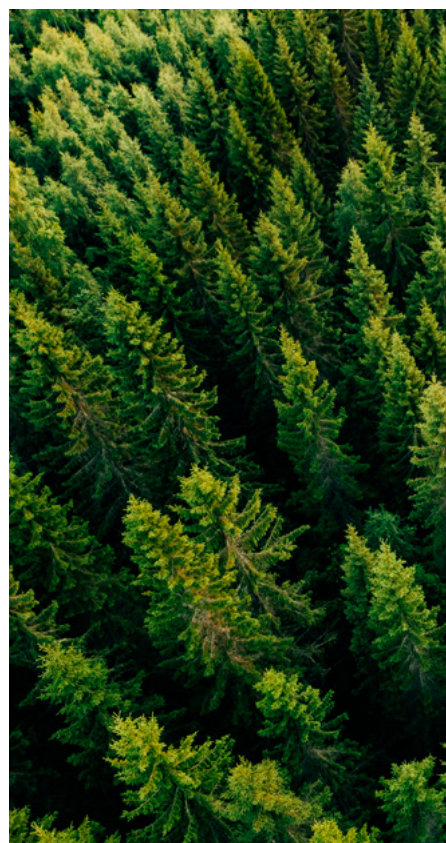
Generali Group: Invested €4.5 billion in new green and sustainable investments from 2018 – 2021

Groupe CNP: committed in 2019 to doubling its green investment assets to €20 billion by the end of 2023 compared with €10.4 billion at the end of 2018.

Phoenix: Invested £127 million in renewable energy, supporting the UK Government's commitment to produce net-zero emissions by 2050.

The recent proposed amendments to Solvency II (described previously) include a proposal that EIOPA assess the evidence on the risk profile of environmentally or socially harmful investments with a view to potentially integrating them into an insurer's capital calculation.¹⁴ If implemented, this is likely to further incentivise insurers to change their asset allocations towards greener assets.

In addition to investing in green assets, some insurers have also been issuing sustainability focused debt, where there is some form of commitment to use the proceeds to finance environmentally supportive activities or assets. For example, in 2019 Groupe CNP issued a green subordinated bond and the sustainability-linked bonds issued by Just in 2020 and 2021. We expect these issuances to increase as insurers look to reduce their funding costs whilst aligning with the green agenda.



SFCR Analysis Use of 'Green' investments

Five of the large insurance groups reported information about their green investments in the SFCR (AXA, Generali, CNP, Aviva & Munich Re). Of these, only AXA, Generali and Munich Re reported actual figures.

The term 'green bond' appears in 13 SFCRs. A handful of variations such as 'green economy' could also be found.

Two additional insurers (Grupo Unipol and Talanx) included figures of green bond investments in their SFCR. Others described some of their green investment principles or commitments and noted they operated exclusion lists in their investment portfolio.

¹³ The recent initiative by the European Commission to define environmentally friendly assets (September 2021) is a welcome step in this direction.

¹⁴ European Commission publication on 21 September 2021, available at: ec.europa.eu/info/publications/210922-solvency-2-communication_en

4. How does best practice need to further develop?

The insurance industry as a whole has already made significant progress in developing frameworks and processes to recognise, monitor and manage climate-related risks as well as appropriately disclose this. However, for most insurers these have represented the initial steps in the process to get something in place - in particular to demonstrate to Regulators and other key stakeholders that some action has been taken.

In this paper, we have focused on two key areas: (i) the disclosures currently being produced around climate risk and (ii) what can reasonably be inferred by these disclosures – both in the SFCRs and in wider publicly available information – around the approaches being adopted.

(i) Climate risk disclosures in SFCRs

The initial nature of the work on climate change is supported by the findings of the analysis on the SFCRs.

While there have been no regulatory requirements to disclose climate-related risks specifically in the SFCRs, there is a requirement to disclose information about all material risks. The TCFD Framework sets out four key areas for climate-related disclosures: governance, strategy, risk management and metrics and targets.

