

SUSTAINABILITY



SUSTAINABILITY | Susta

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For professional investors
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The techniques used in quant can also be applied to sustainability investing to maximize returns for our clients.

Published in the summer of 2018, The Big Book of SI is an award-winning reference work on sustainability. It walks readers through trends in the industry, definitions and tools for implementing this style of investing in a portfolio. Building on this concept, Sustainability Inside moves away from the industry-wide perspective and delves deeper into the details of how we integrate sustainability into all of our investment processes.

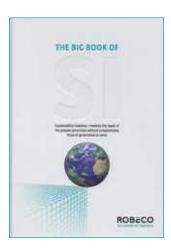
Herein lies the million-dollar question: what do we mean when we talk about ESG integration? It is easy for asset managers to talk the talk about sustainability, but those who want to implement it across the board have really got their work cut out for them. In this new publication, we take a look under the hood of sustainability at Robeco and help investors to avoid getting bogged down in the details.

Sustainability definitely is more than a green coat of paint on existing products. For us, it is not a trend that we have only just started chasing and thrown together a few products for. Sustainability is something that RobecoSAM has been embracing since its inception in 1995, and Robeco since the late '90s, launching the first sustainable fund (Duurzaam Aandelenfonds) in 1999. Where we stand now, as leaders in sustainability, is the result of decades of pioneering.

The reason we are offering a look INSIDE this style of investing at Robeco is because knowledge-sharing is in our genes. We are curious, we conduct research, we share our findings, and we welcome further discussions. Sustainability was commonplace at Robeco long before it moved from being niche to mainstream in the financial industry. Our passion for sustainability is not limited to any one team — it has grown exponentially in recent years and is shared by the entire company.

Peter Ferket

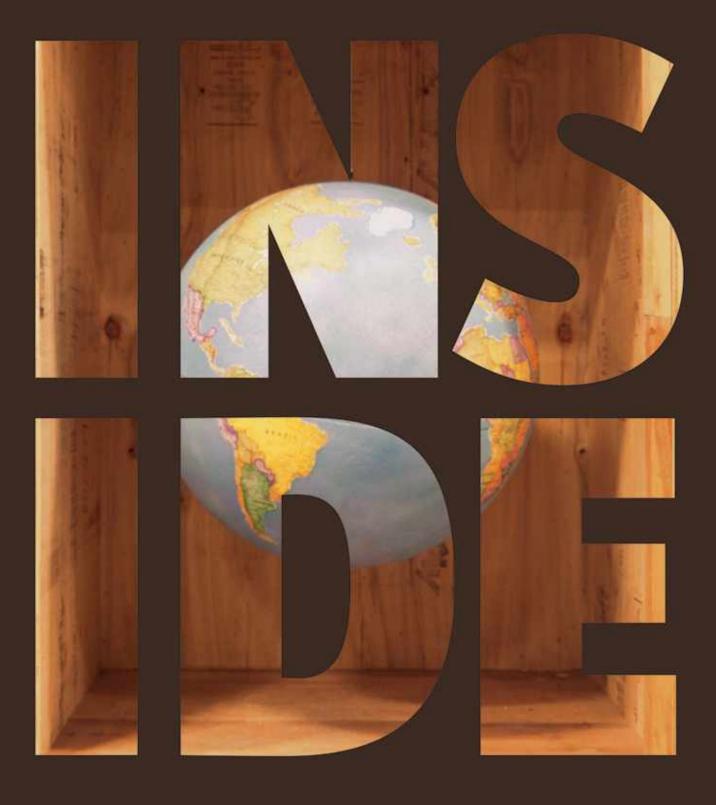
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INTEGRATION





It's all about an integrated approach

Sustainable investing means many things to many people, and their investment goals can vary greatly – there is no one-size-fits-all approach. Techniques used can also vary a lot, from negative screenings such as exclusions, to more sophisticated impact approaches or fully integrated methods. Asset managers must therefore offer highly flexible and customizable solutions.

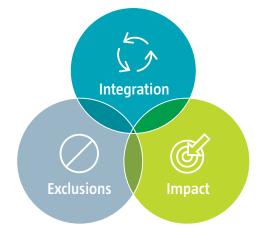
There are three broad approaches to using sustainable investing and addressing ESG issues in portfolios. The most common is the use of **exclusions** – simply avoiding investments in controversial products or business practices, such as tobacco, weapons or thermal coal. For some investors, this is their only form of practicing sustainable investing, which is a shame, because they are missing out on the benefits of using the other styles. The second of these approaches is **impact investing**, where an investor wants to make a socioeconomic impact as well as enjoying the financial returns. This is often done by targeting themes or initiatives such as the United Nations Sustainable Development Goals. While exclusions are the most widely used means of negative screening, impact investing is a form of positive screening, where the focus is on deciding what to leave in rather than what to leave out.

At Robeco, we prefer the less common but much more comprehensive approach of the systematic **integration** of environmental, social and governance (ESG) factors into portfolio construction. This means analyzing financially material information to be able to take better-informed investment decisions and thereby improve the risk/return profile of a portfolio. This has been Robeco's preferred (but not only) method for almost a decade, since it ensures the thorough absorption of sustainability factors in portfolio construction from both the top-down and bottom-up perspectives.

The three approaches are shown in Figure 1.

Figure 1: Three approaches to sustainable investing

Using financially material ESG information to improve the risk/return profile



Avoiding investments in areas of controversial products or business practices

Investing for socioeconomic impact, alongside the financial returns

Source: Robeco

Let us now elaborate on each one, beginning with integrated sustainability, since this is the approach on which we spend the most time and resources, accounting for two-thirds of our assets under management at the end of 2018.





1. ESG INTEGRATION

What is integrated sustainability?

Robeco believes that the integration approach cannot start until the initial screening process has taken place. In the first instance, this means following our exclusions list, such as by removing all tobacco companies or manufacturers of controversial weapons. Positive screening may also be used to identify those companies that meet pre-defined sustainability criteria in advance, such as those targeting renewable energy, or companies that can make a particular impact on an issue or theme such as the Sustainable Development Goals. This leaves the portfolio constructors with an investment universe to which ESG integration can be applied.

The use of ESG analysis runs alongside the use of traditional factors such as a company's profitability, market share, cost chains, competitive position and macroeconomic risks. What makes it *integrated* is the systemic use of ESG factors as an automatic and natural part of the investment process, among the other metrics that are studied.

The United Nations Principles for Responsible Investment defines integrated sustainability as:

"The explicit and systematic inclusion of environmental, social and governance issues in investment analysis and investment decisions. Put another way, ESG integration is the analysis of all material factors in investment analysis and investment decisions, including environmental, social, and governance factors."

 UNPRI https://www.unpri.org/investor-tools/what-is-esg-integration/ 3052.article

While many funds now use forms of sustainable investing (led by exclusions) in their processes, or may follow themes that imply a sustainable path (such as targeting renewable energy), few funds routinely integrate it as standard. What makes Robeco stand out from the crowd is the fact that ESG is now systematically integrated in the investment process in the entire range of fundamental equities, fixed income, quantitative and bespoke sustainability funds. As part of the standard investment process, ESG considerations are considered as naturally as profits or costs.

Part of the reason for this is that sustainability factors are profits and costs. At Robeco, we only look at ESG factors that are financially material: they have a direct impact on the bottom line, and are not simply 'nice-to-have', or are PR gimmicks. A company may, for example, announce that it is using rainwater to flush office toilets rather than draw fresh water from the mains; while this is certainly a worthy cause, it is not going to affect its bottom line. A real estate company announcing that it will upgrade its buildings to save heat and cut carbon emissions would affect its bottom line by lowering future energy costs, and would therefore be financially material.

Of course, different companies face different issues when it comes to ESG; the environmental element is far more important to a power generator than it is to an IT firm. A high street retailer will have a bigger focus on social issues, since they employ thousands of relatively low-paid staff, while governance is of over-riding importance for cutting risks at banks.

True integration also means it is a team effort across job roles, disciplines and departments – everybody does it as part of their day job. At Robeco, we have been careful to integrate the concept of sustainability and its application to our products as a Key Performance Indicator (KPI) for all employees. This means that the use of sustainability company-wide is not done by a few specialists sitting in a room, or even a bespoke department; it is done by everyone to some degree. Of course, we do still employ specialists, and some staff such as ESG analysts or members of the Active Ownership team only do this full time. But it remains a team effort in which the Robeco system of flat hierarchies means opinions are equally valued. In a credit committee deciding which corporate bonds to buy, for example, the opinion of a junior analyst who has discovered a little-known fact about the company may swing the decision of the senior portfolio manager in buying or selling that security.

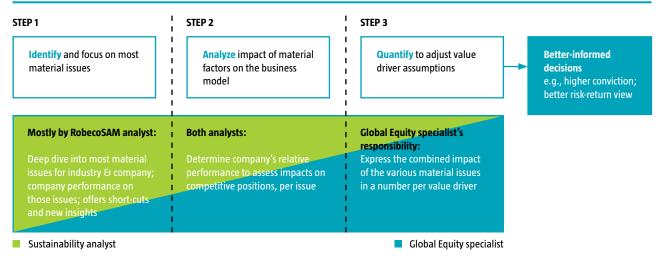
Let us now look at how we integrate ESG into our investment processes for our three main asset classes of developed world and emerging market equities, and in credits.

1a. ESG integration in equities

ESG integration in fundamental equity investments is usually done in three steps at Robeco, using a tool we developed in 2014 – the Value Driver Adjustment Framework. The first step is to identify and focus on the most financially material ESG issues affecting the company. The second is to analyze the impact of these material factors on the company's business model. Finally, the challenge is to incorporate these factors into the valuation analysis and/or the fundamental view of the company in order to decide whether to buy the stock.



Figure 2: Three-step approach to ESG integration in fundamental equity

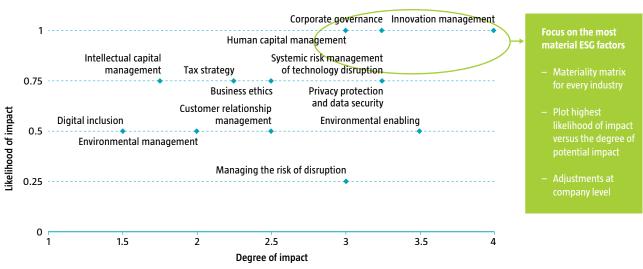


Source: Robeco

Equity team analysts work in close cooperation with Robeco's Active Ownership team, whose valuable experience following its many years of engaging with investee companies has generated a large database of financially material information, in tandem with an exclusion list that prohibits investment in contentious companies. The analysts also work closely with their counterparts at RobecoSAM, whose annual Corporate Sustainability Assessment is a vital source of data. The way in which the roles are split is shown in Figure 2. Combined, this whole process works to empower portfolio managers to make better-informed investment decisions, with a far higher conviction, and an enhanced view of the risk/return outcomes of those decisions.

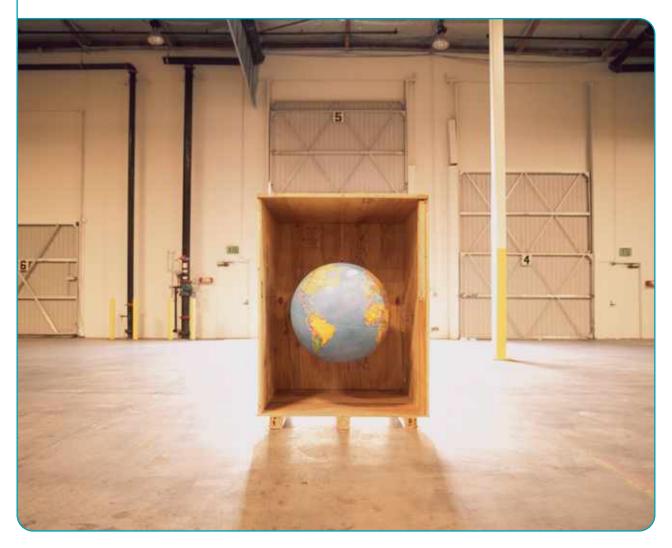
Focusing on the most material factors is key, and this will depend on the company or industry. Analysts view innovation management as being the most material issue for IT services and related companies, followed by human capital management and corporate governance. Environmental management, however, is a relatively low risk, since IT companies generally have a low carbon footprint and generate little pollution. The analyst will plot the highest likelihood of an issue making an impact against the degree of this potential impact. This is shown in Figure 3. Other industries are of course different: for the pharmaceutical industry, the ESG issue of paramount importance is product quality and safety.

Figure 3: IT Services & Internet Software and Services



Source: RobecoSAM, Robeco

INTEGRATION S D E



Taken across the spectrum, the top five material issues in all Robeco's portfolios are (in descending order): corporate governance, innovation management, product quality and control, environmental management, and human capital management.

In order to gain the information needed to assess the likely impact of all these factors, a huge number of data sources are used. These are led by the Corporate Sustainability Assessment for bottom-up and RobecoSAM's Country Sustainability Ranking for top-down; these two research tools are discussed in more detail in the Research Inside chapter. Data collection is supplemented with external ESG data sources such as Sustainalytics, Glass Lewis and the Carbon Disclosure Project, along with industry reports, paid-for analysis from brokers and studying industry trends affecting the company. And of course, Robeco analysts are in regular contact with the companies in which we invest, gleaning as much information as possible from management about current and future plans.



SHOWCASE

HOW A SIGNIFICANT PART OF THE OUTPERFORMANCE CAN BE CONTRIBUTED TO INTEGRATING ESG

A good example of how ESG makes a difference to returns can be seen in Robeco's Global Stars Equities strategy. Integrating ESG into portfolio construction contributed about 22% of the outperformance of the strategy over the past two years. Analysis of the returns shows that ESG explains about 180 basis points of its 800 basis point outperformance over the 2017-2018 time period.

The team starts with an investible universe of about 2,000 stocks, and uses research to narrow it down to the 25-40 best picks. What makes the ESG integrated is that it forms one part of a wider three-step process to find the best stocks; the strategy also focuses on companies with high free cash flow, and a high Return on Invested Capital (ROIC). This is shown in the chart below:

 Identify companies with strong and improving free cash flow High free Trading at a high free cash flow yield and cash flow a significant discount to intrinsic value High Return Companies with good reinvestment opportunities on Invested Capital or high return of cash to shareholders Material ESG factors are used to analyze the risk and return potential in business models & integrated and help to determine the value drivers valuation of our proprietary valuation model

Five value drivers will be routinely identified for the company – revenue growth, margin development, invested capital needed, likely future risk (as defined by a discount factor), and something that Robeco introduced in 2017 – adjusting the Competitive Advantage Period (CAP). This is the number of years that the company is expected to generate excess returns

on new investments, a timeframe in which the ROIC is higher than the Weighted Average Cost of Capital (WACC).

In quantifying it, the starting point is that we know how much ESG contributes to the intrinsic value of a company, because in integrating ESG in our valuation model, we calculate how much ESG impacts our share price target. This is an important instrument, since price targets broadly signal what we expect the company share price to be at a set date in the future. If the price target is much higher than the current share price, it represents a buying opportunity.

For example, on the back of the ESG analysis of a leading European renewable energy company, we lifted our price target for the company by 16%. Subsequently, we looked at the performance contribution of the company in the portfolio, which was +44 basis points (bps) during 2017-2018. Multiply both figures and you get a proxy for the ESG attribution to performance; in this case, this is 16% x 44 bps = +7 bps excess performance attributable to ESG.

A further breakdown of the results showed that in 2018, which proved to be a very difficult year for stock markets, the positive ESG tilt in portfolios acted as a performance cushion, contributing 98 bps of excess performance in addition to the 158 bps of outperformance made on stocks where ESG did not impact company valuation.

