ROBECO
The Investment Engineers

Robeco Insurance Solutions

The road to climate investing – a journey for insurers

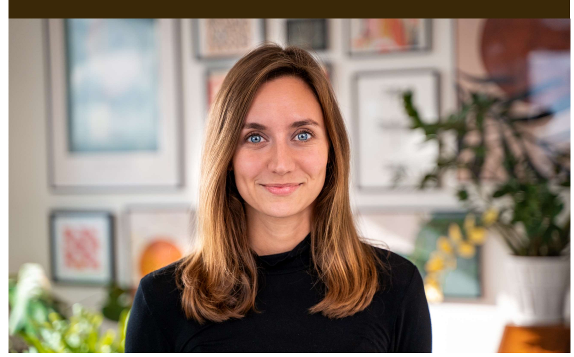
- Pursuing net zero emissions is an increasingly important goal
- Active ownership and decarbonization needed to achieve net zero
- Net zero and raising a portfolio's yield can go hand in hand

Sustainable Investing Expertise by ROBECOSAM

Climate change is becoming a more prevalent topic in everyday business life. Every week, new companies sign up to net zero. Setting and reaching decarbonization targets is particularly important for insurers as they are being hit twice when it comes to climate change. On the one hand, the amount of claims they have to pay is going up due to the increased number of major weather events that cause significant damage to property. On the other hand, insurers also have to face the fact that asset-wise, the value of their portfolios could fall significantly if they are highly exposed to the potential losers of climate change.

Article
For professional investors
April 2022

Hilde Faber, Global Insurance Consultant



While insurers are indeed hit by climate change from multiple angles, they are also in a privileged position of being able to be part of the solution. They can decide which companies and which projects to insure. Also, they can effect change through the weight of their investments while limiting their exposure to climate risk in the process through targeted climate investing. This Q&A will answer several questions on how insurers can do this.

What is net zero and what does signing up to it mean?

To explain net zero, we first need to explain the Paris Agreement. This is an international accord that aims to limit the rise in global average temperatures to below 2°C above pre-industrial levels by the end of this century, and to pursue efforts to limit it to 1.5°C.[1] To limit the temperature rise to well below 2°C, everyone needs to act now. Thus, corporates and investors are accelerating their efforts to align their businesses with the Paris Agreement. Nearly 1,400 companies are taking part in the Science-Based Targets initiative (SBTi) to implement greenhouse reduction targets in line with the objectives of the Paris Agreement. Over one-third of these companies are following the latest 1.5°C scenarios for their sectors and are therefore seeking to align with net zero.[2]

The Intergovernmental Panel on Climate Change (IPCC), a body from the United Nations to assess the science related to climate change, defines net zero emissions as the point at which man-made greenhouse gas emissions into the atmosphere are wholly offset by removals over a specified period. This means that we need to cut our emissions from fossil fuels and land use as well as remove greenhouse gases from the atmosphere. Removal can occur through nature-based solutions such as restoring natural habitats or through engineered solutions such as carbon capture and storage (CCS).

Investors have set up several initiatives to align their portfolios with a net zero economy. One of them is the UN Net Zero Asset Owner Alliance, a group of 37 institutional investors with USD 5.7 trillion in AuM. It was convened in 2019 by the UN Environmental Program (UNEP) and the Principles of Responsible Investment (PRI). The alliance is committed to achieving net zero investments by 2050; several members of the group have announced concrete decarbonization targets for 2025, while others are in the process of doing so.[3]

Box 1: Greenhouse gas emissions and the Science-Based Target Initiative
Greenhouse gas emissions are the levels of carbon dioxide, carbon monoxide, sulfur dioxide and other gaseous byproducts of the industrial processes of a company in its business operations. They also included methane and other gases produced by farm animals. They are cited as being the principal cause of global warming, since they become trapped in the Earth's atmosphere, creating a blanketing effect.[4] In the US, 80% of emissions are carbon dioxide.[5] Often when talking about decreasing emissions, people interchangeably refer to either reducing carbon (CO_2) emissions – or carbon dioxide equivalents (CO_2e).[4]

The Science-Based Target Initiative (SBTi) provides a clearly defined pathway for companies and financial institutions to reduce emissions, helping to prevent the worst impacts of climate change and to future-proof business growth. Targets are considered 'science-based' if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement.[6]

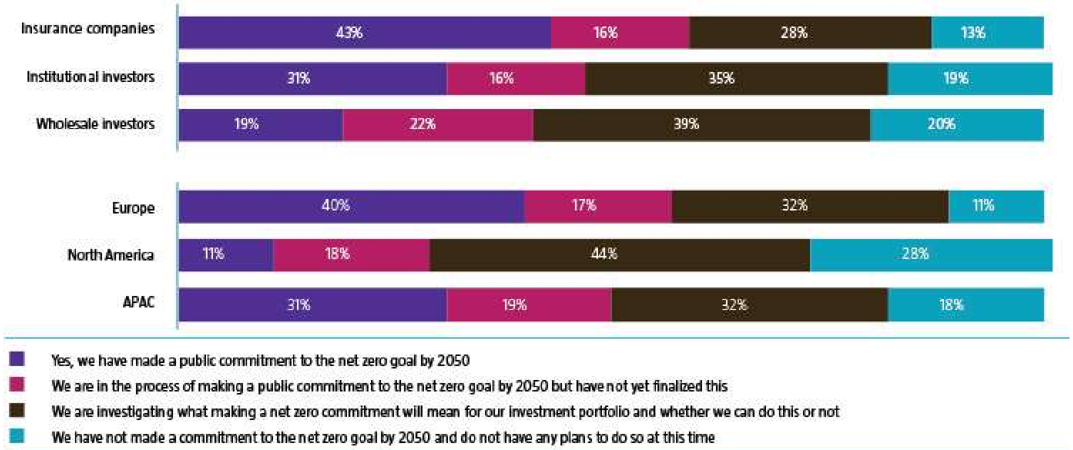
What are other insurers doing?