This framework can potentially be used by insurers to help in their disclosure of material climate-related risks within the SFCR.

However, on this basis the vast majority of 2020 SFCRs fall short by some significant measure. The extremely low frequency of prevalence of even very broad climate-related terms such as ‘ESG’ (22%) or ‘carbon’ (7%) is telling.

While many of the larger insurers are disclosing climate-related information in other publications, few have referenced them in their SFCRs. For example, ‘TCFD’ is mentioned in only 3% of SFCRs.

In addition, given the explicit aim of the SFCR becoming a key public disclosure document for both professionals and policyholders, we would have expected it to include more information about climate risk.



(ii) Current practices and future expectations in managing climate-related risks

The largest insurers globally have already been devoting material time, resources and investment to better recognising and managing climate-related risks, and the rest of the insurance sector is making progress to varying extents.

Based on our review of current approaches for some of the largest insurers, as well as our broader interactions with the insurance industry, we are expecting the following further evolutions in best practice to occur:

1. **More robust and measurable objectives** – more detailed articulation of climate risk objectives including setting ‘staging posts’ along the way to net zero targets. There is likely to be increased pressure from various stakeholders to bring targets forward from the 2050 end point consistent with the Paris agreement. In addition, insurers will need to develop more robust quantification frameworks for assessing and demonstrating consistency of their approaches with the overarching climate risk targets.
2. **Enhanced governance frameworks** – for example greater use of climate risk committees to look at climate risks holistically across both assets and liabilities. More granular and effective consideration of physical and climate (and often liability) risks.
3. **Data enhancements** – on both the asset and liability side of insurers’ balance sheets, there needs to be

improved data quality, improved coverage (particularly of less liquid and traded investments) and more timely data being provided.

4. **Better modelling capabilities** – particularly for smaller insurers, the risk modelling of climate-related risks will continue to present a challenge, noting that even some of the largest insurers would use specialist external resource. The market needs to deliver more off-the-shelf solutions and scenarios for considering climate-related risks, and regulators and non-governmental organisations can play their part through encouraging some standardisation of the scenario inputs.
5. **Increased and smarter use of green investments** – the largest insurers have already been making allocations to specific green investments, and we are expecting this trend to filter down to a higher proportion of smaller insurers. However, we believe that the implementation of such a green portfolio needs improving to avoid areas such as ‘greenwashing’ that remains prevalent.
6. **Deeper and more insightful management information** – better internal reporting for Boards, Investment, Underwriting and Risk committees – providing more regular assessment of climate risks including better metrics (eg more use of forward-looking assessments rather than just the current / backward-looking WACI type measures).
7. **More and better quality disclosures** – the TCFD framework provides a reasonable representation of current best practice around the disclosure of climate-related risks, and many insurers are looking to incorporate this within their disclosures and build out the granularity of this. In general, we believe there needs to be greater consistency in the metrics being disclosed to improved comparability between different insurers and to raise the overall bar for the industry.
8. **Further integration of climate-related information in the SFCRs** – as a key public disclosure document for many insurers, the SFCR should incorporate sufficient information about climate risk management. Insurers should leverage disclosures made elsewhere and reference them in the SFCR report.

The challenge for insurers is now to expand climate risk work, to improve its usefulness and robustness, and to ensure that society and the economy as a whole can benefit from greater awareness, oversight, and management of climate-related risks from a key stakeholder in the global economy. We remain optimistic that the insurance sector will play its part in successfully adapting its climate risk management approaches to deliver the environmental outcomes that society both demands and urgently requires.

Appendix A – SFCR Examples

The following is a collection of examples of some of the more focused climate risk disclosures found in 2020 SFCRs.