The effect of exclusions

Exclusions can cause a dilemma because some of these sectors with excluded companies can be profitable. A good example can be seen in the aerospace and defense sector. Robeco routinely excludes many of these companies because they

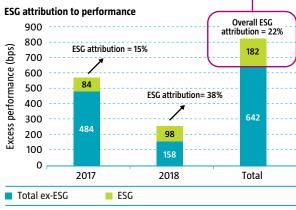


'In 2018, which proved to be a very difficult year for stock markets, the positive ESG tilt in portfolios acted as a performance cushion'

CHRIS BERKOUWER, portfolio manager Global Stars Equity







Source: Robeco

ESG attribution - breakdown 250 Excess performance (bps) 200 85 150 100 38 124 50 63 n -24 -27 -3 -50 2017 2018 Total ESG integration Excluding tobacco

■ Excluding aerospace & defense

make controversial weapons, such as nuclear warheads. In its 2017-2018 analysis quantifying the positive impact that integrating ESG made on the Global Stars Equities strategy, the team was also able to quantify the negative impact that excluding defense companies had made.

By not owning these stocks, the portfolio incurred 27 basis points of opportunity costs over 2017 and 2018. The main reason for this is that aerospace and defense companies generally have high financial returns, healthy balance sheets and good shareholder returns, which still makes them an attractive investment from a fundamental point of view. Fortunately, this opportunity loss was more than offset by selling all tobacco

holdings in the portfolio in early 2017, contributing 85 bps to overall performance after the sector underperformed. The net effect of the exclusions was positive. This is shown in Figure 4.

Research confirms the value gained

The value that ESG integration can have on portfolios is borne out by wider research. A 2019 study of 134 investment cases written in 2017 and 2018 endorsed the results of a 2017 study that ESG integration makes a difference about half the time. In total, 67 investment cases (32%) saw a positive adjustment to the price target; while 20 cases had a negative adjustment (13%), and no adjustment was made in 47 cases (55%). This is shown in Figure 5.

Figure 5: ESG attribution, 2017-2018 – more positive than negative contributions



INTEGRATION S D E



1b. ESG integration in emerging markets equities

Sometimes the use of ESG in emerging markets is thought of as being complicated due to the challenges that some of these countries face. In fact, the reverse is true: having invested in emerging markets for more than 20 years, we have found that integrating ESG factors into the investment process is crucial for both risk avoidance, and for actually *making money*. That is because market inefficiencies caused by lower standards of data availability, poor transparency and governance standards, and issues relating to climate change, human rights and product safety standards are a potential source of alpha.

ESG factors are integrated into both the top-down country allocation and the bottom-up stock-selection process. Given the risks that many emerging nations face, fundamental analysis is dominant in our **top-down** country allocation, using the RobecoSAM Country Sustainability Ranking among other sources. A key part of this is comparing the relative economic, political and social strengths of emerging markets in order to capitalize on the differences.

In the **bottom-up** stock selection process, sustainability analysis is a separate section in our company analysis, next to the routine financial factors such as business fundamentals, earnings revisions, quantitative scores and valuation. We believe that this enhances our ability to understand existing and potential risks and opportunities that are material to our investment cases.

Of course, it is essential to ascertain the ESG factors that are material to the companies covered – those issues that can have a substantial impact on a company's business model and value drivers such as sales growth. The **RobecoSAM Materiality Framework** is used as a starting point for this analysis. The framework provides the team with a comprehensive overview of the most financially material ESG factors within an industry that can impact the performance of a company.

However, this materiality will vary, depending on the company, industry and country. For example, a sound environmental policy is more material to a mining company than to an insurer. Some issues almost exclusively relate to emerging markets, such as palm oil or cocoa cultivation in Asia and Africa, with their attendant environmental and social risks. And then there is the overarching issue of governance, as companies and countries alike battle with corruption, bribery or money laundering issues.

A lot of diverse information is therefore needed, so where to store it? The data-gathering process led to the creation in 2017 of an **ESG Dashboard** for all the companies in our investment universe. This dashboard provides the team with a comprehensive overview of the most material ESG factors of a company compared to the country index and the MSCI Emerging Markets index, against which Robeco's emerging markets strategies are benchmarked. On top of this, the dashboard provides insights into potential red flags and controversies. Each team member analyzes and incorporates the outcomes in their investment case and determines how the ESG factors will impact valuations. In 2018, we found that ESG considerations at a country and/or the company level impacted a stock's fair value, and therefore its weight in the portfolio, in more than 60% of all investment cases and stock updates conducted by the team.

Governance for emerging markets versus developed markets

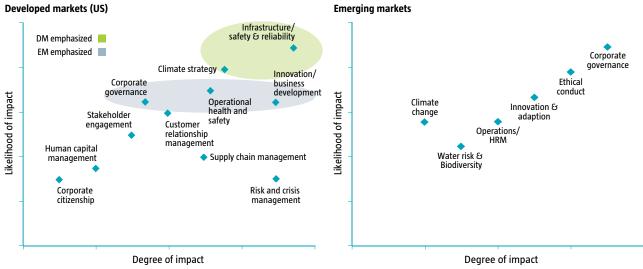
When there are fewer external institutions to protect minority shareholder interests, which is the case in many emerging markets, good governance becomes more important. Our primary focus therefore remains on corporate governance, and trying to improve it through our related engagement and voting programs (we also look at environmental and social considerations). Those companies that simply cannot or will not improve, along with countries whose problems are so immense that they face international sanctions, are excluded as a last resort.



The differences in what is financially material when comparing emerging markets with developed markets, and the role that governance plays, can be seen in the example below for gas distributors. For developed markets, infrastructure safety and

reliability are the most dominant factor, particularly after the Deepwater Horizon disaster, followed by its climate strategy. For emerging markets, it is corporate governance, followed by ethical conduct. This is shown in Figure 6.

Figure 6: For gas distributors, the issues that are more financially material differ between developed and emerging markets



Source: RobecoSAM

CASE STUDY

THE PRICE PAID FOR BRIBERY

An example of how the Materiality Framework works can be seen in the analysis done on a Brazilian food company. The company faced several serious ESG issues, ranging from involvement in two large corruption scandals in the country, to the arrest of a former CEO and indictments of board members and employees on charges of money laundering and bribery. The company had an overhang of possible fines related to the bribery scandal. Although there was a change in chairman and CEO, the issues continued to have a grip on the company.

The important step was to quantify the impact on value drivers. Due to these ESG issues, the emerging markets team increased the Weighted Average Cost of Capital (WACC) for the company by 200 basis points. On top of this, Brazil has a country risk premium, due to political risk following the election of a farright president and other issues. As a result, the WACC was increased by an additional 100 basis points.

In the final assessment of whether to invest, the team calculated that the potential upside on the stock had decreased from +253% to -3%. The impact of ESG considerations significantly decreased the fair value of the stock, even showing downside on our proprietary discounted cash flow model. As a result, we did not invest in the company.

INTEGRATION S



1c. ESG integration in credits

Fixed income funds have different priorities than their equities counterparts when using analysis to find the best bonds. In general, ESG analysis in equities seeks to identify an upside that is not reflected in the share price, while analysis in bonds seeks to expose any downside that may not show up in its credit rating. This has produced a well-known phrase that in credits, it "is better to avoid the losers than necessarily always picking the winners". The risk of default remains the paramount threat, and is much higher in sub-investment grade (high yield bonds) than in investment grade securities.

So, how to avoid those losers? A corporate bondholder's primary focus is the company's ability to repay the debt (and therefore avoid default). The key focus of credit analysis is therefore the cash generating capacity of the issuer and the quality of its cash flows. The credit team performs this analysis through a structured format assessment of five different factors of which ESG is one; the other four variables are the company's business position, corporate strategy, financial profile and corporate structure. Based on these five factors the analyst assigns a fundamental score, ranging from +3 for highly positive to -3 for highly negative, which expresses the overall fundamental view on a company given its credit rating.

The five factors are not stand-alone but are often intertwined; for instance, a change in ownership can impact a company's financial position, and an international expansion strategy may introduce country-specific risks into the business position. Combined, these factors enable Robeco to compile what it calls a Fundamental score, or F-score, as shown in Figure 7.

Figure 7: How F-scores are calculated

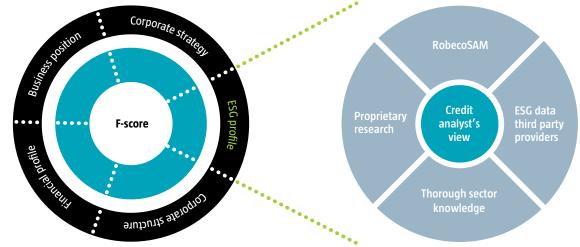


Getting a lower F-score does not necessarily mean that a company's bonds cannot be bought. Instead, this higher risk should be reflected in a higher credit spread versus its peers. In practice, a lower F-score therefore means that we would demand a higher spread to compensate for the additional risks that become apparent from our analysis. We do not exclude on the basis of the scores, but if the additional risk is not reflected in the spread of a corporate bond, we would rather invest in bonds with a better risk profile. Such a decision can be altered if either the risk profile improves, or the spread rises to an adequate level.



Figure 8: Fundamental issuer analysis

Sources of input for ESG profile



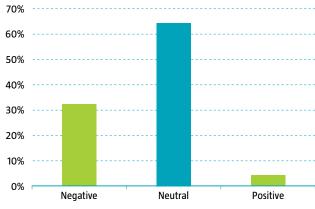
Source: Robeco

A wide number of sources including the RobecoSAM Corporate Sustainability Assessment (see Research Inside) are used to gather ESG information. Robeco has implemented a 'career analyst' model, in which its analysts pursue a long-term career path within research, and meet regularly with the companies that they follow. Analysts are thus able to follow a sector for many years, building up the necessary expertise and access to a network of information sources. The process is illustrated in Figure 8.

Quantifying the impact on portfolios: credits

All company profiles are scanned to quantify in how many cases we find a financially material impact of ESG factors on these profiles. Currently, we find that ESG information has a financially material negative impact on 32% of cases versus a positive impact on the fundamental view on just 4% of cases. This is shown in Figure 9.

Figure 9: The percentage of cases in which ESG makes an impact



Source: Robeco

SHOWCASE

CEREAL KILLERS

Makers of high-sugar and high-fat cereals provide examples of companies for which we reduce their F-scores based on their ESG profiles. By 2030, some 40% of the world's population will suffer from obesity, up from 30% at today's levels. This is already generating new regulations such as the UK sugar tax, along with a consumer backlash. Companies that have put less effort into reformulating products to have lower sugar levels or

fewer calories are at a relative disadvantage to those that have made the effort to produce healthier foods. Some have worked on introducing more gluten-free or higher-fiber products, but have not made enough improvement to counterbalance the risks. Robeco funds would therefore rather invest in the credits of those companies ahead of the game, not behind the curve.





2. IMPACT INVESTING

What, then, of the other two approaches to using SI – impact investing, or using solely exclusions? Let us discuss each one as a standalone approach on its own.

Impact investing involves making investments with the aim of creating a measurable beneficial impact on the environment or society, as well as earning a positive financial return. This could mean investing in a fund that aims to bring telecommunications services to remote areas in emerging markets, or to improve nutritional standards in food by investing in organic farming. A common form of doing this is by following the Sustainable Development Goals (see the investment showcase below).

Impact investing has three key components. First, there must be intentionality: an investor is making a deliberate, targeted effort to exert a positive impact. This could be because he or she wants to have a feelgood factor in making a difference, with an underlying

business motivation. Second, it should generate a positive return on investment; this is the key differentiator between investing and descending into charity or philanthropy, where no return is expected. And third, the financial, social and environmental benefits of impact investment should be measurable and transparent. This means the results of the investment should be tangible, such as how many hospitals in an emerging market were equipped and how many patients were served. If health care charges were levied to get the investment return, then at what rates, and paid for by whom, should be disclosed.

This style of investing is growing in popularity because it acts as a neat bridge between pure capitalism and philanthropy. Specifically targeting investing in renewable energy, for example, helps the fight against global warming while also making a financial return from the sale of the electricity generated. It allows the best of both worlds, and is becoming increasingly popular for that reason.

THE ROBECOSAM GLOBAL SDG CREDITS STRATEGY

One way of making an impact is by following the United Nations Sustainable Development Goals. RobecoSAM launched its Global Sustainable Development Goals Credits strategy in 2018 to specifically target the credits of companies that can be shown to contribute in some way to the goals. The 17 SDGs range from eradicating world hunger and reducing global warming, to improving health care, technological access and educational standards in emerging markets and are shown below:

Working out which companies can contribute to them – or alternatively, offer products or services that detract from them – is done through a three-step framework developed jointly by Robeco and RobecoSAM. It uses a proprietary scoring methodology to evaluate a specific company's contributions, both positively and negatively. The investible universe is about 600 bond issuers (known as names) across investment grade, high yield and emerging issuers.







































Source: United Nations



Figure 10: The three-step process for choosing SDG credits



PRODUCT What do companies produce?

Positive contribution examples:

- Medicine, water, health careNegative contribution examples:
- Shale gas, fast food, gambling

Source: Robeco



PROCEDURE How do companies produce?

Assess a company:

- Governance factors
- Pattern of questionable conduct
- Differentiate between firms with highest SDG impact



CONTROVERSIES Are controversies known?

Examples of controversies:

- Snills
- Bribery and fraud
- Mis-selling

Step 1: What does the company do?

The first step is to establish what the company produces, and then assess what are its potential contributions or detractions from its relevant SDGs. For example, looking at pharmaceutical companies, those making medical devices or offering health care insurance would be the starting point for investment candidates to target SDG 3 (good health and well-being). Focusing on home builders, the producers of building materials, and electric vehicle makers would provide suitable candidates to target SDG 11 (sustainable cities and communities). And so on.

An extensive set of rules and Key Performance Indicators (KPIs) are used to evaluate contributions according to the sector and

industry. For example, banks that make more than 25% of their loans to small and medium-sized enterprises would be making a more positive contribution to SDG 1 (no poverty), SDG 8 (decent work and economic growth) or SDG 9 (industry, innovation and infrastructure). This would then raise their score from a low positive to a medium positive.

Similarly, the percentage of natural gas in the production mix of energy companies would affect its scoring, moving from a negative low on SDG 7 (clean and affordable energy) and SDG 13 (climate action) when this production mix is 30-45%, to a positive low when it reaches more than 65%. Involvement in fracking would reduce scoring by one to three notches. Both examples are detailed in Table 1.

Table 1: How selected issues affect the scoring for banks and energy companies

Sector	BANKS			Sector	ENERGY (E&P)			
SDG	No poverty 8	Decent work and economic growth	Industry, innovation and infrastructure	SDG	Affordable and clean energy	Climate action		
Starting point	Positive Low +1			Starting point	Negative Low -1			
	% SME loans / total loans				% Natural gas in production mix			
KPI 1		> 25% Positive Medium +2		KPI 1	> 65% Positive Low +1	45-65% Neutral +0	30-45% Negative Low -1	
	%	EM loans / total lo	oans		% EM loans / total loans			
KPI 2	< 25% Positive Medium +2	> 25% Positive Medium +2	> 50% Positive High +3	KPI 2	> 20% -1 notch	> 50% -2 notches	> 80% -3 notches	

Source: Robeco





'There is more to creating an SDG-linked investment universe than simply looking at what companies do'

TAEKE WIERSMA, co-head of Credit Research

Step 2: How does the company operate?

The second step analyses how the company produces or delivers its products or services. For this, governance factors are taken into account, any questionable conduct is analyzed, and efforts into cutting their carbon footprints would be included. For example, are they emphasizing gender equality in their human resources, creating a good governance structure, or putting a lot of emphasis on reducing their greenhouse gas emissions?

Step 3: Has the company erred?

Step 3 focuses on controversies, such as whether the company has been cited for corruption, has had an environmental calamity such as an oil spill, or has become embroiled in financial mis-selling. The analysis would focus on whether this was a one-off event, and whether the company is addressing its problems or not.

The SDG scoring system

A proprietary scoring system is used to make evaluations, ranging from +3 for positive contributions to -3 for negative effects. Any company that is actively engaged in the provision of affordable medicine, cleaner water or health care in emerging

markets is likely to score highly. Conversely, any company involved in shale gas, fast food or gambling would get negative points. These are assessed together, meaning a pharmaceutical company could score positively for one aspect of its work in supplying cheap medicines, but negatively on something else, such as a controversy over bribery. However, if a company scores low on any given SDG, then the outcome is still negative.