Of the 71 members of the Net Zero Asset Owner Alliance, almost half are insurers (48%).[3] Additionally, a group of 20 leading insurers have allied themselves in the Net Zero Insurance Alliance (NZIA). NZIA members have committed to transition their insurance and reinsurance underwriting portfolios to net zero emissions by 2050, consistent with a maximum temperature rise of 1.5°C above pre-industrial levels by 2100.

Robeco's 2022 Global Climate Survey shows that more than two-thirds of surveyed insurance companies are signing up to net zero or have already done so. Another 28% of firms are in the process of investigating what making a net zero commitment will mean for their investment portfolios, and only 13% are not considering signing up any time soon. This last percentage is substantially lower for insurers compared to other institutional investors (19%) and wholesale investors (20%).[7]

[1] https://www.robeco.com/nl/expertise/duurzaam-beleggen/begrippenlijst/paris-agreement.html#:~:text=The%20Paris%20Agreement%20is%20an,limit%20it%20to%201.5%20degrees
[2] Peppelenbos, L. (2021) The why, the how and the what: Showing the way to Paris-aligned investing
[3] https://www.unepfi.org/net-zero-alliance/
[4] www.robeco.com
[5] https://www.epa.gov/ghgemissions/overview-greenhouse-gases
[6] https://sciencebasedtargets.org/
[7] Robeco 2022 Global Climate Survey Report (bars might not add up to 100% due to rounding)

Figure 1: Investors signing up to net zero. [7]



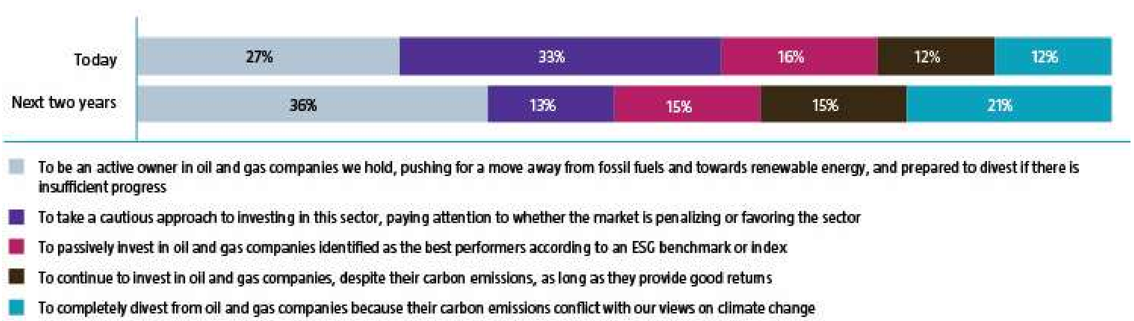
Source: 2022 Robeco Global Climate Survey

What does net zero mean for my investment universe?

Two decarbonization methods are important in meeting carbon targets, and both have an impact on the investment universe. The first method to decarbonize is to select issuers with low carbon emissions in a portfolio. This could result in a lower weighting of high-carbon emitters, but also in the exclusion of a certain sector. The investment universe will subsequently become smaller: a 30% decarbonization reduces the investment universe by 1%, while 50% decarbonization reduces the universe by about 3%.[8]

Reducing a portfolio's carbon footprint is an important method of limiting exposure to future risks, but it could just transfer the exposure to someone else – another investor may well buy the polluting companies. Also, insurers currently cannot invest in a net zero portfolio without significantly changing their expected returns compared to standard benchmarks. So, in addition to selecting low-carbon emitters, we also need to change the investment universe itself. This brings us to the second method and the most effective way for insurers to change the investment universe, which is through engagement: persuading polluting companies to adopt less carbon-intensive business models. It is also an excellent way of reducing the climate risk of an existing portfolio.[9]

Figure 2: Insurer's investment approach to investing in oil and gas companies using fossil fuels. [7]



Source: 2022 Robeco Global Climate Survey

[8] Robeco in-house quant research (2022)
[9] Collinge, E., Hendriks, S., & Koekkoek, R. (2020). Climate change: A problem that insurance companies can't afford to ignore.

According to the Robeco Climate Survey, many insurance companies already have or will be adopting active ownership in the next two years (36%) when investing in oil and gas companies. Another 21% will completely divest from these types of companies in two years' time.[10]

At Robeco, we have set interim targets to reach net zero by 2050. We aim to decarbonize our investments by 30% by 2025 and 50% by 2030. Robeco will accelerate the transition by investing in companies with low emissions, and by engaging with companies that are not moving fast enough. To do this, Robeco will step up its active ownership activities through voting and engagement. How Robeco approaches climate engagement, is explained in the 'Net Zero Roadmap'.

The basis of our engagement is an assessment of how well companies are prepared to decarbonize their businesses. We look at two aspects. First, we measure a company's carbon performance relative to its peers in the industry. Secondly, we look at a company's climate targets and how well these are embedded in its strategy. The top 200 emitters in Robeco's investment universe will receive a letter from our CEO. This will underscore that we expect them to implement a credible transition towards achieving net zero emissions by 2050 or sooner.