A. Net zero targets

Scottish Widows stated its aim of reaching net zero target by 2050 as well as “an intermediate target

of halving our investments’ relative carbon footprint by 2030.” The group explained that it does not intend to rely on carbon offsetting schemes and that

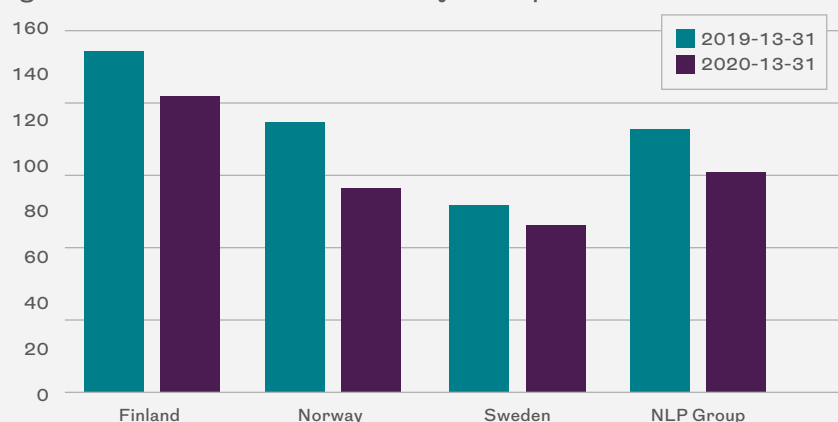
instead it has “committed to driving carbon reduction in the real economy to achieve net zero goals.”

B. Carbon footprint

Nordea Life Holding provided a chart detailing emission intensity for 2019 and 2020 of scope 1 and 2 across the territories in which it operates as well as for the group as a whole.

The company also provides the following commentary: “The figure illustrates that emission intensity attributed to the investments of NLP Group has already started to reduce, showing both the efforts of investee companies to reduce emissions and the efforts of NLP Group to step away from emission intensive investments.”

Figure C6.1 MSCI emission intensity of scope 1 and 2



Source: Nordea Life Holding 2020 SFCR

C. Management of climate risks

Nordea Life Holding provided one of the most comprehensive sections on climate risk in the SFCR.

The company described its climate-related strategies as part of its overall ESG work.

“Mitigation of ESG risk is achieved through appropriate decisions regarding capital allocation and investment decisions, developing internal policies, frame-works and tools for quantifying ESG risk and the engagement of asset managers with

Table C6.1 ESG risk as a factor in other risk types

Risk type	Impact of ESG risk
Market risk	High
Underwriting risk	Low
Operational compliance risk	Medium
Reputational risk	High

Source: Nordea Life Holding 2020 SFCR

investee companies with the aim of communicating ESG-related goals and setting the focus on sustainable development.”

The SFCR also contains a table showing the impact of ESG risk on key risk types closely aligned to the Solvency II standard formula.

D. Data coverage – investments

Scottish Widows was the only company surveyed to publish detailed figures about data coverage in its SFCR: a table detailing the “financed emissions for the Insurance Group’s Policyholder assets”.

Although these are 2018 figures, they represent the best example of disclosures in this area to date.

The company explained: “We are disclosing 2018 emissions as there

was more comprehensive company emissions reporting data available at the time of calculation.”

	Total Governed Assets Under Management (AUM), €	AUM in scope according to PCAF methodology, £	In-scope AUM for which emission data is available, %	Estimated total MtCO ₂ e (Scope 1 & 2 emissions, for investments where data is available)	Emissions per £1m Invested (where data is available)
Scottish Widows Assets ¹	120 billion	111 billion	70 per cent	14.2 MtCO ₂ e	168 tCO ₂ e / £million invested

¹ Includes unitised and with-profit fund assets held within the Life and Pension funds of Scottish Widows Limited and mutual funds managed by the LBG Authorised Corporate Directors Scottish Widows Unit Trust Managers Limited and HBOS Investment Fund Managers Limited and excludes Scottish Widows Administration Services Limited (SWAS) assets under administration