There are also crossovers between SDGs. Steps by an energy company to step up renewable energy sources such as wind are very beneficial for SDG 7 (affordable and clean energy) but shutting down existing sources of fuel such as coal mines causes unemployment, which can have a negative impact on SDG 1 (no poverty), especially in emerging markets. All available data, good and bad, must therefore be integrated to be able to have a complete view.

The results

In the last sweep of companies as investment candidates in 2018, 60% of companies in the investment universe were found to make a positive contribution to the SDGs, which forms the basis of the candidates of names for the strategy. Some 24% of companies received a negative SDG score and 16% were neutral.



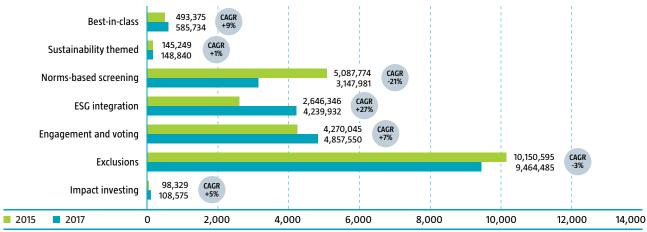


3. EXCLUSIONS

Using exclusions remains by far the most common form of sustainable investing, and for some is the only form that it takes. Its popularity can be seen in this survey of sustainability approaches by Eurosif in 2018, where it is still the clear leader over other forms, despite declining in use slightly between 2015 and 2017.

Robeco considers exclusion to be an action of last resort, only to be used towards controversial products or in case of contentious behavior after an enhanced engagement with the company to try to improve its ESG practices has not succeeded. The practices of excluded companies with UN Global Compact breaches are

Figure 11: Exclusions still top the relative popularity of different forms of SI



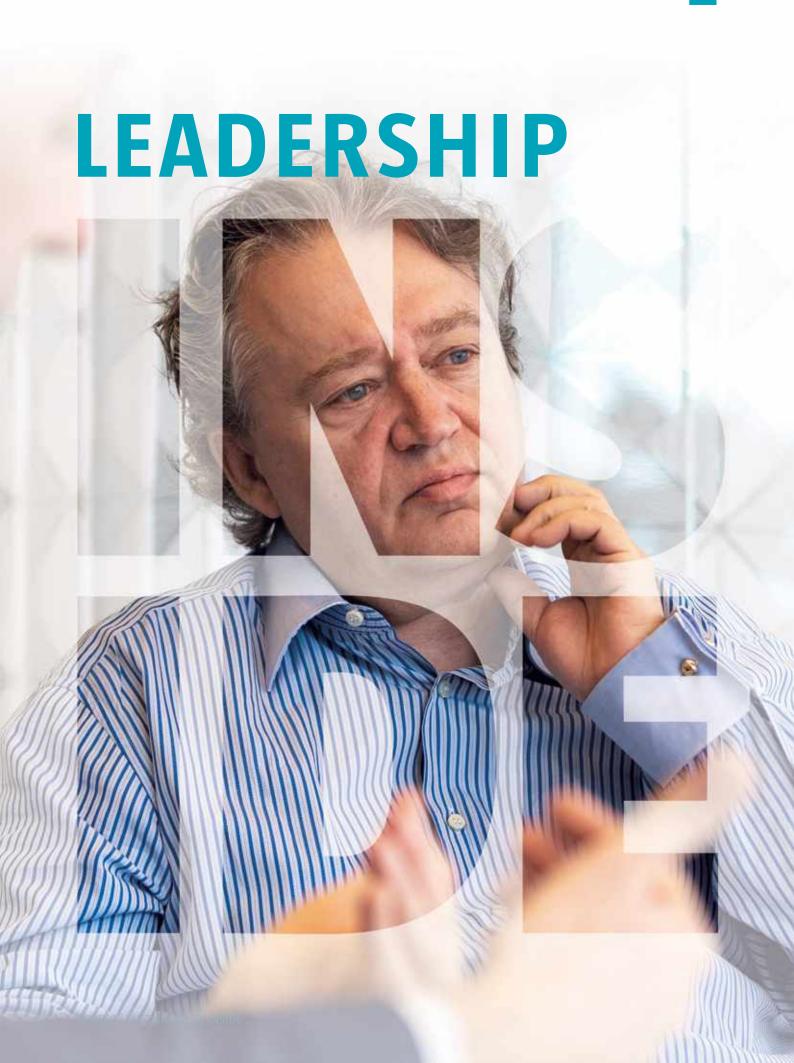
Source: Eurosif

Robeco has implemented an exclusion policy for companies involved in the production of, or trade in, controversial weapons, such as cluster munition and anti-personnel mines, and for companies that structurally and severely breach the United Nations Global Compact that have not improved after an engagement dialogue. This code was drawn up in 2000 with 10 principles in the areas of human rights, labor standards, the environment and anti-corruption, with the aim of offering a globally agreed framework for what constitutes acceptable corporate behavior.

Robeco has also excluded tobacco companies from portfolios, given the fact that their principal product of cigarettes is an unhealthy and socially disadvantageous product. Exclusion is applied to companies that are involved in the production of tobacco or suppliers of significant components of cigarettes (such as filters) or companies with significant ownerships in those companies. For thermal coal, which is considered to be a major contributor to global warming, all Robeco SI Focus funds are divested from mining companies with more than 10% of thermal coal revenues, and from power producers with more than 20% of thermal coal-related revenues.

revaluated at least once a year, and a company may be reinstated in the investment universe if it can show that the desired change has been implemented and the Global Compact breach lifted. Robeco's exclusion policy and exclusion list are published on its website.

Robeco deems investing in government bonds (federal or local) of countries where serious violations of human rights or a collapse in the governance structure take place as fundamentally unsustainable. To identify these countries, we use data from sources including the World Bank and its World Governance Index (WGI) on Political Stability and Absence of Violence or Terrorism; Freedom House and its Freedom in the World (FIW) index on Political rights and civil liberties; the Fund for Peace and its Fragile States Index (FSI). Such excluded nations include Somalia, North Korea, Myanmar and Zimbabwe.





INTERVIEW WITH GILBERT VAN HASSEL

'We really have to act now'

In October 2018, Robeco CEO Gilbert Van Hassel was named Sustainable CEO of the Year at the Pan-European Global Invest Forum in Paris. In this interview he talks about leadership in sustainable investing, business opportunities, the lack of regulation and clear definitions, SDGs and the challenge of staying ahead of the pack.

ON CREATING WEALTH AND WELL-BEING

In mid-2018, you said that conversations with clients always turn to the subject of sustainability within a few minutes. Does that still happen?

Is it an advantage for Robeco that clients know more? Does that make it easier to explain how our approach compares to that of our peers?

Is that integration the most important element? Do clients understand exactly what that entails?

"It still always comes up quite quickly. Sustainability is a key aspect of almost all RfPs and it's often even a requirement. Our clients are also a lot more knowledgeable on the subject, and are becoming more demanding. Just using an ESG filter isn't going to cut it."

"Yes, definitely. Sustainability is important for everyone these days, but only a few asset managers can say that it's been part of their core business for more than 20 years. We launched our first sustainability product in 1999, RobecoSAM has very long data series and together, we have around 65 specialists. At Robeco, it's not something we just do on the side: it's part of the company's DNA and fully integrated in all our investment processes."

"I think so. We've noticed that a great many of our competitors have a small engagement team, they work with several sustainability filters. But we incorporate relevant ESG factors into our investment decision-making. For each investment, we assess whether these factors will contribute to long-term value creation or actually detract from it. This analysis plays an integral part in every investment decision — whether it's to buy, sell or hold. And that's not all that hard to explain. Putting it into practice, however, is."

LEADERSHIP S D E



In 2018, Robeco changed its mission statement to include 'creating wealth and well-being' as one of its goals. Does that resonate with clients? Or is there still a sense that sustainability and return objectives are at odds with each other? "There's no one response to that question. In the Netherlands, and northern Europe, we are ahead of the game. Here, it is already part of pension funds' fiduciary duty to incorporate sustainability. So the two are perfectly compatible. But even in Scandinavia, which is actually a leader in this area, the degree to which it is integrated varies a lot. Norway and Sweden are quite far along, but people in Denmark still question whether you can reconcile the two and how pursuing well-being will impact the creation of wealth. More and more academic work gives proof that there is a link between sustainability and long-term value creation. Especially on the G component of ESG this starts to be conclusive. However more academic work is needed to establish the full link between the two."

"But in the US, most pension funds are subject to ERISA, an act drafted by the Department of Labor that states that their fiduciary responsibilities include maximizing returns on behalf of participants. As long as there is no fully proven causal relationship between sustainability and wealth creation, those funds will be unable to implement sustainability on any appreciable scale. There's just not enough scientific evidence yet, the data series are too limited and the track record of funds is too short to give them academic weight. Until the fiduciary responsibilities are reformulated, their participation will be marginal at best. Their hands are tied."

Investors often speak of 'risk-adjusted returns'. Do you think ESG integration mostly tends to reduce risk, or boost returns?

"I think it's about 50-50. If risk increases over time, then clearly returns will follow. If you take a really simplistic look at what will happen in the long term – if we don't change the way we treat the climate, with CO₂ emissions – then it's obvious we are eventually going to hit a wall. The global economy will stop growing and start contracting, and large amounts of value will be wiped out. So basically, risk and return are two sides of the same coin for me."



Over the last few years, you've made a point of putting sustainability very firmly on the map at Robeco. As CEO, is your pursuit of sustainability driven purely by business opportunities or do you have personal motivations?

Would you say that the financial services industry is going through a period of soul-searching right now?

ON THE ROLE OF THE FINANCIAL INDUSTRY

"As a CEO, your responsibility extends beyond the company's bottom line and shareholder interests. You are also accountable to your employees, and, as a company, to society as a whole. That's why you have to care about well-being, in which wealth plays a part, but it isn't the only factor and may not even be the most important one. From that perspective, it's only natural that we are involved in sustainability and hold the ideological belief that we really must do something. The fact that large groups of young people in many of our neighboring countries, and now here, too, are taking to the streets in protest, is a clear signal that some things are going seriously wrong."

"On the other hand, we have the shareholder to answer to, and they in turn have their own stakeholders. So, no, it's not only about gains and operating results, but of course we can't lose sight of those, either. That's why I focus on the opportunities and to me, it's very clear that sustainability is a big one. And that we are good at it."

"Absolutely. And it's not just a passing phase. Of course, a lot of people see this as a window of opportunity and are therefore jumping on the ESG bandwagon. But I'm convinced that sustainability will become standard before we know it. Right now, it's fashionable, but in three or four years from now, sustainable investing will be standard practice. And it's essential that that happens. If you read scientific reports about climate change and CO₂ emissions, you realize that we really have to act now. More and more people are realizing it."

"As things stand now, we're heading straight for that wall. People are becoming more and more anxious. I think that both governments and businesses – and every one of us as individuals – must take responsibility. The long-term survival of society depends on it. And it's going to require a huge effort from the entire planet. The question is whether we can afford to do it from an economic standpoint. Then again, can we afford not to? What would the world look like then?"

"One of the key challenges is deciding how to define sustainability. It seems like the number of things that are considered sustainable grows with each passing year. If you expand the definition to include not only the climate but also diversity, income equality and poverty, then it's painfully clear that things have to change."







'It can be hard to make headway if you yourself don't have any skin in the game'

In order to accomplish those changes, should investors be more activist if companies do not have their affairs in order? "Activist has kind of a negative connotation. I prefer the term 'active'. Should we exclude more companies? The way I see it, certain activities are just wrong and you can't justify being part of them. The production of nuclear weapons or cluster bombs are examples. These days, almost everyone feels the same way about tobacco, because the evidence of the dangers of smoking and passive smoking is overwhelming. That is the kind of industry you exclude."

"But often it can be hard to make headway if you yourself don't have any skin in the game. If we have a share in a company where multiple things are going wrong, then as a shareholder, we have a good chance of making ourselves heard. We've had a joint Voting & Engagement team at Robeco and RobecoSAM for over 15 years. Every year we select five engagement themes that we give our full attention, for a period of three years. If you don't make progress with engagement, then you eventually start excluding certain companies in that sector. Palm oil is one example of an industry that we put a lot of effort into, and where we've started excluding companies that aren't open to improving things."

"We have many engagement success stories. In the case of Shell, we joined hands with the Church of England to convince them to include climate objectives in their KPIs. That received a lot of media attention. And it was a kind of a litmus test, which made us realize that even at really big companies in difficult sectors, it's possible to make tangible progress."









ON RULES AND REGULATIONS (AND, WELL, RETURNS)

Back to the definition. SDGs provide a clear framework and go a step further than just the climate. Is that a big leap forwards?

"I think that the SDGs offer a really good framework, because they enable us to better define what sustainability means. But that's not enough. The next step is being able to measure and report on sustainability. And a lot of work needs to be done before we're in a position to do that. It's of the utmost importance that we develop a framework for this with the help of the European regulators."

"We embraced SDGs early on. We were one of the first to launch an SDG Equities product and after that, we were the first to develop a model that allowed us to apply it to credits, too. That's great, but ultimately, the SDGs will only have a really significant impact once the EU develops a solid framework and we have generally accepted definitions. Only then will we be able to really measure sustainability and see the impact on the SDGs. So yes, we can play a part in this, every asset manager can make a contribution. But ultimately, there needs to be a coordinated effort, driven by EU regulations, that allows the government to draw on the expertise of industries such as ours."

Different sources report different amounts in sustainable investments. And many asset managers overuse the label 'sustainability' in their marketing.

Does that proliferation bother you?

"The lack of a clear definition means anyone can have his claim to fame, which causes a lot of confusion. In addition, the concept is constantly evolving. In itself, that's no big deal, as long as everyone moves in the right direction. But if you really want to make progress, you need to define it. The fact that we lack scientific evidence of the ESG factors' added value, doesn't help, either."



'I think the SDGs offer a really good framework, because they enable us to better define what sustainability means. But that's not enough'

ON LEADERSHIP AND INNOVATION

Robeco is a pioneer in sustainable investing. But as a leader, you always have the so-called 'handicap of progress' to contend with. Competitors don't need to reinvent the wheel. How can Robeco maintain its competitive edge?

"This is definitely something I lose sleep over, despite innovation being in the company's blood. We invest a lot of time and energy in it. With sustainability, it all started with an enthusiastic team in Zurich that began looking at companies out of a real passion for green solutions and embracing the ideology of sustainability. Since then, we've come a long way together. Sustainability has become an integral part of the financial analysis. I call that 'applied research' because it's used to analyze the value of assets and it plays a role in building portfolios and, ultimately, generates alpha. We are still making great strides, but we have a ways to go. And there are no limits on that, either."

"We need to maintain the right balance between research and engineering. Engineers tend to take an established concept and tinker with it to create a new and improved version. But that new version is very close to the old one. It's not all that innovative. So we not only have to continue developing company sustainability reports, but also think about the concept: how we can renew it to add fundamental value."

"It's extremely important for us to keep investing in both applied and fundamental research. RobecoSAM does 1,200 CSA interviews a year. We assess the sustainability of a total of 4,500 companies and in the future, that number must be significantly higher. The question is: can we do that alone or do we need to find partners to help us? And can it be done in the traditional way or will we need to use artificial intelligence (AI) and Big Data? Research is important and doing best-in-class research requires big investments."

Is the process moving fast enough?

"Only time will tell. But when I see what peers are doing... Then yes, you have the handicap of progress against you, but the process of building experience and expertise can't be rushed. It takes time, by definition. And we really do still have an edge on our peers. Our clients tell us so. It helps if you've been doing it for a really long time, and therefore had the opportunity to gain experience and keep getting better, and make improvements. Building up expertise takes time and many hours of practice. I think other parties can probably catch up a bit, but we will still be ahead of the pack."



And yet, it might not be so nice if something that sets you apart now were to become commonplace in the future.