When casting votes on the reappointment of directors and the approval of annual accounts, the extent to which companies are fulfilling these expectations will be taken into account. We have voted against those who are not playing ball. Additionally, Robeco will identify 30 laggard companies that will be prioritized for climate engagement. With this addition, we expand our climate engagement to 55 companies, covering about 20% of portfolio emissions.[11]

How can I measure carbon in my portfolio?

Limiting global warming means cutting greenhouse gas emissions. Step one in doing this is knowing the carbon impact of your current portfolio. Although carbon impact implies the emission of carbon dioxide, it usually measures the greenhouse gas emissions of all the investments in the portfolio. These are often measured by metric tons of CO_2e. There are several methods that can be used to measure the carbon impact:

- Total carbon emissions. You can calculate the total carbon emissions attributed to the portfolio, in this case measuring the absolute carbon level without offsetting.
- Carbon footprint. This is the total carbon emissions per invested euro. The carbon footprint measures how much greenhouse gas emissions an investor owns, normalized by the size of the portfolio. By reducing their carbon ownership, investors contribute to the goals of the Paris Agreement.
- Carbon intensity. This measures the exposure of portfolios to carbon-intensive assets, and it's a measure that continues to be a relevant metric for portfolio management. It is in fact one of the metrics required by the Sustainable Finance Disclosure Regulation (SFDR).

In 2017, the Taskforce for Climate-related Financial Disclosure (TCFD) recommended using carbon intensity as the leading metric, with the TCFD's focus on climate risks. However, in 2022 the focus has shifted to making it the responsibility of investors to ensure they contribute to the Paris Agreement. In the same vein recent legislation and market standards are converging in recommending carbon footprint as the leading metric, including by the TCFD itself.

Of course, you'll need to know how much carbon an issuer emits before you can use it as input for calculations. There are many third-party data providers that provide this information (e.g., Bloomberg, MSCI, Sustainalytics) which is usually categorized as Scope 1, 2 or 3 emissions. However, it's not simply a case of adding up tons of cubic meters of greenhouse gases and investors often mention lack of quality data as a barrier to decarbonizing. There are several challenges when it comes to using carbon data.[12]

A fundamental problem of carbon footprint data is that it is backward looking, with an average time lapse of around two years. The second problem is not that there isn't enough data, but that it comes from multiple and overlapping sources that are often contradictory. The data is frequently not measured but modelled – which means it is estimated.

[10] Robeco 2022 Global Climate Survey report
[11] Robeco (2021). Navigating the climate transition: Robeco's roadmap to net zero emissions by 2050
[12] Robeco (2021). The big book of climate investing: From urgency to solutions

Finally, Scope 3 data, which is arguably the most important category, is the least reliable source. It is 6 to 10 times larger than Scope 1 and 2 combined, and it includes a lot of double counting.

In conclusion, there is no single source that shows the carbon emission of an issuer. Therefore, we recommend insurers always discuss carbon footprints with their asset manager to find out how they get their carbon data.

Box 2: Carbon data: Scope 1, 2 and 3

Scope 1, 2 and 3 emissions are greenhouse gas emissions that cause carbon footprints. As their name suggests, they are measured in three ways, according to how they were created:

- Scope 1 emissions: emissions that are directly generated by the company, such as an airline emitting exhaust fumes.
- Scope 2 emissions: emissions that are created by the generation of the electricity or heat needed by the company to sell its main products or provide its main services.
- Scope 3 emissions: emissions caused by the entire value chain, including the end-user of the product over its life cycle, and are much more difficult to measure.

The use of scopes is important as it allows investors to identify the true causes of emissions and suggest means of reducing them through engagement. An electricity utility would have relatively low Scope 1 emissions caused by its infrastructure or grid, but high Scope 2 emissions if its power came from the burning of fossil fuels rather than renewable sources.

A carmaker is an anomaly, since it would have relatively low Scope 1 and 2 emissions from manufacturing the car, but the user of the vehicle would burn petrol to run the car over many years, causing very high Scope 3 emissions.

While Scope 1 and 2 data are relatively easy to acquire, it can be very difficult to measure Scope 3 data; in the example of the car user, one could not know how many kilometers it would be driven. More forward-looking metrics are necessary to truly measure carbon footprints, both in terms of companies' products and services and their entire value chains.[13]

Optimizing insurer considerations and implementing net zero sounds contradictory. Can you do both in a buy-and-maintain portfolio?

Concerns around climate risk mitigation are especially critical for buy-and-maintain investors, who are limited in their ability to trade assets and who have a long-term investment horizon. Climate-related considerations typically play out over a much longer horizon than many other factors that influence the performance of financial instruments. The fact that optimal buy-and-maintain portfolios are bespoke by nature creates a clear advantage for investing with climate in mind. Furthermore, one could argue that a climate-focused perspective is even more important for buy-and-maintain investors than for more active investors, for whom shorter-term considerations typically are more relevant. Active investors also have far greater flexibility to sell assets whose emissions exposure is deemed too high, or whose emissions remain too high over a certain horizon.