Source: Scottish Widows 2020 SFCR

E. Climate VaR, stress tests and scenarios

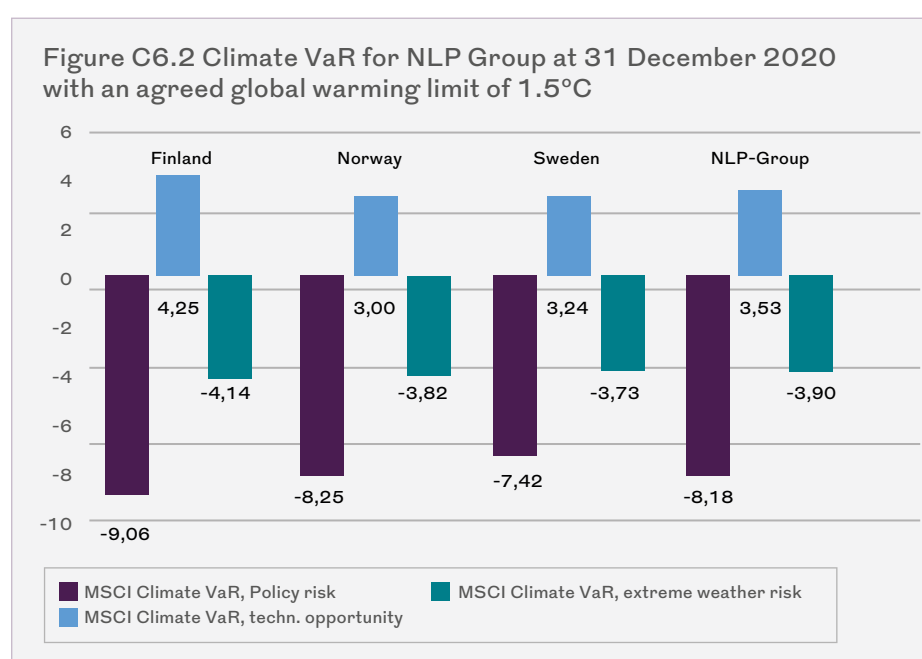
Nordea Life Holding is the only European insurer surveyed to publish Climate VaR in its 2020 SFCR, including a table and detailed explanation of the figures.

“The Climate VaR is given ... for a scenario with an assumed target of limiting global warming to 1.5°C. In this ambitious scenario, the negative development of the market value of the investment port-folio due to changed climate regulation is estimated to be around –8%. The impact from physical risk in the form of extreme weather events is estimated to be around –3.9%. A counteracting effect of an estimated +3.5% may materialise in the form of opportunities due to technological advances.”

Stress Testing

Several insurers disclosed that they were conducting stress testing and scenario analysis.

Topdanmark shared some of its stress testing results: “Stress tests show that



Source: Nordea Life Holding 2020 SFCR

only one out of 900 years will exceed the reinsurance cover of DKK 5.1bn in a storm event on the company’s current insurance portfolio.” The company also stated that overall it has “hedged the climate - related risks sufficiently,” and that it does not have any “noticeable climate - related insurance risks.”

Fidelis Underwriting Limited is the only insurer to link climate risk directly to its solvency ratio: “The financial effects of climate change on underwriting and investment performance – this scenario resulted in a post-loss solvency ratio of 116%.”

F. Carbon intensity of investments

No WACI information was found in the SFCRs. However, **Nordea Life Holding** provided detailed information about what kind of data it collects about climate risk and impact on investments.

“NLP has established a comprehensive

database for ESG risk indicators such as greenhouse gas emissions (GHG emissions), the Climate Value at Risk (Climate VaR), the CDP Climate Change Score, ESG scores and many others.

External data providers include, among

others, MSCI and CDP. The database is updated regularly and developed continuously in order to achieve a good coverage of NLP assets with available best practice indicators of ESG risk.”

G. Use of ‘green’ assets (invested and issued)

Munich Re detailed green bond issue in a section on its subordinated liabilities: “The increase in subordinated liabilities stems from the issuance of a green

bond amounting to €1.25bn by Munich Reinsurance Company in the third quarter of 2020.”

DAS Rechtsbijstand published a table showing details of its investment funds listing green and sustainable bond.