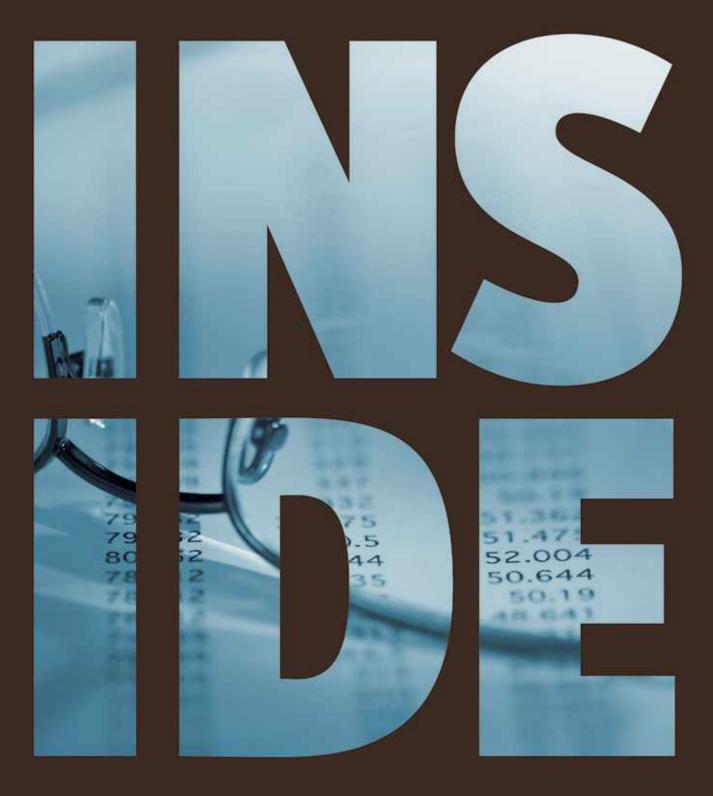
"You think? I'm not so sure. Just look at sustainable investing compared to 'regular' investing in stocks or bonds. Anyone can access the data and information from those markets. But there are still asset managers who succeed in setting themselves apart. Sustainability data is still scarce, but in the medium term, it will become a commodity. Will that eliminate the first mover advantage? It's not only about the availability of data. It's also about understanding it. The ability to spot correlations, to get added value from the data. Data alone is not enough to give added value to a portfolio or product."

"You have to ask yourself the same question as you would in any other domain: what sets you apart? The answer is simple: the quality of your research, the quality of your innovations, understanding what your clients need, how your teams relate to each other, perfecting your communication. We are also pioneers in factor investing and that's gradually becoming mainstream. And after 30 years, we're still a leader. Why? Because our people approach it very creatively, which means that we continue reinventing our understanding, constructions and products and are constantly gaining new insight."

Does keeping that innovative spirit alive play a key part in that? And how do you go about it?

"One of the responsibilities of company leaders, I believe, is to make sure people don't gradually become complacent. One of Robeco's strengths is that we aren't afraid to ask ourselves tough questions. An innovative spirit has nothing to do with age, but with culture and mentality. What I try to do is keep my inner child alive. In essence, that's pure curiosity. What's happening? Why is it happening? What will I find around the corner? I get bored really quickly; that's not easy. The constant need to question things and to tinker with things consumes a lot of energy. But you have to find a balance between innovation and execution."

RESEARCH





It all starts with high-quality research

Research lies at the heart of everything that Robeco does. It has been in our DNA ever since our first director Wim Rauwenhoff said "every investment strategy should be research-driven" shortly after the company was founded in 1929.

It is simply not possible to integrate ESG in investments without having every possible fact at our fingertips, and the ability to process this information to make better-informed investment decisions. Research also gives us the ability to keep up with events in a rapidly changing world, powering innovation, new ways of thinking, and more efficient ways of working.

Carefully researching every possible facet of any investment decision, to the point where "if we can't prove it, we don't do it" forms one of three pillars of the integrated sustainability process at Robeco. Access to leading research – for which we are blessed with the world-class capabilities of our affiliate, Zurich-based RobecoSAM – is the first pillar. This works alongside the second pillar of Active Ownership, where we use our position as asset owners to effect change, and the third: the ESG integration process itself.

You might call this a virtuous circle, since each one has the effect of strengthening the others, creating a continuously empowering cycle. Much of the work of the Active Ownership team, for example, has created a gold mine of information over many years of engaging with companies. This provides a rich vein of research, which then feeds into ESG integration.

Two proprietary, world-leading research programs lie at the bedrock of our sustainable investing and ESG integration work: the

Figure 1: The three pillars of Robeco's integrated sustainability process



Source: Robeco

annual Corporate Sustainability Assessment (CSA) and twice-yearly Country Sustainability Ranking (CSR) produced by RobecoSAM.

RESEARCH S



1. The Corporate Sustainability Assessment

The CSA is an annual survey of the world's largest or most influential companies, and it forms the backbone of the corporate sustainability research done across Robeco and RobecoSAM. We passionately believe that integrating financially relevant sustainability criteria into financial analysis helps us make better-informed investment decisions. And for that you need state-of-theart data, ideally drawn from the companies in which you hope to invest. RobecoSAM therefore launched the CSA 20 years ago — not long after the company was founded in 1995 — to acquire such a wealth of data.

The insights derived from the CSA are fully integrated into our asset management, engagement and sustainability benchmarking activities. Its data also forms the basis of the ESG information Robeco integrates into its mainstream fundamental and quantitative equity strategies as well as its corporate credits strategies. Without it, we would need to rely on external sources, and would be unable to data-crunch our own results and use them in a variety of ways.

In a changing world, it's also vital to keep your data fresh.

Commitments to combatting global warming provide an increasing challenge for companies – particularly those with high carbon footprints such as power generators and real estate. Controversies can strike from unexpected places, and in the age of social media,

how a company responds can get more scrutiny than it used to receive from mainstream media. Then there are megatrends that can change industries almost overnight; witness how quickly digitalization has transformed the landscape, particularly in areas like banking, music and travel.

One of the ways in which we as investors are able to keep up with events is by asking the companies themselves. And the process is relatively simple, since it all boils down to a questionnaire.

The CSA focuses on criteria that are both industry-specific and financially material, and has been doing so since 1999. Currently over 4,500 listed companies around the world, including the 2,500 largest, are covered – and growing. The CSA consists of 80 and 100 industry-specific questions that directly relate to the companies' operations, from carbon emissions and worker relations, to board composition and macroeconomic risks. For the last collection in 2018, some 60 industries were represented, with more than 600 data points per company. To ensure that the analysis remains focused on financially material criteria, we continuously refine the methodology to reflect new sustainability trends that are likely to have an impact on companies' competitive landscapes as they emerge.



What topics are covered?

The CSA has three sections: the economic dimension of a company; an environmental dimension; and a social dimension. The categories of questions within each section are as shown in Table 1.

How the scoring works

RobecoSAM expresses its research in a sustainability score between 0 and 100 which reflects a company's relative sustainability performance versus its peer group. Relevant information is also summarized in qualitative company profiles. Robeco and RobecoSAM's investment teams have access to both the scores and sector overviews; they are used to construct company profiles which are then specifically tailored to the investment processes within

the relevant team. The CSA is used for both equities and corporate bonds, since the underlying data applies to the company rather than purely to the security.

Aside from their scores, companies also receive percentile rankings for approximately 20 financially relevant sustainability criteria across the economic, environmental and social dimensions. The percentile ranking represents the percentage of assessed companies that have received a higher or lower score than the company in question. For example, if a company has a percentile ranking of 95 for a specific criterion, this means that the company scored higher than 95% of the companies in its industry. An example of what the final scorecard for a company looks like is shown in Table 1.

Table 1: An example of a final scorecard for a company using the CSA

	Score 2018	Score 2017	Y-o-Y	Percentile 2018	Percentile 2017	Y-o-Y	Average score	Best score	Weighted gap	Weight (%)	
Total sustainability score	78	77	+1	78	73	+5	52	88	-8		
Economic dimension	76	76	0	84	73	+11	52	90	-5.16	43	
Corporate governance	78	79	-1	94	93	-+1	60	87	-0.42	6	
Materiality	100	91	+9	100	90	+10	50	102	0	2	
Risk & crisis management	84	72	+12	81	67	+14	55	94	-0.32	4	
Codes of business conduct	95	92	+3	94	87	+7	73	100	-0.15		
Customer relationship management	69	64	+5	63	60	+3	61	102	-1.24	4	
Policy influence	100	NAP	N/A	100	N/A	N/A	42	102	0	2	
Supply chain management	93	93	0	97	70	+4	53	100	-0.3	6	
Tax strategy	58	43	+15	81	80	+11	44	85	-0.5	2	
Impact measurement & valuation	9	NAP	N/A	94	N/A	N/A	6	60	-0.98	2	
Innovation management	59	55	+4	78	70	+8	37	90	-1.74	6	
Product quality and recall management	62	90	-28	56	80	-24	58	102	-1.52	4	
Environmental dimensions	77	80	-3	72	73	-1	55	99	-6.8	34	
Environmental reporting	93	93	0	81	77	+4	63	102	-0.42	6	
Environmental policy & management systems	83	87	-4	63	70	-7	71	102	-1.19	7	
Operational eco-efficiency	61	40	+21	81	63	+18	39	95	-2.28	9	
Product stewardship	75	95	-20	72	80	-8	53	102	-1.5	6	
Climate strategy	82	100	-18	75	100	-25	55	102	-1.08	6	
Social dimension	82	73	+9	88	77	+11	49	93	-2.07	23	
Social reporting	91	91	0	84	87	-3	58	100	-0.28	4	
Labor practice indicators	90	56	+34	84	70	+14	61	102	-0.3	3	
Human rights	72	NAP	N/A	84	N/A	N/A	43	96	-0.66	3	
Human capital development	75	70	+5	84	80	+4	38	98	-0.84	4	
Talent attraction & retention	74	72	+2	78	73	+5	47	92	-0.96	6	
Corporate citizenship and philanthropy	95	94	+1	97	83	+14	46	102	-0.15	3	

Minimum total sustainability score for index inclusion

Source: Robeco

RESEARCH



Refining the methodology

In order to improve clarity and data consistency for companies, the 2018 methodology was aligned with accepted sustainability reporting frameworks such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB) and the Carbon Disclosure Project (CDP). This helped to address the growing reporting burden companies face — something that has put many companies off from filling in the CSA in the past.

We also introduced new questions to further challenge companies on new risks and opportunities, and removed others that are now superfluous. For example, in the light of increased investor interest in corporate controversies, we increased the weight of the Media and Stakeholder Analysis within the overall scoring. An example of a question change can be seen in the ongoing vexed topic of executive pay, and whether this is aligned with performance. In 2018, we revised two existing questions and introduced four new ones. The question previously called "Executive Compensation – Success Metrics and Vesting" was split into the reviewed "Executive Compensation – Alignment with Long-Term Performance" question and the new "Executive Compensation – Success Metrics" question.

Regarding climate change, it was important to realign the CSA's questions with methodology updates by the Carbon Disclosure Project's own 2018 Climate Change questionnaires, and likewise with changes to the Taskforce on Climate-related Financial Disclosures' recommendations. We subsequently extended the climate strategy criterion's applicability to all industries, updated five of the questions and added a new question on Scenario Analysis.

The Dow Jones Sustainability Index

The CSA is not only used for investment decisions in companies. The results form the basis for the construction of all Dow Jones Sustainability Indices (DJSI) which also celebrate their 20th anniversary in 2019. Offered jointly by RobecoSAM and S&P Dow

Jones Indices, the DJSI track the stock performance of the world's leading companies in terms of the CSA's economic, environmental and social criteria. The indices serve as benchmarks for investors who wish to reflect their sustainability convictions in their portfolios.

Moreover, the DJSI indices serve as an effective engagement platform encouraging companies to adopt sustainable best practices. The range of indices developed and offered jointly by RobecoSAM and S&P Dow Jones Indices include the flagship Dow Jones Sustainability Indices, the DJSI Diversified, S&P ESG, and the S&P Fossil Fuel Free Indices. All index families include global and regional subsets.

Companies that qualify for the DJSI receive the member logo demonstrating that they belong to a select group of sustainability leaders within their industry.

What's in it for the company?

Robeco and RobecoSAM believe that no company can effectively compete within the modern world without being adjudged on its sustainability, which the CSA can offer. The final scores can offer bragging rights for companies that wish to advertise their sustainability credentials, particularly if they are in high profile industries. Still, many companies choose not to fill in the survey, so there are other carrots on offer for taking the time to do it.

All participants receive a Company Benchmarking Scorecard comparing their sustainability performance to that of industry peers. The scorecard covers all ESG criteria assessed, and shows the company's sustainability performance, both in absolute and relative terms, compared to the industry average and their industry's top-performing company. The scorecard thereby offers valuable insights into sustainability trends affecting the company's industry, and many use it as an internal management tool to identify gaps and make improvements to their own corporate sustainability strategies.



Then there is the RobecoSAM Sustainability Yearbook, which offers awards to the world's most sustainable companies based on information collected through the CSA. Only the top 15% of companies from each industry are included in the Sustainability Yearbook; they are further classified into gold, silver or bronze classes. The 2019 yearbook made gold class awards to a total of 66 companies, of which 32 were in Europe (see Table 2).

Table 2: Yearbook 2019 compared to Yearbook 2018

Region	Companies included	Total medals awarded	Gold medals awarded
Asia Pacific	113 (-1)	50 (-15)	12 (-2)
Emerging markets	85 (+4)	51 (+7)	13 (+2)
Europe	172 (-13)	104 (-19)	32 (-8)
North America	88 (-11)	31 (-6)	9 (+1)
Total	458 (-21)	236 (-33)	66 (-7)

Source: RobecoSAM

Many participants are convinced as to its worth. "At AXA, we believe high performance in the CSA is a good proxy for advanced sustainability practices, which translates into better awareness of long-term risks and opportunities. In a nutshell: the CSA makes us a better company for all stakeholder," says Christian Thimann, who at the time of writing in early 2018 was a Member of AXA Group's Executive Committee and Group Head of Strategy, Sustainability & Public Affairs.

WHAT DO YOUR PEERS SAY?

Companies that participate in the CSA year after year consistently tell us:

- "We use the CSA to develop and implement a succesful and sustainable business strategy"
- "The CSA helps us to reduce sustainability risks for the company and realize opportunities"
- "CSA benchmarking allows us to meet investor and stakeholder expectations and needs"
- "We value the external/internal recognition for our sustainability performance"
- "The CSA participation embeds sustainability thinking in the corporate DNA (networks)"

2. The Country Sustainability Ranking

The Country Sustainability Ranking (CSR) is a survey of the ESG credentials of 65 countries – 22 from developed markets and 43 from emerging markets – which is published twice a year. Scandinavia has provided more countries in the top five than any other region, while the countries at the bottom are as one might expect from troubled emerging markets.

The rationale behind it is that country sustainability analysis offers an alternative view into an economy's underlying change drivers, and provides investors with insights into a country's strengths and weaknesses on a broad selection of ESG indicators. It primarily focuses on mid- to long-term factors that have an indirect (or sometimes even direct) impact on a government's ability to implement reasonable economic policies and generate sufficient revenues ensuring its ability to service its debt. These factors are usually insufficiently considered in traditional sovereign debt rating assessments. One of the best uses for the CSR is trying to find information that is not covered in a country's standard credit rating. If a country ranks higher in the CSR than its credit rating would suggest, it may present a buying opportunity for that nation's sovereign bonds.

The CSR gives an ESG score for countries based on 17 indicators, which receive a weight of 15% for environmental, 25% for social and 60% for governance. The weightings given to each element are shown in Figure 2, along with the 'winners and sinners' from a typical survey. The indicators have been selected according to their availability, materiality, plausibility and financial relevance, and are updated regularly. The scores on these factors are based on over 200 underlying data series from all over the world. Sources include international organizations such as the World Bank, the United Nations or the International Labor Organization, as well as a variety of reputable government agencies, private institutions and NGOs.