In addition to incorporating sustainability goals related to climate risk and carbon footprints, insurers typically also require other specific objectives to be met, like avoiding falling angels, maximizing capital and risk-adjusted returns, and matching a specific cashflow profile. Incorporating the specific risk, return, regulatory and sustainability objectives in a buy-and-maintain portfolio can be a complex process. To do this, Robeco uses a proprietary framework that employs a scenario-based set-up to achieve the optimal outcome for the portfolio. To define the optimal outcome, Robeco runs through several steps:

1. Assesses situation and defines objectives (risk, return, regulation, sustainability)
2. Defines investment constraints (e.g. currency, duration, turnover, cashflow matching)
3. Constructs a reference asset universe as a benchmark (see figure 3, 'current'-column)
4. Runs the portfolio optimization tool
5. Selects one of the optimized portfolios

[13] https://www.robeco.com/en/key-strengths/sustainable-investing/glossary/scope-1-2-and-3-emissions.html

Using the proprietary framework described above, we typically see that significant carbon footprint reduction can be achieved with limited turnover and limited portfolio impact. Take the following in figure 3: a case study in which the Robeco Insurance & Pension Solutions team optimized an insurer's buy-and-maintain portfolio for climate risk, reducing the carbon footprint of the portfolio. The results show that the optimized portfolios have a higher yield (0.56 – 0.54) than the reference benchmark portfolio (0.51), while decreasing the carbon footprint up to 60%.[14]

So yes, both climate and insurer considerations can be taken into account when creating or optimizing a buy-and-maintain portfolio, and all while also increasing the yield.

Figure 3: Decarbonization of a buy-and-maintain portfolio.[15]

	Metric*	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 4	Portfolio 5	Current
Return	Yield (EUR)	0.56	0.56	0.56	0.55	0.54	0.51
Risk	Rating	A/A- (7.3)	A/A- (7.3)	A/A- (7.3)	A/A- (7.3)	A/A- (7.4)	A-/BBB+ (8.4)
	Max sector exposure	15%	15%	15%	15%	15%	29%
	Fundamental Score	0.5	0.5	0.5	0.5	0.6	0.0
	Duration	5.2	5.2	5.2	5.2	5.2	5.2
	BBB- allocation	4%	4%	4%	4%	4%	15%
	Fallen Angel probability	8%	8%	8%	8%	8%	15%
Sustainability	Carbon footprint	100%	85%	70%	55%	40%	100%
	SDG Score	0.9	0.9	0.9	1.0	1.1	0.5

Source: Robeco, Bloomberg

How can I measure the performance of my portfolio after I have included climate considerations?

Traditional benchmarks don't give a realistic view on your portfolio once it has been set up to move to net zero. Therefore, the European Union's "Action Plan on Financing Sustainable Growth" has published two new categories of benchmark: a climate transition benchmark and a Paris-aligned benchmark.

1. A climate transition benchmark incorporates specific objectives related to emission reductions and the transition to a low-carbon economy (based on the scientific evidence of the IPCC) through the selection and weighting of underlying constituents. At least a 30% reduction in carbon versus the investable universe is required, followed by a 7% year-on-year decarbonization trajectory.
2. A Paris-aligned Benchmark is specifically aligned to the Paris Agreement goals. This includes a more ambitious 50% reduction in carbon versus the investable universe, followed by 7% decarbonization annually.

As there was no global benchmark for climate bonds, Robeco created a Paris-aligned Benchmark together with Solactive, a German provider of financial indices. These are the indices against which the performance of the Robeco Climate Global Fixed Income strategies is measured, rather than the usual benchmarks used for credit strategies.[16]

Will regulators change capital charges to urge insurers to move to net zero?

Right now, regulatory bodies such as the European Insurance and Occupational Pensions Authority (EIOPA) and the UK's Prudential Regulation Authority (PRA) have not announced that capital charges will begin to reflect climate change. However, this might change in the future. At the end of 2020, EIOPA published a methodological paper on the potential inclusion of climate change in the natural catastrophe standard formula known as Nat Cat SF, which integrates natural catastrophe risk, such as earthquakes, windstorms, and floods into the Solvency II standard formula.

[14] Koekkoek, R., & Moret, G. (2021). Why climate risk considerations are especially relevant for buy-and-maintain portfolios
[15] Robeco, Bloomberg, based on 15 June 2021 market data and model assumptions
* Carbon footprint level indexed to 100% at reference universe footprint level and based on Trucost scope 1,2 and 3, portfolio is also expressed relative to this level. Fallen Angel probability is based on the average historical Moody's rating migration tables and model assumptions over the period 1983 – 2017. Our 'objective' measure, solely based on rating/tenor positioning. SDG score is sustainable development goal score given by Robeco, ranging from -3 to +3 per company and for issuers for which we do not have an SDG value the sector score is used. Issuers for which we do not have a Fundamental score are assigned a '0' score.
[16] https://www.robeco.com/nl/expertise/duurzaam-beleggen/begrippenlijst/climate-transition-benchmarks.html

Stakeholders were invited to respond, and most of them agreed that it was necessary to explicitly consider climate change in the recalibration of the Nat Cat SF.[17] However, no changes to the formula have been made yet.

The PRA has also been looking into the relationship between climate change and insurance regulatory capital regimes and whether there are gaps. The consensus at the PRA now is that capital frameworks should not be used to address the causes of climate change, but can be useful when dealing with its consequences. They discuss a potential approach for how the use of capital or change in capital frameworks could address relevant gaps. As a next step, the PRA will explore making specific changes to the solvency capital ratio calculation.[18]

How can I assess climate risk in my investment portfolio?

As climate change has become more widely acknowledged as a financial risk, part of the regional response of regulators and other bodies has been the introduction of climate risk stress tests. These help the regulator and the organization generate a perspective on the insurer's overall climate risk. One of these tests was developed by the Network for Greening the Financial System (NGFS). The NGFS's climate scenarios aim to provide a common starting point primarily for central banks and supervisors.