Onderstaande tabel toot de beleggingen in de beleggingsfondsen (Surplus portefeuille) per 31 december 2020:

	Balans waarde ultimo 2019	Aankopen /verkopen	Herwaar- dering	Balans waarde ultimo 2020
Beleggingsfondsen				
National Nederlanden L Global Sustainable Equity Hedged	40,2	-13,0	10,2	37,4
National Nederlanden Euro Sustainable Credit Fund	454	-1,8	1,2	44,9
National Nederlanden Euro Green Bond Fund	22,1	-1,3	0,9	21,8
National Nederlanden Collateralized Bond Fund	22,3	-2,5	0,3	20,1
Total	130,0	-18,5	12,7	124,2

Source: DAS Rechtsbijstand 2020 SFCR

Appendix B

Assumptions:

For the Carbon Footprint metrics, we have converted the £ figures to € for consistency using the 1.12 rate as at end of 2020.

Sources:

Allianz: [Annual Report 2020](#)

[Group Sustainability Report 2020](#)

AXA: [Annual Report 2020](#)

[Sustainability Report 2020](#)

[Net zero: This is how we invest | AXA](#)

Generali Group: [Annual Report 2020](#)

Groupe CNP Assurances: [Annual Report 2019/20](#)

[Sustainability report 2019/20](#)

[CNP Assurances joins the Net-Zero Asset Owner Alliance and commits to a carbon-neutral investment portfolio by 2050 | CNP Assurances](#)

Crédit Agricole Assurances + Predica: [Annual Report 2020](#)

[Sustainability report 2020](#)

Aviva plc Group: [Annual Report & Sustainability report](#)

Munich Re: [Annual Report 2020](#)

[Sustainability Report](#)

Legal & General Group Plc: [Annual report 2020 and Sustainability Report 2020](#)

Swiss Re: Business Report 2020: 2020-business-report-doc-en.pdf ([swissre.com](https://www.swissre.com))

Sustainability Report 2020: 2020-sustainability-report-doc-en.pdf ([swissre.com](https://www.swissre.com))

Mapfre: Annual Report consolidated-annual-accounts-management-report.pdf ([mapfre.com](https://www.mapfre.com))

[Climate change - Grupo MAPFRE Corporativo - Acerca de MAPFRE](#)

Tyrg: [Financial Report 2020](#)

Sampo: Board of Directors' Report 2020: sampo2020_board_report_financial_statements.pdf

Corporate Responsibility Report 2020: sampo2020_corporate_responsibility_report.pdf

The Prudential Assurance Company Limited (M&G): [Annual Report 2020](#)

Sustainability Report: [mandgplc.com/sustainability/sustainability-report](https://www.mandgplc.com/sustainability/sustainability-report)

Phoenix Group: Annual Report 2020: [thephoenixgroup.com](https://www.thephoenixgroup.com)

Sustainability Report 2020: phoenix-group-2020-sustainability-report.pdf

Pension Insurance Corporation plc: Annual Report and ESG Report 2020 [Financial results and reports | Pension Insurance Corporation \(pensioncorporation.com\)](#)

[PIC commits to net zero by 2050 - future Net Zero](#)

Scottish Widows Limited: Annual Report: SWL - DOC (y/e 2020) ([scottishwidows.co.uk](#))

Responsible Investment and Stewardship Report: [Scottish Widows Responsible Investment and Stewardship Report](#)

Lloyd's of London: ESG Report 2020: [Lloyd's_ESG_2020_report.pdf](#)

Canada Life [Annual Report 2020](#)

Rothesay Life Plc: [Annual Report 2020](#)

Direct Line Group: [Annual Report 2020](#)

Sustainability Report: [directlinegroup.co.uk](#)

SFCR Data: Solvency II Wire Data: [SolvencyIWireData.com](#)

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Issued in December 2021 by Royal London Asset Management Limited, 55 Gracechurch Street, London, EC3V ORL. Authorised and regulated by the Financial Conduct Authority, firm reference number 141665. A subsidiary of The Royal London Mutual Insurance Society Limited

Ref: PDF RLAM PD 0057

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