They include topics that an investor might expect, such as environmental risk, energy use, social unrest or political risk, along with more subtle issues such as human development (access to education, etc.) and the stability of institutions. All have a bearing in some way on a nation's ability to sustain itself and its population over the long term. Governance has always had a much larger weight, since how a country is governed and what systems it uses have such a bearing on how successful it will be in the modern world. Political risk is worth 10% on its own, and is not just confined to emerging markets with poor democratic traditions; the example of Brexit and the experience with populism has shown that even highly developed economies can also suffer instability.

Social and environmental issues have lower weights, since ultimately, these are controlled by the government, which goes back to governance. Essentially it boils down to what would affect a nation's ability to either borrow new money, or service its existing debt. Having a poor energy mix (2.5%) could be remedied with a greater focus on renewable sources, but social unrest (5%) and the government's response to it is more likely to send investors heading for the exit.



Figure 2: The weightings used for ESG indicators, and an example of a final country ranking

	ESG indicators and weights	
F	Environmental status	10%
	Energy	2.5%
15%	Environmental risk	2.5%
c	Social indicators	10%
))E0/	Human development	10%
25%	Social unrest	5%
	Liberty & inequality	10%
	Competitiveness	10%
G 60%	Political risk	10%
	Aging	10%
	Institutions	5%
	Six other factors	15%

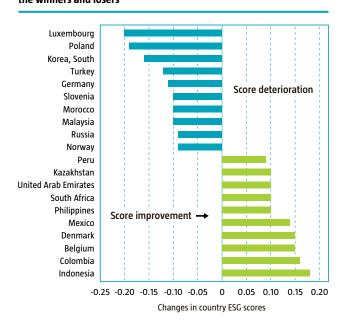
Country ranking Norway 1 Sweden 2 Finland 3 Switzerland 4 New Zealand 5 Netherlands 6 China 57 FI Salvador 58 India 59 60 Egypt Venezuela 61 Nigeria 62

Source: RobecoSAM

Various events during the last few years – from the euro sovereign debt crisis to the Arab Spring and the Ukraine crisis – illustrate the relevance of this type of information for investors. For example, World Bank Governance Indicators, which are incorporated into the CSR rating tool, showed that the Southern European peripheral countries rather impolitely known as the PIGS – Portugal, Italy, Greece and Spain – had much weaker governance structures than their northern European peers. Subsequently, they suffered more during the crisis than Germany did, with some requiring ECB bailouts. Ireland began to deteriorate earlier than capital market ratings, and the pre-crisis ESG score for Spain (6.19 in March 2007) was well below that of Germany (7.34), even though Spain also enjoyed a triple-AAA status at the time.

But times change – countries frequently go up and down the rankings according to the ESG issues that they face, and results can sometimes be surprising. Greece has largely recovered since its original bailout, whereas it is now Germany that is facing political turmoil. Germany slipped down the rankings in November 2018 due to uncertainty over the stability of its government after Angela Merkel said she would quit as Chancellor following elections that made coalition forming difficult. And Luxembourg has fallen in rankings due to its demographic timebomb over its ability to pay pensions. Conversely, Indonesia has risen in the rankings after raising its retirement age from 55 to 65, and Colombia has risen after securing a peace deal with the rebel group FARC. This is shown in Figure 3.

Figure 3: Changes in country ESG scores, October 2018 vs April 2018: the winners and losers



How the score is calculated

Calculating the end scores is done in six steps, using a system of using 'z-scores' that range from -3 for a damaging factor to +3 for something highly positive. The final score for a country ranging from 1-10 uses the following equation:

Country sustainability score = 1 + ((z-score + 3)*1.5)

Then the rankings can be created.

Source: RobecoSAM

RESEARCH S



'A proper country sustainability assessment provides valuable insights into a country's underlying risk drivers that we believe are critical to making balanced investments'

MAX SCHIELER, Senior SI country analyst

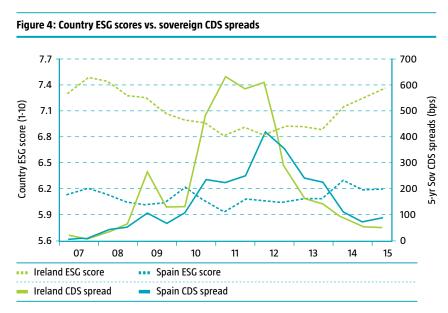
The CSR vs. CDS

The CSR data can also be compared with the values of a country's credit default swaps (CDS) — a form of insurance which pays out in the rare event of a default. Using CDS spreads and comparing them with ESG scores also allows comparison between countries, as can be seen in Figure 4. This figure compares Ireland with Spain, both are which are 'peripheral' EU nations for whom investment decisions often revolve around their relative value compared to others.

The real beauty of this chart is that it shows the country ESG scores for both Ireland and Spain deviate from their CDS spreads. From March 2012, for example, just after the Eurozone crisis hit, the Irish CDS spread (the full green line) is sharply falling, implying lower risk. But the country ESG score (the dotted green line) is rising, warning

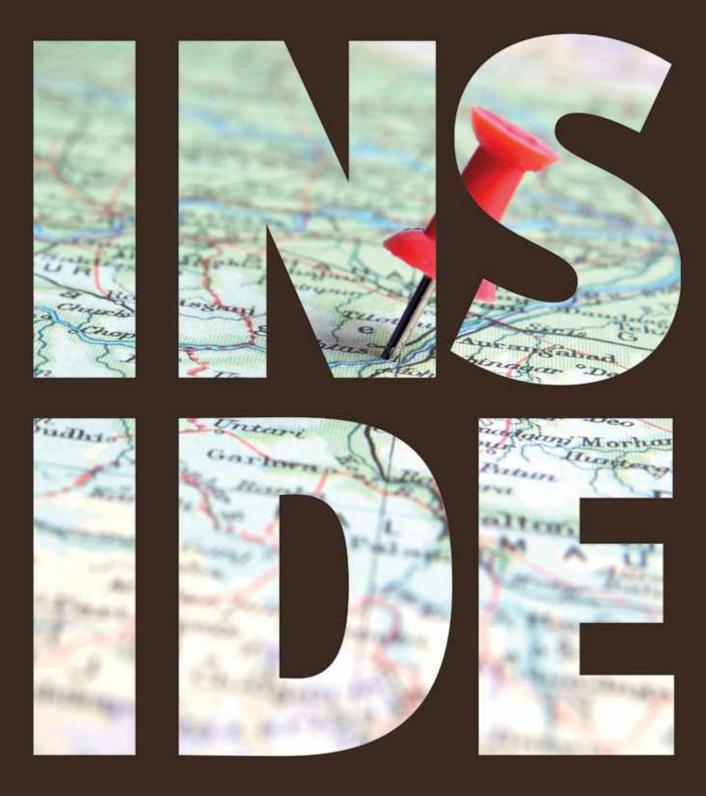
investors that there is more to this than meets the eye. Armed with both sets of information, an investor in Irish government debt can take a better-informed decision on whether to buy or sell the bonds. Another use is the ability to compare the risk between nations.

From March 2014, when the worst of the Eurozone crisis had passed, the CDS spreads of both Ireland and Spain (the full blue line) more or less fall in tandem, with the Irish spread slightly below, but largely mirroring, that of Spain. However, there is a sharp diversion in the country ESG scores; the Spanish score (the dotted blue line) starts falling before flatlining while the Irish score rises. This means from March 2014, our ESG analysis suggests that Ireland has become increasingly more sustainable than Spain, information which is not reflected in the CDS spread.



Source: RobecoSAM, Robeco, Bloomberg

ROADMAP



What is happening in the market

There is growing evidence that sustainability generates better risk-adjusted performance

The average performance of sustainable funds in 2018 was above-average according to Morningstar research

Quartile / number / percentage



Source: Morningstar Direct (Data as of December 31, 2018)

There is increasing demand for sustainable investments

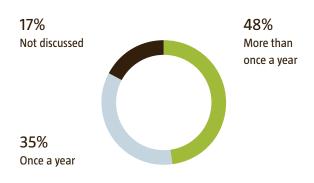
Assets under management in Responsible Investing in EUR (trillion)



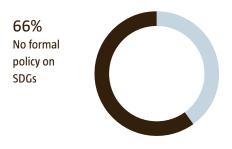
Source: Broadridge GMI (Global Mutual fund & ETF AuM, 2019)

Institutional investors talk about SDGs...

SDGs are on the agenda of pension funds' boards



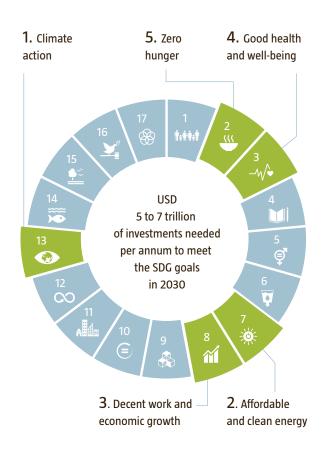
...but most have not integrated SDGs in their investments



Source: VBDO survey among Dutch pension funds (2018)

Top 5 SDG-related investment opportunities

According to institutional investors



What Robeco does

Safeguarding economic, environmental and social assets is a prerequisite for a healthy economy and the generation of attractive returns in the future. Our focus is therefore not only on creating wealth but on creating wealth and well-being.



Proprietary research

RobecoSAM's Corporate Sustainability Assessment consists of an annual analysis of financially material sustainability information from approximately

4,500 listed companies



Analysis

We integrate sustainability analysis with our financial analysis



Recommendations

Our ESG analyses influence our views on issuers of credits (in 35% of all cases) and stocks (in 50% of all cases)

Voting හ engagement

In 2018 we voted at a record number of **5,291** meetings

In 56% of all meetings we voted against at least one management proposal

Exclusion



Tobacco



Controversial weapons



Controversial behavior and countries

Some examples

In 2018 we handled 240 engagement cases, covering:

- **Environmental issues** (like climate-change strategies)
- Social topics (like living wage and food security)

Governance issues (like culture and risk oversight)



Following our engagement, Shell has agreed to set short-term targets for cutting carbon emissions and will link executive pay to meeting these objectives for the first time



SDG Credits



Smart mobility



Gender equality



Sustainable **European Equities**



Quant Em. Markets Sust. Active



Assets integrating ESG

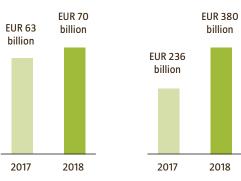
Impact investing

Sustainability Focused

Ex-ante focus on stocks that score better on ESG and environmental footprint

Assets under voting

grew by almost 12%



Assets under

engagement

grew by almost 60%

As per December 2018, only applicable for equity investments

- We look at the long-term drivers of ESG issues for companies
- We analyze how ESG risks and opportunities influence valuations
- We vote and engage to improve ESG behavior

ESG integration leads to better-informed decision making

* as per December 2018

What investors can do

Implementation of sustainability in portfolios requires a step-by-step approach

1 Define a purpose

- 1. Do your duty & protect image consider exclusions
- Improve risk/return fully integrate ESG
- 3. Make a difference fully embrace ESG & Impact

3 Adopt a strategy

An ESG overlay is a tool to implement sustainability on a more strategic level. This leads to overarching voting & engagement policies.

5 Analyze risk/return

Implementing sustainability characteristics can have an impact on the risk or return expectations for the portfolio.

/ Integrate and evaluate

Implementing sustainability can take several years.
Take one step at the time.
Then evaluate every year.



What is your sustainability framework – what do you want to contribute to? For example:

- 1. UN SDGs
- 2. Paris climate accord
- 3. UN Global Compact

4 Monitor and manage

- Measure ESG impact of companies
- Avoid worst offenders
- Engage on specific themes
- Invest in companies that provide solutions to ESG issues

6 Select managers

- Look at how broad and deep they integrate ESG
- Look at their UNPRI score
- Look at assets under ESG vs AuM
- Holistic implemented vs. solo ESG team
- Or simply call Robeco: (3) +31 (0)10 2241224



Be transparant and open.



ROBECO PODCAST

Daniel Wild, co-CEO of RobecoSAM, explains why embracing SI is "a good sort of selfish", as it enables the investor to enjoy superior risk-adjusted returns while also helping the planet on a range of environmental, social and governance (ESG) issues at the same time. Listen to this 16-minute podcast on sustainable investing via robeco.com, iTunes or Spotify.

ENGAGEMENT















Why engagement works

Active ownership is another of the three pillars of the integrated sustainability process at Robeco, and directly feeds into the other two, contributing valuable research while forming part of the ESG integration process. Put simply, active ownership means using Robeco's position as a shareholder or bondholder to exert leverage on a company and improve its behavior. Robeco has a 13-strong team exclusively pursuing this, many of whom have devoted their careers to it.

Figure 1: Engagement & voting figures 2018						
EUR 380 BILLION	733	EUR 70 BILLION				
Assets under engagement	Engagement activities	Assets under voting				
52	240	5,291				
Closed cases	Engagement cases	Shareholder meetings voted				
65%	214	56%				
Cases closed successfully	Companies engaged	Meetings with votes against management				

Source: Robeco

Active ownership is primarily pursued through voting and engagement. Voting is the practice of either supporting or opposing policies of the company's board, usually at annual general meetings. Engagement is the practice of holding discussions with a company about pre-defined issues that Robeco believes present business risks due to lack of oversight on sustainability challenges. Over EUR 380 billion of assets were under engagement and over EUR 70 billion were under voting at the end of 2018. A summary of the team's work can be seen in Figure 1.

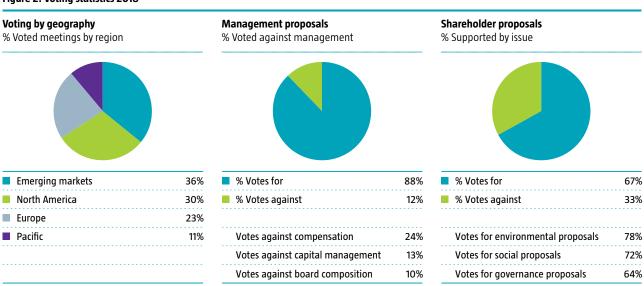
Voting policies

Robeco's voting policies are based on the principles of the International Corporate Governance Network (ICGN). These allow companies to be assessed according to local practices, national legislation and corporate governance codes of conduct. Key elements include the management's view on shareholder rights, accountability and transparency. In addition, Robeco pays close attention to adequate and independent supervision, particularly in the roles of non-executive directors. The voting statistics for 2018 are shown in Figure 2.





Figure 2: Voting statistics 2018



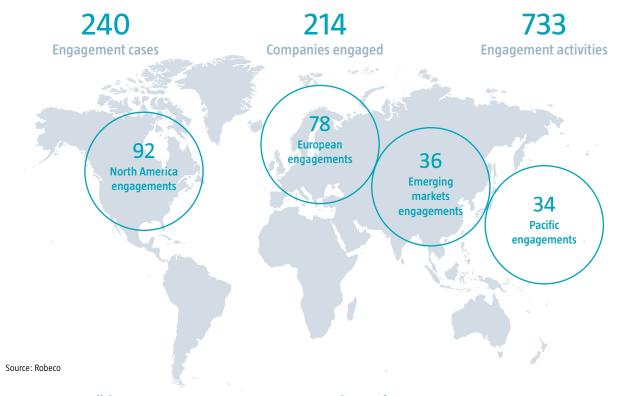
Voting themes of 2018

- We voted against at least one agenda item at 56% of meetings.
- Compensation remained a controversial issue during 2018, and was the most frequently voted against agenda item.
- Climate change remained on the agenda. During the year we supported 78% of environmental shareholder proposals.

Source: Robeco



Figure 3: Engagement at Robeco: a global approach – engagement cases run in 2018



Engagement policies

Robeco has been engaging with companies since 2005, and actively engages with about 200 companies a year on some level. Through this dialogue, we encourage companies to improve their ESG practices. Our approach includes governance topics such as improving shareholder rights and board quality; environmental issues like energy transition; and social subjects such as cybersecurity and data privacy. A synopsis of our engagement work is shown in Figure 3.