The EIOPA has developed two scenarios to be used in an insurer's risk and solvency assessment (ORSA). They also encourage insurers to develop their own scenarios.[19] Also, the Dutch Central Bank (DNB), the Bank of England (BOE) and the European Central Bank (ECB) have designed mandatory assessments to evaluate both short-term and long-term climate risk. The New York Fed recently published a paper on climate stress metrics and several other regulators have announced plans for stress tests in 2022.[15]

These stress tests designed by different regulators and supervisory bodies differ in various ways such as in the scenarios used, granularity, and the types of risk considered, but they also share some common features. Most tests explore climate risk quantitatively and qualitatively. The quantitative part of the test focuses on assessing losses under different scenarios. The qualitative part focuses on management actions taken to reduce climate risk and seize new opportunities in each scenario.[20]

If you want to read more about the climate-related financial risks and measures regulators are implementing to deal with climate change, Robeco's paper on *Climate Change Risk Management for Insurers* is an excellent read.

How can I disclose the right climate-related information?

In 2021, the TCFD released updated financial disclosure recommendations to help financial institutions to add depth, granularity and nuance to their climate risk assessments. These disclosures enable stakeholders to better understand the concentrations of carbon-related assets of a company and to support informed capital allocation. The TCFD gives recommendations on governance, strategy, risk management and metrics and targets.[21]

In the UK, the Financial Conduct Authority (FCA) has also defined climate-related disclosure rules for asset managers, asset owners and listed companies. This also includes life insurers who provide insurance-based investment products and defined contribution products. These organizations are required to provide disclosures in line with the TCFD reporting requirements.[22]

[17] EIOPA (2021) Feedback statement on comments received on the discussion paper on Methodology on potential inclusion of climate change in the Nat Cat standard formula
[18] PRA (2021). Climate Change Adaptation Report 2021: Climate-related financial risk management and the role of capital requirements
[19] Yan, C. & Resovac, D. (2021). Climate change risk management for insurers.
[20] UNEP FI (2022). Climate stress testing is here: 4 ways your firm can prepare.
[21] https://www.fsb-tcfd.org/
[22] https://www.fca.org.uk/publication/policy/ps21-24.pdf

Where can I get more information about climate investing?

Robeco is a leading European asset manager in the field of sustainable investing. Our investment solutions for insurers are designed to adjust to even the most specific requirements regarding risk, return, regulatory and sustainability considerations. We work with insurance companies to create customized solutions to meet their distinct insurance and sustainability challenges, while keeping an optimal risk/return profile. For more information, visit our website.

Important Information

Robeco Institutional Asset Management B.V. has a license as manager of Undertakings for Collective Investment in Transferable Securities (UCITS) and Alternative Investment Funds (AIFs) ("Fund(s)") from the Netherlands Authority for the Financial Markets in Amsterdam. This marketing document is intended solely for professional investors, defined as investors qualifying as professional clients, who have requested to be treated as professional clients or are authorized to receive such information under any applicable laws. Robeco Institutional Asset Management B.V. and/or its related, affiliated and subsidiary companies, ("Robeco"), will not be liable for any damages arising out of the use of this document. Users of this information who provide investment services in the European Union have their own responsibility to assess whether they are allowed to receive the information in accordance with MiFID II regulations. To the extent this information qualifies as a reasonable and appropriate minor non-monetary benefit under MiFID II, users that provide investment services in the European Union are responsible for complying with applicable recordkeeping and disclosure requirements. The content of this document is based upon sources of information believed to be reliable and comes without warranties of any kind. Without further explanation this document cannot be considered complete. Any opinions, estimates or forecasts may be changed at any time without prior warning. If in doubt, please seek independent advice. This document is intended to provide the professional investor with general information about Robeco's specific capabilities but has not been prepared by Robeco as investment research and does not constitute an investment recommendation or advice to buy or sell certain securities or investment products or to adopt any investment strategy or legal, accounting or tax advice. All rights relating to the information in this document are and will remain the property of Robeco. This material may not be copied or shared with the public. No part of this document may be reproduced or published in any form or by any means without Robeco's prior written permission. Investment involves risks. Before investing, please note the initial capital is not guaranteed. Investors should ensure they fully understand the risk associated with any Robeco product or service offered in their country of domicile. Investors should also consider their own investment objective and risk tolerance level. Historical returns are provided for illustrative purposes only. The price of units may go down as well as up and past performance is no guarantee of future results. If the currency in which the past performance is displayed differs from the currency of the country in which you reside, then you should be aware that due to exchange rate fluctuations the performance shown may increase or decrease if converted into your local currency. The performance data do not take account of the commissions and costs incurred when trading securities in client portfolios or for the issue and redemption of units. Unless otherwise stated, the prices used for the performance figures of the Luxembourg-based Funds are the end-of-month transaction prices net of fees up to 4 August 2010. From 4 August 2010, the transaction prices net of fees will be those of the first business day of the month. Return figures versus the benchmark show the investment management result before management and/or performance fees; the Fund returns are with dividends reinvested and based on net asset values with prices and exchange rates as at the valuation moment of the benchmark. Please refer to the prospectus of the Funds for further details. Performance is quoted net of investment management fees. The ongoing charges mentioned in this document are the ones stated in the Fund's latest annual report at closing date of the last calendar year. This document is not directed to or intended for distribution to or for use by any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, document, availability or use would be contrary to law or regulation or which would subject any Fund or Robeco Institutional Asset Management B.V. to any registration or licensing requirement within such jurisdiction. Any decision to subscribe for interests in a Fund offered in a particular jurisdiction must be made solely on the basis of information contained in the prospectus, which information may be different from the information contained in this document. Prospective applicants for shares should inform themselves as to legal requirements which may also apply and any applicable exchange control regulations and taxes in the countries of their respective citizenship, residence or domicile. The Fund information, if any, contained in this document is qualified in its entirety by reference to the prospectus, and this document should, at all times, be read in conjunction with the prospectus. Detailed information on the Fund and associated risks is contained in the prospectus. The prospectus and the Key Investor Information Document for the Robeco Funds can all be obtained free of charge from Robeco's websites.

Additional Information for US investors

Robeco is considered "participating affiliated" and some of their employees are "associated persons" of Robeco Institutional Asset Management US Inc. ("RIAM US") as per relevant SEC no-action guidance. Employees identified as associated persons of RIAM US perform activities directly or indirectly related to the investment advisory services provided by RIAM US. In those situations these individuals are deemed to be acting on behalf of RIAM US, a US SEC registered investment adviser. SEC regulations are applicable only to clients, prospects and investors of RIAM US. RIAM US is a wholly owned subsidiary of ORIX Corporation Europe N.V. and offers investment advisory services to institutional clients in the US.

Additional Information for investors with residence or seat in Australia and New Zealand

This document is distributed in Australia by Robeco Hong Kong Limited (ARBN 156 512 659) ("RIAM BV"), which is exempt from the requirement to hold an Australian financial services license under the Corporations Act 2001 (Cth) pursuant to ASIC Class Order 03/1103. Robeco is regulated by the Securities and Futures Commission under the laws of Hong Kong and those laws may differ from Australian laws. This document is distributed only to "wholesale clients" as that term is defined under the Corporations Act 2001 (Cth). This document is not intended for distribution or dissemination, directly or indirectly, to any other class of persons. In New Zealand, this document is only available to wholesale investors within the meaning of clause 3(2) of Schedule 1 of the Financial Markets Conduct Act 2013 (FMCA). This document is not intended for public distribution in Australia and New Zealand.

Additional Information for investors with residence or seat in Austria

This information is solely intended for professional investors or eligible counterparties in the meaning of the Austrian Securities Oversight Act.

Additional Information for investors with residence or seat in Brazil

The Fund may not be offered or sold to the public in Brazil. Accordingly, the Fund has not been nor will be registered with the Brazilian Securities Commission (CVM), nor has it been submitted to the foregoing agency for approval. Documents relating to the Fund, as well as the information contained therein, may not be supplied to the public in Brazil, as the offering of the Fund is not a public offering of securities in Brazil, nor may they be used in connection with any offer for subscription or sale of securities to the public in Brazil.

Additional Information for investors with residence or seat in Brunei

The Prospectus relates to a private collective investment scheme which is not subject to any form of domestic regulations by the Autoriti Monetari Brunei Darussalam ("Authority"). The Prospectus is intended for distribution only to specific classes of investors as specified in section 20 of the Securities Market Order, 2013, and must not, therefore, be delivered to, or relied on by, a retail client. The Authority is not responsible for reviewing or verifying any prospectus or other documents in connection with this collective investment scheme. The Authority has not approved the Prospectus or any other associated documents nor taken any steps to verify the information set out in the Prospectus and has no responsibility for it. The units to which the Prospectus relates may be illiquid or subject to restrictions on their resale. Prospective purchasers of the units offered should conduct their own due diligence on the units.

Additional Information for investors with residence or seat in Canada

No securities commission or similar authority in Canada has reviewed or in any way passed upon this document or the merits of the securities described herein, and any representation to the contrary is an offence. Robeco Institutional Asset Management B.V. relies on the international dealer and international adviser exemption in Quebec and has appointed McCarthy Tétrault LLP as its agent for service in Quebec.

Additional information for investors with residence or seat in the Republic of Chile

Neither Robeco nor the Funds have been registered with the *Comisión para el Mercado Financiero* pursuant to Law no. 18.045, the *Ley de Mercado de Valores* and regulations thereunder. This document does not constitute an offer of or an invitation to subscribe for or purchase shares of the Funds in the Republic of Chile, other than to the specific person who individually requested this information on their own initiative. This may therefore be treated as a "private offering" within the meaning of article 4 of the *Ley de Mercado de Valores* (an offer that is not addressed to the public at large or to a certain sector or specific group of the public).

Additional Information for investors with residence or seat in Colombia

This document does not constitute a public offer in the Republic of Colombia. The offer of the Fund is addressed to fewer than one hundred specifically identified investors. The Fund may not be promoted or marketed in Colombia or to Colombian residents, unless such promotion and marketing is made in compliance with Decree 2555 of 2010 and other applicable rules and regulations related to the promotion of foreign Funds in Colombia.

Additional Information for investors with residence or seat in the Dubai International Financial Centre (DIFC), United Arab Emirates

This material is distributed by Robeco Institutional Asset Management B.V. (DIFC Branch) located at Office 209, Level 2, Gate Village Building 7, Dubai International Financial Centre, Dubai, PO Box 482060, UAE. Robeco Institutional Asset Management B.V. (DIFC Branch) is regulated by the Dubai Financial Services Authority ("DFSA") and only deals with Professional Clients or Market Counterparties and does not deal with Retail Clients as defined by the DFSA.

Additional Information for investors with residence or seat in France

Robeco Institutional Asset Management B.V. is at liberty to provide services in France. Robeco France is a subsidiary of Robeco whose business is based on the promotion and distribution of the group's funds to professional investors in France.

Additional Information for investors with residence or seat in Germany

This information is solely intended for professional investors or eligible counterparties in the meaning of the German Securities Trading Act.