Engagement has proved highly effective, particularly once companies realize that it is in their own interests to improve; better ESG ultimately means lower costs and improved risk management that will feed through to the bottom line. Engagement periods typically last up to three years, with a good overall success rate.

Themes can be company-specific, or more general, addressing some of the major ESG issues of our times. Dealing with fossil fuel companies is a good example of where engagement with the major player is crucial, as the world grapples with climate change. Trying to meet the Paris Agreement by limiting global warming to 2 degrees Celsius has the potential to create stranded assets — where companies cannot burn the oil, gas or coal that they extract — along with wasted investment in upstream exploration. The long-term answer is to persuade these companies to change their business models to replace fossil fuel extraction with renewables.

Themes for 2019

Robeco has four major engagement themes for 2019 – one for each quarter. These are the transition to a sustainable palm oil industry; reducing single-use plastic and its attendant waste disposal problem; the social risks of artificial intelligence; and deflating health care costs through digitalization.

As ever, engagement focuses on financially material ESG issues that directly impact the bottom line, rather than simply 'banging the drum' on an ethical issue, and can be shown to enhance returns. A 2017 research paper by three academics analyzed a dataset of 660 companies that had agreed to some form of engagement for a range of ESG issues, with 847 separate engagements in total. The research found that the engaged companies saw stock returns that were 2.7% higher than non-targeted firms in the six months after the engagement ended. The results for companies which previously had had low ESG scores were even more marked, as their share prices outperformed non-targeted companies by 7.5% in one year after the end of the engagement.¹

And it can also be shown to work in some high-profile cases, as seen in the following two engagement showcases, highlighting the work done with Royal Dutch Shell and Roche.

 Tamas Barko, Martijn Cremers and Luc Renneboog, 'Shareholder Engagement on Environmental, Social, and Governance Performance', Working paper for the European Corporate Governance Institute, 2017



SHOWCASE

ROYAL DUTCH SHELL LINKS BOARDROOM PAY TO CARBON FOOTPRINT

Robeco worked with Royal Dutch Shell to set short- and medium-term targets for lowering its carbon footprint. The principal result was the company agreeing to link executive pay with carbon reduction targets is unprecedented.



After a sustained campaign led by Robeco and the Church of England on behalf of Climate Action 100+, the Anglo-Dutch oil major agreed to set short-term targets for cutting carbon emissions – and surprised many by saying it will link executive pay to meeting these objectives for the first time. Climate Action 100+ is an initiative spearheaded by investors with more than USD 32 trillion in assets under management.

"This is a significant achievement, something that has never happened before in the field of engagement: a company and its shareholders acting together on climate change," said Carola van Lamoen, Head of Robeco's Active Ownership team. "This shows that dialogue does work, and is an effective way to bring about change."

Introducing an ambition

Shell was already the first oil and gas company to introduce an ambition to reduce its carbon footprint, stretching out to 2050. Meeting the challenge of tackling climate change requires unprecedented collaboration, as was demonstrated by its engagements with investors.

In a joint statement with investors, the company said it aims to reduce its Net Carbon Footprint (NCF) by around half by 2050 and by around 20% by 2035 as an interim step. To operationalize this long-term ambition, Shell will start setting specific NCF targets for shorter-term periods of three or five years. The target will be set each year for the next three- or five-year period, and the target setting process will start from 2020 and will run to 2050.

Link with remuneration

Shell said it will also incorporate a link between energy transition and long-term remuneration as part of its revised Remuneration Policy, which will be subject to a shareholder vote at the 2020 Annual General Meeting (AGM). If approved at the AGM, the policy will include a NCF-related measure, as well as other measures, to have a balance of leading and lagging performance metrics over a three- or five-year performance period.

The measures for each performance period will be set on an annual rolling basis at the time of the award, and will be subject to the annual remuneration target-setting process as well as to the final plan design. The measures and targets will evolve as time progresses over the years to 2050.

The moves follow engagement activities that go back as far as 2005. Earlier in 2018, Robeco was signatory to an appeal from 60 investment firms appearing in the UK Financial Times newspaper that encouraged all companies in the oil and gas sector to clarify how they see their future in a low-carbon world. Robeco also spoke at Shell's 2018 shareholder meeting on behalf of a large group of institutional investors.

'This is a significant achievement, something that has never happened before in the field of engagement: a company and its shareholders acting together on climate change'

CAROLA VAN LAMOEN, Head of Robeco's Active Ownership team





SHOWCASE

ROCHE WELCOMES DIALOG ON ISSUES FACING PHARMA COMPANIES

Robeco views engagement as an essential means of securing sustainability improvements at its investments. But what's in it for the company?



The Swiss pharmaceutical group Roche said the constructive dialog with Robeco improved its practices, focused minds, and improved transparency. And it was happy to publicly disclose the results, believing that this will lead to a better understanding of the issues facing a complex industry.

The top five material topics for the pharma industry are innovation management, product quality and safety management, business ethics, clinical trial transparency, and access to medicine. For the first topic, innovative medicines tend to be increasingly expensive, at a time when pubic health services face a growing strain on their resources as people age.

"In our pricing, we strive for the right balance between ensuring people have access to the medicines they need, while investing in future breakthroughs," says Alexander Klauser, Head of Sustainability Communications at Roche. "We have a very high threshold for new medicines. It is no use developing a sub-par product which will not deliver additional benefit for patients."

Raising awareness

This is where Roche says engagement has raised awareness at the company. "We know that product quality and safety – not harming patients – are our license to operate," he says. "We appreciate that you flagged this topic, as it confirmed the high importance that we attach to it. In our talks, you highlighted very important issues, such as product recalls. You made us more aware that any warning letter or recall will result in Roche being punished by the market."

Business ethics have been another problem; 20 years ago, the pharmaceutical industry did not have the best reputation in this area, with a number of scandals on issues such as paying doctors to promote drugs that were not necessarily beneficial to their patient. Part of the engagement process challenged companies to detail what they had done to rectify this. "We can exclude systematic violations, but we cannot exclude individual violations," Klauser says. "However, we guarantee that we do not turn a blind eye if things go wrong. There is zero tolerance, and any wrongdoing will be sanctioned. To enable our company to operate with high standards, we transformed from 'formal compliance' to 'business-integrated sustainable compliance'. For example, we do not simply record payments that we make to doctors and hospitals, but our line management critically examines the purpose of the payments."

Clinical trial transparency

What about similar transparency on clinical trials, especially if the drugs prove not to work, or have significant side effects? "We share information on all Roche-sponsored safety and efficacy studies, also when the outcome is negative," he says. "This helps physicians, patients and health care providers to make informed treatment decisions. The engagement with you confirmed that it doesn't help health care if companies are not transparent about their clinical trials. We have to address this as an industry."

Finally, public access to medicine remains an issue. "Many patients lack access to the most essential health services," Klauser concedes. "Often, the problem lies not only in the price of medicines but also in the system – for example, if the medical infrastructure or mandatory health insurance is lacking. The only way to achieve enduring solutions is working together in each country to ensure that all factors such as awareness, diagnosis, health care capacity and funding are addressed. We have access plans for 75 countries."

"In addition, access to medicine needs to be tackled by multiple stakeholders. In countries with little money to spend, we work with insurance companies to find financial solutions and make sure people get the medicine they need. In our discussions, you made us aware of the importance of transparency. We now make our internal access goals publicly available."







INTERVIEW WITH MASJA ZANDBERGEN

'We must not misrepresent sustainability as a one-dimensional issue'

Masja Zandbergen is head of ESG integration at Robeco. In this interview she talks about the dilemmas investors face when embracing sustainability, the progress made over the past years and the conviction that it takes real commitment to be among the winners in this area.

You're head of ESG integration at Robeco – and that's no coincidence. Where does your passion for sustainability come from?

"I studied econometrics, so I'm sort of the odd one out. I started at Robeco in 1997 as an equities portfolio manager. In the early years, I followed the performance of a lot of European IT companies and witnessed the IT boom in 1999 as an analyst. Those were wonderful years! Later I started doing financials. I vividly remember sitting in a room full of men in dark, gray suits listening to banks and insurance companies all presenting on the same topic: return on equity and capital. All very important, of course, but I thought, 'There's got to be more than this. Surely there's a lot more to a company than just these figures?' The figures are the result of what a company does. I thought: 'What am I doing here?' A team was being set up for our one and only sustainable fund. I asked to join it."

In those days, people weren't really talking about sustainability. Asset managers had maybe one or two sustainable funds, but no more than that... "Then we set up voting and engagement programs. The social aspect, in other words, the moral duty of companies to treat people with respect, was always very important to me. But so was the environment, which is of course increasingly important these days. Back then, I was mainly interested in working conditions and human rights. Also, even in those days, incorporating these issues into the investment policy was really important to me. In that respect, I was years ahead of my time. At that time, I set up a corporate governance database with data from a provider and rolled it out for the investment teams, so they could use it in their processes. That wasn't very successful at the time (...)."

"We figured that the most successful approach was to let the portfolio managers do their thing, while we focused on voting and engagement. Then we could give shape to sustainability without bothering them."

So that was an era of two different worlds: the investors on the one hand and voting and engagement on the other?

"Yes, but we did have two clients (Rabo Pensioenfonds and Achmea) who thought this topic was very important, so that got us started. They paid us a fee to do it."

PASSION SINGLE S



But investors still had a sense that this was not part of their job?

"Corporate governance has always been an issue; the EM team also put together a corporate governance questionnaire at the time. But the investors weren't really ready for it. Needless to say, therefore, my first engagement case wasn't a huge success, either. It was like banging your head against a brick wall. For a time, I was head of equities at Achmea, where I was in a position to say: sustainability has to be part of our investment policy. It's really nice when you can change the system from the inside out."

Was there a specific turning point, or did sustainable investing evolve gradually at Robeco?

"Both, actually. It did evolve, starting off with a few people. Now everyone's involved and job applicants are judged on it – it is part of an assessment, at any rate. And I even think it's a reason why people want to work at Robeco – because it's such a big theme here. But over the last two years, it's really gained traction. That's partly due to the market, regulations, climate issues, problems with litter – you can't ignore it anymore. And these issues are important to the new generation, whose opinions matter more and more. Many different forces are converging right now. As a society, we have to live more sustainably, otherwise, we just won't make it."

To what extent are investors prepared to pay higher fees for sustainable solutions? Can you charge them for sustainability?

"There are many pension funds that aren't willing to pay a lot more for it. But they won't have a choice — someone has to foot the bill for the research. That's why it's good if demand is high, because the burden can be shouldered by many more investors. Recently, a pension fund asked its members for their thoughts on this and was willing to incorporate the results into its investment policy. So it wasn't just hypothetical. They actually asked them what they wanted. As it turns out, the members were truly willing to invest more sustainably, in spite of the consequences. Pension funds are still too quick to hide behind their fiduciary duty; in other words, that they have to focus on maximizing returns above all else. That's nonsense, of course."

PASSION S





Because... what's to say they don't?

Are we now in an era of real change? The recent engagement success with Shell¹ might be evidence of this. Are people mentally ready for big changes? Do they realize that it's not only about returns, but also the future of our planet and of our children?

The eternal conflict between short-term gains and a long-term perspective.

Time for what?

Is that something you lose sleep over?

"Whether implicitly or explicitly, you make so many choices: to keep cash on hand as a buffer, to avoid investing in certain countries or sectors, to steer clear of products that are too expensive or not transparent enough. There are so many choices, and this is just one of them. And you can't ever maximize your profits, because you always have certain restrictions to contend with. At Robeco, we also have a fiduciary duty to achieve the highest possible returns for our clients within the applicable restrictions, but we also have a responsibility to our clients to be a good steward of their assets. And we have the same accountability towards the companies we invest in. We used to say 'we vote with our feet', but now we choose to engage with companies instead. There are companies which we will always have in our portfolios — because their benchmark weight is so high. I believe we've held shares in Shell or Unilever since 1929. Then you can't say you vote with your feet — as a shareholder, you have obligations."

"I find that difficult to answer — maybe because I am too closely involved. I only end up talking to clients who are already on the same wavelength. In all honesty, I think we still have a long way to go, even though you can already see things changing. Companies have to be willing to make investments that won't pay off for a very long time. That's still a dilemma."

"Yes, and between financial and environmental and social values. Common goods don't have a price, but they ought to. We are all willing to pay lip service to sustainability being a win-win, but oftentimes you have to pay the costs before you can reap the benefits. You have to be honest about that. Yes, you want to achieve returns, but you also want social values and the environment to be factored into investment decisions. You have to put a price on that. In that respect, this is the start of a very long road and the question is whether we still have enough time (...)."

"Time as a planet. To fix everything."

"Well, let's just say sometimes I'm sent research by colleagues and specialists that's quite depressing. Research about the prospects with regard to climate change, and the consequences. But I am optimistic. If we work hard now, then hopefully we can still make it."

PASSION STATE OF THE PASSION S



'We are all willing to pay lip service to sustainability being a win-win, but oftentimes you have to pay the costs before you can reap the benefits'

Sometimes it seems like people are programmed to go back to 'business as usual' after hearing and reading about it, even those who have kids that are going to inherit the Earth from us.

"Bizarre, isn't it. I think that if all the countries and industries join hands, we can prevent a lot of damage from being done. It's a miracle that we have the Paris Agreement, though it's a shame that many countries are behind schedule on their commitments and some are even backpedaling. All too often, our thinking about regulations or a CO₂ tax is based on fear. I prefer to focus on the opportunities; ultimately, we will stop using certain raw materials. From that perspective, you're better off being ahead of the game by innovating and creating new, sustainable industries. We have to encourage that."

"When we had our house built two years ago, we decided to invest in thermal storage and solar panels. As a result, the indoor climate is very comfortable and our energy costs are low. But there are others in our complex who didn't. They now have much higher bills. So again: you have to pay the costs before you can reap the benefits. You have to be willing to invest first and that's easily done — you can even get a subsidy for the thermal storage. You recoup the extra investment quite quickly."

Is a world in which big multinationals are required to invest some of their profits in the working conditions at the start of the production chain akin to utopia? "I don't think that's a very good solution, because it still wouldn't form an integral part of business practices. I would approach it differently. More economic models should be developed that include those external costs in the profit and value calculations. How much does a shoe actually cost if you factor in a fair salary for all the employees – at minimum living wages – and take the cost of certain environmental measures into account? How much margin would the company have left? And are consumers willing to pay a premium? A lot of the stuff we have now is actually much too cheap."

It's that same dilemma again. We know things have to change, but if that requires us to contribute – financially or otherwise – we look the other way?

"Yes, and that's why I think we're only at the start of a very long process of internalizing those external costs. There aren't any generally accepted models for it yet. Universities are not yet including it in their financial curricula."

Is education the solution?

"It's certainly part of the solution. That's why we are working with Erasmus University. They have also outlined a preliminary framework to incorporate sustainability into financial analysis."



Change also starts with awareness. The new generation is growing up with a greater awareness of the challenges of sustainability. "That's definitely true for my kids. We often talk about it at home – how certain items of clothing are made, for instance. It happens automatically because it is part of both my and my husband's work. Everyone has their own work-related preoccupations, so that's probably why we talk about it at home more often than other people do. Our children have it instilled in them regularly. Avoiding or eating less meat, or just doing things more sustainably – it's much more a matter of course for the new generation than for us."

But the solution to our problems is quite a bit more complicated than that, isn't it?

"Of course. We must not misrepresent sustainability as a one-dimensional issue. It's more complex than it seems. An electric car may seem sustainable, but if the American owner of that car charges it with electricity generated from coal, then the car won't be any more sustainable over its entire service life than a gas-powered one. Or if a multinational constructs a building with a high energy-efficiency rating right next to a freeway, making it inaccessible by public transportation. That's why you have to approach sustainability holistically, otherwise you're just flying blind and you might even end up having a negative impact. The worst that can happen is that we look back in ten years and realize we haven't achieved anything sustainability-wise and that we've also failed financially. That's why research and integrative thinking are so crucial."