Additional Information for investors with residence or seat in Hong Kong

The contents of this document have not been reviewed by the Securities and Futures Commission ("SFC") in Hong Kong. If there is in any doubt about any of the contents of this document, independent professional advice should be obtained. This document has been distributed by Robeco Hong Kong Limited ("Robeco"). Robeco is regulated by the SFC in Hong Kong.

Additional Information for investors with residence or seat in Indonesia

The Prospectus does not constitute an offer to sell nor a solicitation to buy securities in Indonesia.

Additional Information for investors with residence or seat in Italy

This document is considered for use solely by qualified investors and private professional clients (as defined in Article 26 (1) (b) and (d) of Consob Regulation No. 16190 dated 29 October 2007). If made available to Distributors and individuals authorized by Distributors to conduct promotion and marketing activity, it may only be used for the purpose for which it was conceived. The data and information contained in this document may not be used for communications with Supervisory Authorities. This document does not include any information to determine, in concrete terms, the investment inclination and, therefore, this document cannot and should not be the basis for making any investment decisions.

Additional Information for investors with residence or seat in Japan

This document is considered for use solely by qualified investors and is distributed by Robeco Japan Company Limited, registered in Japan as a Financial Instruments Business Operator, [registered No. the Director of Kanto Local Financial Bureau (Financial Instruments Business Operator), No, 2780, Member of Japan Investment Advisors Association].

Additional Information for investors with residence or seat in South Korea

The Management Company is not making any representation with respect to the eligibility of any recipients of the Prospectus to acquire the Shares therein under the laws of South Korea, including but not limited to the Foreign Exchange Transaction Act and Regulations thereunder. The Shares have not been registered under the Financial Investment Services and Capital Markets Act of Korea, and none of the Shares may be offered, sold or delivered, or offered or sold to any person for re-offering or resale, directly or indirectly, in South Korea or to any resident of South Korea except pursuant to applicable laws and regulations of South Korea.

Additional Information for investors with residence or seat in Liechtenstein

This document is exclusively distributed to Liechtenstein-based, duly licensed financial intermediaries (such as banks, discretionary portfolio managers, insurance companies, fund of funds) which do not intend to invest on their own account into Fund(s) displayed in the document. This material is distributed by Robeco Switzerland Ltd, postal address: Josefstrasse 218, 8005 Zurich, Switzerland. LGT Bank Ltd., Herrengasse 12, FL-9490 Vaduz, Liechtenstein acts as the representative and paying agent in Liechtenstein. The prospectus, the Key Investor Information Documents (KIIDs), the articles of association, the annual and semi-annual reports of the Fund(s) may be obtained from the representative or via the website.

Additional Information for investors with residence or seat in Malaysia
Generally, no offer or sale of the Shares is permitted in Malaysia unless where a Recognition Exemption or the Prospectus Exemption applies: NO ACTION HAS BEEN, OR WILL BE, TAKEN TO COMPLY WITH MALAYSIAN LAWS FOR MAKING AVAILABLE, OFFERING FOR SUBSCRIPTION OR PURCHASE, OR ISSUING ANY INVITATION TO SUBSCRIBE FOR OR PURCHASE OR SALE OF THE SHARES IN MALAYSIA OR TO PERSONS IN MALAYSIA AS THE SHARES ARE NOT INTENDED BY THE ISSUER TO BE MADE AVAILABLE, OR MADE THE SUBJECT OF ANY OFFER OR INVITATION TO SUBSCRIBE OR PURCHASE, IN MALAYSIA. NEITHER THIS DOCUMENT NOR ANY DOCUMENT OR OTHER MATERIAL IN CONNECTION WITH THE SHARES SHOULD BE DISTRIBUTED, CAUSED TO BE DISTRIBUTED OR CIRCULATED IN MALAYSIA. NO PERSON SHOULD MAKE AVAILABLE OR MAKE ANY INVITATION OR OFFER OR INVITATION TO SELL OR PURCHASE THE SHARES IN MALAYSIA UNLESS SUCH PERSON TAKES THE NECESSARY ACTION TO COMPLY WITH MALAYSIAN LAWS.

Additional Information for investors with residence or seat in Mexico
The funds have not been and will not be registered with the National Registry of Securities, maintained by the Mexican National Banking and Securities Commission and, as a result, may not be offered or sold publicly in Mexico. Robeco and any underwriter or purchaser may offer and sell the funds in Mexico on a private placement basis to Institutional and Accredited Investors, pursuant to Article 8 of the Mexican Securities Market Law.

Additional Information for investors with residence or seat in Peru
The Fund has not been registered with the Superintendencia del Mercado de Valores (SMV) and is being placed by means of a private offer. SMV has not reviewed the information provided to the investor. This document is only for the exclusive use of institutional investors in Peru and is not for public distribution.

Additional Information for investors with residence or seat in Shanghai
This material is prepared by Robeco Overseas Investment Fund Management (Shanghai) Limited Company ("Robeco Shanghai") and is only provided to the specific objects under the premise of confidentiality. Robeco Shanghai was registered as a private fund manager with the Asset Management Association of China in September 2018. Robeco Shanghai is a wholly foreign-owned enterprise established in accordance with the PRC laws, which enjoys independent civil rights and civil obligations. The statements of the shareholders or affiliates in the material shall not be deemed to a promise or guarantee of the shareholders or affiliates of Robeco Shanghai, or be deemed to any obligations or liabilities imposed to the shareholders or affiliates of Robeco Shanghai.

Additional Information for investors with residence or seat in Singapore
This document has not been registered with the Monetary Authority of Singapore ("MAS"). Accordingly, this document may not be circulated or distributed directly or indirectly to persons in Singapore other than (i) to an institutional investor under Section 304 of the SFA, (ii) to a relevant person pursuant to Section 305(1), or any person pursuant to Section 305(2), and in accordance with the conditions specified in Section 305, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA. The contents of this document have not been reviewed by the MAS. Any decision to participate in the Fund should be made only after reviewing the sections regarding investment considerations, conflicts of interest, risk factors and the relevant Singapore selling restrictions (as described in the section entitled "Important Information for Singapore Investors") contained in the prospectus. Investors should consult your professional adviser if you are in doubt about the stringent restrictions applicable to the use of this document, regulatory status of the Fund, applicable regulatory protection, associated risks and suitability of the Fund to your objectives. Investors should note that only the Sub-Funds listed in the appendix to the section entitled "Important Information for Singapore Investors" of the prospectus ("Sub-Funds") are available to Singapore investors. The Sub-Funds are notified as restricted foreign schemes under the Securities and Futures Act, Chapter 289 of Singapore ("SFA") and invoke the exemptions from compliance with prospectus registration requirements pursuant to the exemptions under Section 304 and Section 305 of the SFA. The Sub-Funds are not authorized or recognized by the MAS and shares in the Sub-Funds are not allowed to be offered to the retail public in Singapore. The prospectus of the Fund is not a prospectus as defined in the SFA. Accordingly, statutory liability under the SFA in relation to the content of prospectuses does not apply. The Sub-Funds may only be promoted exclusively to persons who are sufficiently experienced and sophisticated to understand the risks involved in investing in such schemes, and who satisfy certain other criteria provided under Section 304, Section 305 or any other applicable provision of the SFA and the subsidiary legislation enacted thereunder. You should consider carefully whether the investment is suitable for you. Robeco Singapore Private Limited holds a capital markets services license for fund management issued by the MAS and is subject to certain clientele restrictions under such license.

Additional Information for investors with residence or seat in Spain
Robeco Institutional Asset Management B.V., Sucursal en España with identification number W0032687F and having its registered office in Madrid at Calle Serrano 47-14º, is registered with the Spanish Commercial Registry in Madrid, in volume 19.957, page 190, section 8, sheet M-351927 and with the National Securities Market Commission (CNMV) in the Official Register of branches of European investment services companies, under number 24. The investment funds or SICAV mentioned in this document are regulated by the corresponding authorities of their country of origin and are registered in the Special Registry of the CNMV of Foreign Collective Investment Institutions marketed in Spain.

Additional Information for investors with residence or seat in South Africa
Robeco Institutional Asset Management B.V. is registered and regulated by the Financial Sector Conduct Authority in South Africa.

Additional Information for investors with residence or seat in Switzerland
The Fund(s) are domiciled in Luxembourg. This document is exclusively distributed in Switzerland to qualified investors as defined in the Swiss Collective Investment Schemes Act (CISA). This material is distributed by Robeco Switzerland Ltd, postal address: Josefstrasse 218, 8005 Zurich. ACOLIN Fund Services AG, postal address: Affolternstrasse 56, 8050 Zürich, acts as the Swiss representative of the Fund(s). UBS Switzerland AG, Bahnhofstrasse 45, 8001 Zurich, postal address: Europastrasse 2, P.O. Box, CH-8152 Opfikon, acts as the Swiss paying agent. The prospectus, the Key Investor Information Documents (KIIDs), the articles of association, the annual and semi-annual reports of the Fund(s), as well as the list of the purchases and sales which the Fund(s) has undertaken during the financial year, may be obtained, on simple request and free of charge, at the office of the Swiss representative ACOLIN Fund Services AG. The prospectuses are also available via the website.

Additional Information relating to RobecoSAM-branded funds/services
Robeco Switzerland Ltd, postal address Josefstrasse 218, 8005 Zurich, Switzerland has a license as asset manager of collective assets from the Swiss Financial Market Supervisory Authority FINMA. RobecoSAM-branded financial instruments and investment strategies referring to such financial instruments are generally managed by Robeco Switzerland Ltd. The RobecoSAM brand is a registered trademark of Robeco Holding B.V. The brand RobecoSAM is used to market services and products which entail Robeco's expertise on Sustainable Investing (SI). The brand RobecoSAM is not to be considered as a separate legal entity.

Additional Information for investors with residence or seat in Thailand
The Prospectus has not been approved by the Securities and Exchange Commission which takes no responsibility for its contents. No offer to the public to purchase the Shares will be made in Thailand and the Prospectus is intended to be read by the addressee only and must not be passed to, issued to, or shown to the public generally.

Additional Information for investors with residence or seat in the United Arab Emirates
Some Funds referred to in this marketing material have been registered with the UAE Securities and Commodities Authority (the Authority). Details of all Registered Funds can be found on the Authority's website. The Authority assumes no liability for the accuracy of the information set out in this material/document, nor for the failure of any persons engaged in the investment Fund in performing their duties and responsibilities.

Additional Information for investors with residence or seat in the United Kingdom
Robeco is subject to limited regulation in the UK by the Financial Conduct Authority. Details about the extent of our regulation by the Financial Conduct Authority are available from us on request.

Additional Information for investors with residence or seat in Uruguay
The sale of the Fund qualifies as a private placement pursuant to section 2 of Uruguayan law 18,627. The Fund must not be offered or sold to the public in Uruguay, except under circumstances which do not constitute a public offering or distribution under Uruguayan laws and regulations. The Fund is not and will not be registered with the Financial Services Superintendency of the Central Bank of Uruguay. The Fund corresponds to investment funds that are not investment funds regulated by Uruguayan law 16,774 dated September 27, 1996, as amended.