SDGs are the next big thing. Robeco was one of the first to offer SDG products. Is that an example of market leadership and innovation?

"That's definitely an example, but I think we are also a leader when it comes to integration. Many clients are quite advanced in sustainability, but the actual integration is hard for them. You need good research and your portfolio managers and analysts have to accept that companies need to be viewed in a different way. Since we have that expertise, it's easier for us to innovate in other ways, too. That creates a multiplier effect. It starts with the specialists, but eventually everyone goes that extra mile, leading to a lot more innovation."

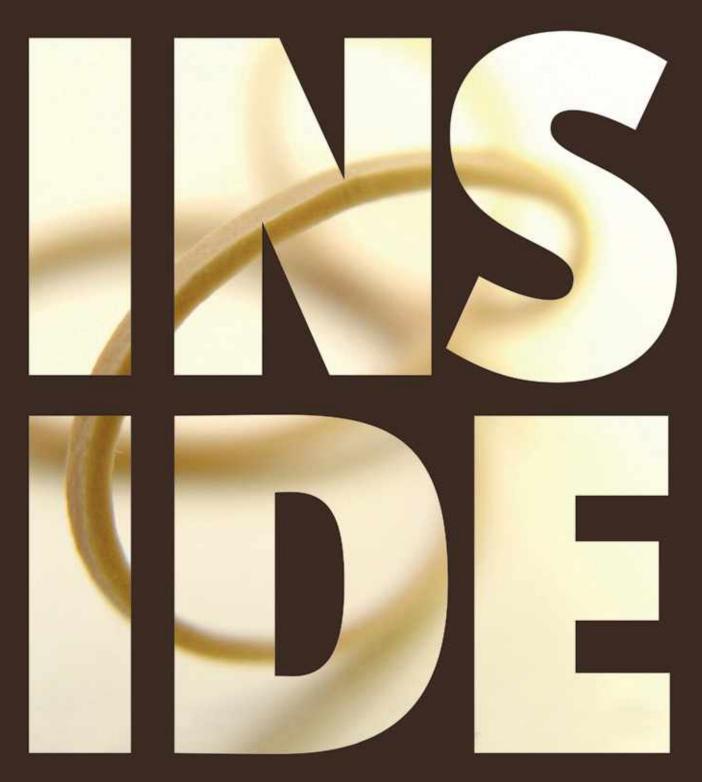
"We now have around 60 clients with specific sustainability requirements, compared to last year's figure of about 15. Demand is increasing, but so is our ability to provide solutions. The SDGs are a good example of this: RobecoSAM had both the idea and the expertise to develop a framework enabling analysts to assess companies based on SDG criteria. Ultimately, the SDGs are also part of ESG integration. That takes time and can't simply be copied. Buying some sustainability data and applying it to your portfolio is not the same as ESG integration."

These days, almost all asset managers claim that ESG is part of their DNA. Do you ever feel like it's nothing more than a marketing pitch?

"Quite often, yes. There are also asset managers who do it well. We really do a lot – just look at how many stewardship codes we've signed and initiatives we participate in and how often we take the lead in engagement and vote at shareholder meetings. While many parties are only just getting started. It's great to see that other asset managers are now also getting involved. We'll have a bigger impact if everyone contributes. But you still want to stand out from the competition. The asset managers who really believe in sustainability will be the winners, because they will be in it for the right reasons. And, in the end, that will make all the difference."

^{1.} See the 'showcase' box on page 51.

FLEXIBILITY





Quant and sustainability: a perfect match

We have seen in previous chapters that sustainability means many things to many people. From an investment perspective, sustainability goals can vary greatly from one investor to another. Consequently, the techniques used to integrate sustainability criteria into an investment process also vary a lot, from simple ethics-based negative screening to more sophisticated impact-oriented approaches.

To address even the most specific client requests, asset managers must therefore offer highly flexible and customizable solutions. To achieve that, it is important that they can combine different approaches to sustainability efficiently, while making sure that the financial objectives are also reached. Quantitative investment strategies are particularly suitable for this, as we explain in the next 'showcase' box. In fact, for more than 15 years now, Robeco has been working closely with its clients to design tailor-made quantitative investment strategies that fulfill their long-term objectives, in terms of both return-risk and sustainability.

In this chapter, we explain why generic sustainable solutions, often marketed as ETFs or index funds, don't quite make the grade. We also show how sustainability can be integrated in a much more effective way, within a quantitative investment approach. We then explain the different ways Robeco integrates sustainability in its quantitative equity, fixed income and multi-asset strategies. Finally, we show how the flexible setup of our sustainability building blocks enables us to fine-tune our solutions to meet even the most challenging client requests.





SHOWCASE

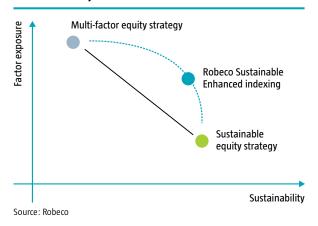
WHY FACTOR INVESTING & SUSTAINABILITY WORK WELL TOGETHER

While sustainability integration is by no means limited to any particular investment approach, quantitative strategies have shown to be especially suitable for this. Their rules-based nature makes it relatively easy to integrate additional quantifiable variables, such as ESG scores for example, in the security selection and portfolio construction process. From this perspective, integrating sustainability aspects in the investment methodology is not very different from a standard factor-based approach, where securities are included in a portfolio based on their factor characteristics.

This kind of approach enables quantitative asset managers to create an investment portfolio that strikes the right balance between sustainability objectives and risk and return expectations for each client. Robeco's empirical analysis shows that it is possible to improve sustainability profiles while capturing the majority of the exposure to proven return factors. This results in solutions that provide both an enhanced sustainability portfolio profile and attractive return-risk characteristics.¹

Increasing the weight to sustainability criteria will obviously decrease the exposure to return factors such as value, quality or momentum in the stock or bond selection model. Figure 1 provides a stylized illustration of the trade-off between factor exposure and sustainability exposure for a multi-factor equity strategy. The blue line represents the portfolios that can be achieved through the integration on ESG aspects into a multi-factor stock-selection process. Meanwhile, the black line represents the possible outcomes when simply 'blending' two

Figure 1: Stylized illustration of the tradeoff between factor tilts and sustainability



independent equity strategies: a classic multi-factor strategy and a sustainable strategy.

Interestingly, contrary to the black line, the blue line does not decrease linearly, as one could expect. The reason is that integrating these two investment drivers ensures that sustainable stocks with attractive valuation, sound quality, strong momentum and positive analyst revisions are chosen. This does not necessarily happen in the blending approach, where the individual portfolios are one-dimensional and therefore ignore either sustainability or factor exposures of stocks. This leads to suboptimal portfolios. Obviously, the desired amount of factor and sustainability exposure will depend on the preferences of each investor.

1. Generic sustainability products don't go far enough

One temptation for those interested in sustainability integration but worried by costs is often to go for the seemingly cheap 'passive sustainable products'. These products are, however, far from ideal, from both a return and a sustainability perspective. A slightly better option is to choose the more recent generic factor-based sustainable strategies, often marketed as 'sustainable smart beta' or 'ESG smart beta'. But while these products generally do provide exposure to proven factor premiums, as well as improved sustainability characteristics, they also involve a number of serious

pitfalls. For one, their simplistic approach to ESG scoring can lead to undesired biases; for example, towards large-cap European firms. These companies tend to be more transparent than their peers concerning sustainability matters. Therefore, they tend to score better although they may not always be more sustainable in practice. Moreover, the level of sustainability integration these products offer often remains too basic, making it impossible to adjust them to specific client needs.



No such thing as sustainable passive investing

In recent years, the investment industry has seen a massive shift from active to passive strategies, as investors have sought cost-efficient ways to get into the financial markets. On paper, combining this trend with sustainability to create a single approach might be tempting. However, passive and sustainable investing are fundamentally at odds with each other.²

At first glance, it might seem easy to integrate sustainability considerations into a passive investment approach. For example, passive investors can actively participate in voting and engagement. They can also exclude the stocks that are the most problematic from a sustainability perspective. An alternative is to passively follow an ESG index. On closer inspection, however, these approaches are either ineffective or, in fact, actually active.

In addition to this, so-called 'passive sustainable' or 'passive ESG' products still expose investors to most of the pitfalls of traditional passive strategies. They inevitably lag the market index, due to management fees and transaction costs. They ignore decades of academic insights on market anomalies and factor premiums.³ Also, because they are fully transparent, passive strategies are prone to arbitrage by opportunistic investors who anticipate trades. Finally, because trades are usually concentrated on a small number of rebalancing dates, they tend to suffer from overcrowding, which drives up transaction costs.

Pitfalls of generic sustainable smart beta

Generic factor-based strategies that take sustainability considerations into account are another increasingly popular way to enhance the sustainability profile of a portfolio. These products are often marketed as 'ESG smart beta' or 'sustainable smart beta'. In the latest annual survey of asset owners on smart beta carried out by index provider FTSE Russell, over half the respondents said they were implementing or evaluating ESG considerations in their investment strategy. Globally, of those who either had an existing smart beta allocation or planned to evaluate or implement one in the near future, 38% anticipated applying ESG considerations to a smart beta strategy.⁴

However, while these products may look like a better option compared to pseudo-passive ESG strategies, they also remain far from optimal. For one, they remain subject to overcrowding and arbitrage. Another important drawback of these generic products: they are not able to quantify the contribution of ESG in performance.

But there are other, more serious concerns, in particular that sustainable smart beta products tend to treat sustainability and financial objectives independently, without real integration. This

is the case for strategies that settle for exclusion lists as the sole sustainability implementation technique. While this may be a small step forward, it is clearly insufficient, as it focuses on removing the sustainability laggards and omits any positive tilting towards leading companies. Moreover, this can lead to significant biases in portfolios, in terms of counties, sectors, capitalization size, or even factor exposures. This point is an important one, as most of the current ESG smart beta offering seem to be essentially focused on negative screening.

One size does not fit all

In addition to all the concerns raised in previous paragraphs, generic sustainability strategies lack the flexibility to adjust to the specific objectives of a client. As mentioned at the beginning of this chapter, investors' sustainability goals tend to be unique. And there is no widely accepted definition of what distinguishes a truly investment strategy from one that is not.⁵

While early ethics-based approaches such as negative screening remain relevant today, other techniques are catching up. For example, many institutional investors have developed approaches that include ESG considerations into their portfolio selection and management processes. The availability of more data and advanced analysis techniques even enable them to distinguish between the E, the S and the G, allowing for greater focus on the aspects they consider most relevant.

More recently, we have seen a sharp increase in support for and interest in the sustainable development goals (SDGs) in the sustainable investing landscape. And this makes sense, as the launch of the UN SDGs in 2015 was embraced by governments and companies alike. Many sustainability frameworks have a large focus on how companies operate. SDGs focus on what companies produce. The SDGs offer a comprehensive framework that is broad enough to cover the full range of causes (e.g. humanitarian, ecological and economic) yet specific enough to guide companies on the exact criteria needed to achieve each goal.⁶

More generally, most investors want to take multiple dimensions of sustainability into account; for example, combining exclusions with best-in-class and environmental footprint-reduction approaches. As a result, sustainable investing isn't about one-size-fits-all approaches but requires tailored/custom-made solutions. For asset managers, the upshot is that they should first be able to help clients formalize their needs and priorities in terms of sustainability, as well as return-risk profile. Then, they should be able to help them translate these into concrete sustainability goals that are compatible with their financial objectives. Finally, they offer a broad range of products that are efficient and flexible enough to achieve all these different goals.



2. How we flexibly integrate sustainability in our quant strategies

Based on over two decades of expertise in the field of sustainable investing, Robeco and RobecoSAM have developed various building blocks to address even the most specific client needs in terms of sustainability. These building blocks are the same as those we can apply to our fundamental strategies and they encompass all the different techniques of sustainability integration described in the first chapter (see page 7). They can be flexibly adjusted and combined with our quantitative equity, credit and multi-asset quantitative capabilities, including factor indices, to efficiently address a very broad variety of financial and sustainability objectives. Another important aspect is that we can report in detail on the contribution of sustainability criteria to performance.

Sustainability building blocks

All our quantitative equity and credit strategies take sustainability into account, although some have a greater focus on these aspects than others. When considering sustainability integration, we follow the three approaches we discussed in the first chapter, namely exclusions, integration and impact. For each of these approaches, we developed specific quantitative building blocks that can be integrated and combined flexibly into the investment process of all

our quantitative equity, credit and multi-asset quantitative strategies, including our factor indices. The next 'showcase' box explains how Robeco was recently able to offer to a UK client a competitive factor index solution that also features high sustainability standards.

This integration is done either following a standard approach that sets a minimum sustainability profile for our entire quant product range, or an advanced approach that characterizes our five sustainable focus strategies, namely QI Global Developed Sustainable Enhanced Index Equities, QI Global Sustainable Conservative Equities, QI Emerging Markets Sustainable Active, QI Sustainable Value and QI Multi-Factor Sustainable Equities.

In addition, for investors whose sustainability objectives cannot be addressed even with our enhanced approach, we offer the possibility to customize mandates even further. For many years now, Robeco has been tailoring quantitative investment strategies, in close cooperation with clients, to meet even the most demanding sustainability goals. Table 1 provides a brief overview of how our different building blocks are integrated, as well as examples of further customization.

Table 1: From standard to customized portfolios Integrating **Environmental** Voting and ESG scores SDGs Baseline impact engagement We ensure that the Robeco's active Standard approach Robeco's general exclusion policy portfolio scores better ownership program than the benchmark, based on RobecoSAM Smart ESG scores Advanced Robeco's values-We ensure that the Reducing environmental Robeco's active Sustainable focus based exclusion list portfolio's score is at footprint by 20% on ownership program strategies least 20% or 30% better four dimensions: energy than the benchmark, consumption, greenhouse based on RobecoSAM gas emissions, waste Smart ESG scores generation and water use Possible Applying any client-Requiring the portfolio Additional footprint Robeco's active Integration of UN customization specific exclusion to score even higher reductions ownership program Sustainable Development and/or using specific Goals (SDG) in portfolio. scores (e.g. for FRR we E.g. staying away from use an Environmental companies that have a Dimension score) negative impact on SDGs.

Source: Robeco



SHOWCASE

LARGE UK DEFINED CONTRIBUTION PENSION SCHEME EMBRACES SUSTAINABILITY VIA FACTOR INDICES

In 2018, a large, fast growing UK defined contribution multiemployer pension scheme was looking for an efficient factorbased investment solution for its equity portfolio, that would also feature an ambitious sustainability profile, including a values-based exclusion list and a significantly better ESG profile than the market index. Environmental footprint reduction was also among the aspects deemed important by the client.

One very particular request from this pension trust was that, for cost and transparency reasons, it wanted the solution to be managed in the form of a bespoke index, that could be replicated. At the same time, however, the client was aware of the pitfalls of generic products offered by index providers, in particular in terms of practical implementation. The client was therefore more inclined to consider a solution run by an active asset manager.

Meanwhile, Robeco had already been closely working with the scheme's consultant, for several years at the time, conveying our approach to efficiently harvesting factor premiums in a sustainable way. As a result, turning to our Factor Index offering came as a natural move for this client.

The chosen solution, Robeco Global Sustainable Multi-Factor Equities Index, harvests factor premiums in a systematic manner, allocating to individual stocks based on four factors: value, momentum, quality, and low volatility. The strategy also considers ESG and environmental footprint attributes of each stock and the overall portfolio as key parts of the index construction.

More specifically, on top of applying RobecoSAM's standard exclusion list, the strategy also targets an ESG score that is 20% better than that of the benchmark. It also targets a 20% reduction of the portfolio's environmental footprint in terms of greenhouse gas emissions, energy use, water consumption and waste generation. The involvement of RobecoSAM's teams during the selection process was important to convince the client that the sustainability component of the mandate was of the highest quality.





'Our evidence-based philosophy that combines Robeco's thought leadership in factor investing and RobecoSAM's award-winning sustainability expertise is essential to ensure our sustainable multi-factor index solutions are of the highest quality'

VIOREL ROSCOVAN, Factor investing researcher



Customizing quantitative equity strategies for more than a decade

Robeco's Quant Equity strategies use the building blocks mentioned above, but differ in terms of sustainability focus. Our building blocks are characterized by flexibility and can be customized in close consultation with investors to reflect their sustainability preferences. This includes not only the possibility to efficiently create a greater tilt towards companies with a strong sustainability profile and the use of client-specific exclusion lists, but also more specific sustainability objectives, such as further carbon footprint reduction. The box on the righ summarizes the different customization options we offer.

The inclusion of sustainability aspects in the investment process of our Enhanced Indexing strategies will result in 'green beta', as these strategies aim for stable alpha after costs with a low tracking error. This makes them a compelling alternative to pseudo-passive sustainable strategies, as well as more classic passive strategies. Meanwhile, in the case of our Active Quant and Factor Investing Equities strategies, which offer more pronounced factor exposures but

CUSTOMIZATION OPTIONS

- Application of Robeco ଓ client-specific exclusion lists
- Integration of positive screening
- Enhancement of the portfolio's overall ESG profile, with the possibility to segregate the 'E', the 'S' and the 'G'
- Integration of footprint reduction on various environmental measures, including those of external providers
- Integration of UN Sustainable Development Goals (SDG) in the portfolio
- Application of active engagement & proxy voting

also imply a greater tracking error risk, the goal is to achieve 'green alpha' over time. Finally, including sustainability aspects into our Conservative Equities strategies produces strategies that aim for long-term, full-cycle performance equal to or greater than the market, with substantially lower downside risk and a better sustainability profile. Table 2 provides an overview of tailored sustainability solutions we have been offering to clients worldwide over more than a decade.

Client cases Strategy	Strategy	'Sleep well at night' Values-based exclusions	'Smart investing' ESG integration	'Making a difference'	
				Footprint reduction*	Engagement
Pension fund	Bespoke Multi-Factor Eq. Index	FALS	Higher	10% reduction**	√
Public pension fund	Conservative Equities	60	20% higher	20% reduction	~
Superannuation	Value Equities		10% higher	-	-
Endowment	Sustainable Enhanced Indexing	F & 3 = 3 6 4 %	40% higher	35% reduction	✓
Family office	Conservative Equities	<i>\$</i> = ₹ ₽ ®	20% higher	20% reduction	-
Islamic fund	Conservative Equities	F	-	-	-
Insurance company	Conservative Credits		Higher	-	✓
Multinational bank	Conservative Credits		Higher	-	✓
Global consultant	Sustainable Multi-Factor Eq.Index	F & & = =	20% higher	20% reduction	n/a
Robeco fund	Sustainable Enhanced Indexing	F & 1 = =	30% higher	20% reduction	✓
Robeco fund	Sustainable EM Active	<i>F & 1</i> % = Y & 6 0	20% higher	20% reduction	✓
Robeco fund	Sustainable Value Equities	<i>F & 1</i> % = Y # 6	20% higher	20% reduction	✓
Robeco fund	Sustainable Conservative Eq.	<i>F & 1</i> 2 7 8 6 2	20% higher	20% reduction	
% Financial services	s (18) Adult entertainment	Controversial weapons 🗀 Tobacco	° Fur	Alcohol	Pork meat
Corruption	Firearms \$	UNGC breaches Thermal coal	Nuclear energy	Gambling	Labor rights

^{*} Footprint reduction on four dimensions: CO₂ reduction, waste reduction, energy consumption and water usage.

Source: Robeco

^{**} Aims for 10% improvement of labor rights and 10% carbon footprint reduction.



SHOWCASE

TAKING ENHANCED INDEXING TO THE NEXT SUSTAINABILITY LEVEL

Back in 2015, the French pension fund Fonds de Reserve pour les Retraites (FRR) was looking to renew its passive equity mandates and, in the process, it wanted to integrate high sustainability standards. In particular, the French organization wanted to reduce its portfolio's carbon footprint by 50% and enhance its ESG profile, with a focus on the environmental dimension, in line with its ambitious investment policy.

At the same time, however, methodology requirements for the different targets mentioned in the tender were intentionally left open for interpretation. Limited guidance was provided in terms of precise metrics and quantitative constraints.

The requirements in this mandate were not new to us. Many of the elements sought by the FRR were already part of the building blocks of our existing quantitative equity sustainable strategies.

Monitoring and steering environmental impact

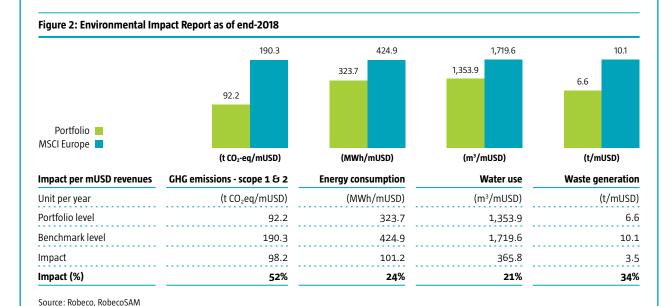
The chosen approach helps investors assess the footprint of their portfolios and make better-informed decisions, based on environmental impact metrics developed by RobecoSAM. This framework (see Figure 2 below) considers four key metrics: greenhouse gas emissions, energy consumption, water consumption and waste generation.

To identify companies with the best environmental practices, the chosen solution systematically includes RobecoSAM's Environmental Dimension Score. This forward-looking score complements the firm's current environmental rating and allows one to gauge the readiness of a company to embrace future environmental challenges and opportunities.

The strategy ensures the portfolio maintains its high ESG quality standards, drawing on RobecoSAM's proprietary Corporate Sustainability Assessment (CSA). The CSA consists of an annual ESG analysis of approximately 4,500 listed companies and is one of the most comprehensive databases of financially material sustainability information.

Not purely passive

The FRR also appeared to be quite flexible regarding the reference indices that could be used as benchmarks and actually came up with a list of possible ones. And, despite the fact that the fund was initially looking for passive solutions, some of those selected were actually smart beta indices. In this context, an enhanced indexing strategy, designed to systematically capture the market return and, in addition, benefit from well-rewarded factor premiums, soon proved to be an interesting solution.





This kind of rules-based approach helps combine performance targets with sustainability goals. While most passive-leaning investment strategies deal with sustainability as a separate issue, this solution aims to achieve the optimal balance in order to maximize the sustainability profile of a portfolio and its ability to harvest factor premiums.

Enhanced indexing portfolios take the capitalization-weighted index as a starting point. Then they give slightly more weight to stocks with favorable factor characteristics and slightly less to stocks with unfavorable ones, using proprietary investment models. This ensures the investment is relatively cost effective, while preventing overcrowding and arbitrage.

Robeco's research shows that a well-designed enhanced index strategy that exploits proven factor premiums such as value, quality and momentum, combined within a transparent portfolio algorithm and a unique set of risk controls, can consistently outperform the market after costs. The portfolio construction algorithm for this type of strategy plays an important role for this mandate given the sustainability requirements. This algorithm needs to feature a flexible structure so that it can be easily adapted to meet a variety of individual requirements concerning, for example, the investable universe, the level of active risk and the integration of stricter sustainability criteria.

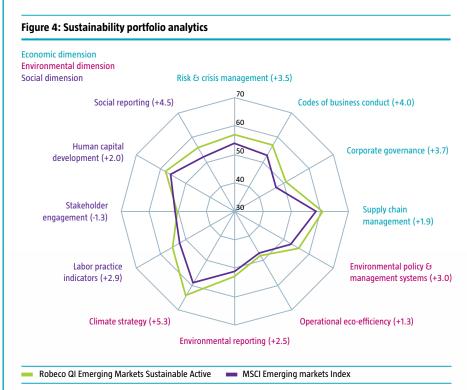
Integrated investment process

An enhanced index strategy that is designed to outperform the market with the flexibility to implement variety of sustainability criteria was an appealing solution, versus pure passive strategies. One crucial element in the selection process was to convince the FRR that sustainable investing, and risk-controlled quantitative techniques could be fully integrated in one comprehensive solution.

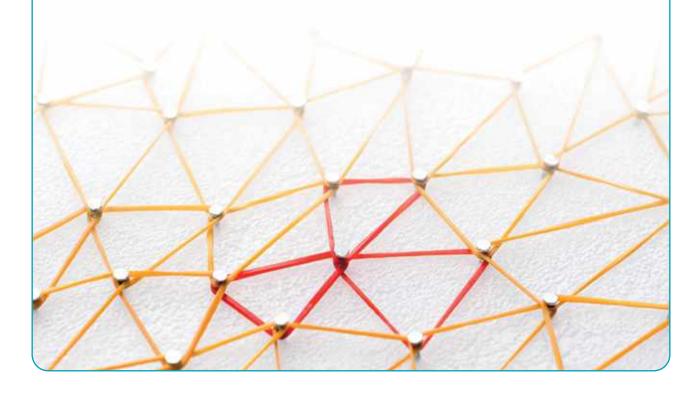
By combining well-known factor premiums with a higher exposure to companies with enhanced sustainability profiles, the strategy generates a portfolio with a positive environmental impact while at the same time providing an attractive risk/return profile. In addition, active ownership aspects are taken into account. Figure 3 below shows the contribution to performance versus the benchmark of both the sustainability criteria and the return factors taken into account in the investment process as of 31 December 2018.

Figure 3: Performance attribution report as of end-2018 **Factor attributions** Last 12 months cumulative factor attributions (full months only) 0.6% 0.8% 0.52% 0.40% 0.6% 0.3% 0.4% 0.2% 0.2% 0.1% 0.0% -0.1% -0.06% -0.2%-0.12% -0.2% -0.3% 3M attribution (%) 12M attribution (%) Α D Portfolio Sustainability ■ Valuation & momentum 2018 Source: Robeco, RobecoSAM





In short, the solution we provided combines Robeco's experience in quant and RobecoSAM's expertise in sustainability. It enables a 50% reduction of the carbon footprint of the portfolio, compared to the benchmark. It also integrates reliable historical environmental data and forwardlooking sustainability criteria. In addition to these sustainabilityrelated elements, the strategy benefits from well-known factor premiums, resulting in an attractive risk/return profile. Moreover, its setup remains flexible and can be customized to fit a client's specific requirements. Figure 4 shows the main sustainability characteristics of the portfolio at the end of 2018.



Source: Robeco, RobecoSAM



SHOWCASE

IMPROVING THE SUSTAINABILITY PROFILE OF AN EXISTING EMERGING MARKETS PORTFOLIO

Back in 2017, a European insurance company was looking for ways to further enhance the sustainability profile of its investments. This asset owner showed a strong commitment to sustainable investing and was a long-standing Robeco client, for whom we had already been running an Emerging Markets Active Quant Equities mandate for several years.

This strategy offers investors an attractive alternative to fundamental strategies in emerging markets by delivering a stable outperformance after costs with an estimated tracking error of 3%, using Robeco's proven multi-factor model. Sustainability is integrated in this portfolio by excluding many controversial companies and aiming for a better portfolio sustainability score compared with its benchmark (MSCI Emerging Markets Index).

When, in the summer of 2017, Robeco launched Emerging Markets Sustainable Active Quant, this client showed an immediate interest. The idea behind this new strategy was to leverage on the strong results of our Emerging Markets strategy, as well as on our extensive expertise in the field of sustainable investing.

The Robeco Emerging Markets Sustainable Active Quant strategy also invests in emerging market equities, based on the proven multi-factor model that has been in use since 2008. But it focuses on large-cap stocks to ensure a good data coverage. The strategy targets stable outperformance after costs with a low tracking error, through a bottom-up selection process that ensures limited deviation from the weights of different emerging countries in the benchmark.

At the same time, however, the strategy aims for a significantly better ESG score than the index and reduced footprints for water use, greenhouse gas emissions, waste and energy. The sustainability building blocks described in this chapter enable us to target stable outperformance while combining a variety of sustainability goals. Moreover, we implement an extensive values-based exclusions list

Our investment team presented the new strategy as a way to further improve the sustainability profile of the client's emerging markets portfolio. Following discussions between the insurer, its investment consultant and Robeco's investment team, the strategy was implemented early 2018.

Specific exclusions list

The insurer was very interested in the higher ESG score and lower environmental footprint offered by the Emerging Markets Sustainable Active Quant strategy relative to its existing portfolio. However, it wanted to continue applying its own specific exclusions list, instead of Robeco's values-based list.

Having discussed potential improvements with the client, Robeco proposed a plan to gradually turn the existing Emerging Markets Active Quant Equities portfolio into a more sustainable one. This entailed targeting a 20% higher ESG score and a 20% lower environmental footprint or water use, greenhouse gas emissions, waste and energy use than the MSCI Emerging Markets Index, while also implementing the client's specific exclusions list. This would require, for example, selling a number of smaller-cap, off-benchmark stocks for which ESG data is either too partial or not good enough according RobecoSAM's standards.

'Our quantitative equity solutions can easily be adapted to meet both the unique sustainability and financial objectives of our clients'

MACHIEL ZWANENBURG, portfolio manager Core Quant Equity



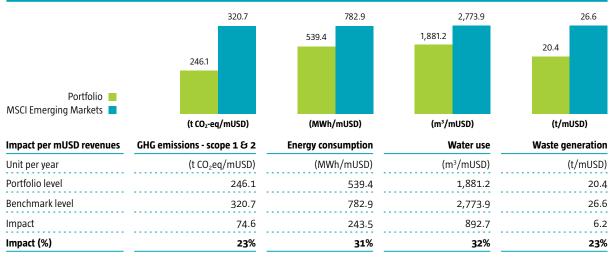


Changes were implemented gradually during the spring of 2018, taking advantage of the portfolio's monthly rebalancing processes. Off-benchmark stocks with insufficient coverage in terms of ESG data were sold, which automatically improved the portfolio's environmental footprint measures. We also took additional steps first towards a 10% better ESG score than the index and then towards a 20% better ESG score than the index by selling stocks with poor sustainability characteristics and

buying stocks with good sustainability characteristics. Overall, the additional forced turnover from these changes remained relatively limited, which resulted in a cost-efficient transition.

Figure 5 below shows the portfolio's environmental impact characteristics relative to the benchmark, at the end of 2018. For each of the four measures considered, the portfolio's impact reduction appears to be largely above the 20% target.

Figure 5: Environmental Impact Report as of end-2018



Source: Robeco, RobecoSAM

Conclusion

This chapter shows how quantitative investment strategies provide a good foundation for efficiently implementing sustainability approaches, in both a flexible and transparent way. For many years now, the solutions Robeco offers have featured different levels of sustainability integration, as well as the possibility to customize mandates to fit specific requests. Although the examples and case studies mentioned in this chapter relate mostly to equity strategies, our ability to flexibly accommodate the needs of our clients also applies to fixed income and multi-asset strategies.

- See: Zwanenburg, M. and Naaijkens, T., 2018. "Sustainable alpha balancing sustainability and quant factors", Robeco article.
- See: Blitz, D. and De Groot, W., 2019, "Passive investing and sustainability integration are fundamentally irreconcilable investment philosophies", The Journal of Portfolio Management, forthcoming.
- 3. In fact, so-called 'passive sustainable' or 'passive ESG' products often end up with very unfavorable factor tilts, compared to the market index, and therefore lower expected returns. The reason is because the so-called 'sin stocks' that tend to be excluded from their universe are often characterized by very favorable characteristics from a factor point of view. See: Blitz D. and Fabozzi F.J., 2017, "Sin Stocks Revisited: Resolving the Sin Stock Anomaly", Journal of Portfolio Management.
- See: FTSE Russell, 2018, "Smart Beta: 2018 Global Survey Findings from Asset Owners'".
- For an interesting discussion on this topic, see Robeco's recent interview with Bertrand Badré, former managing director of the World Bank and founder of Blue like an Orange Sustainable Capital, a company that invests in sustainable projects in emerging countries.
- 6. For more information on SDGs, please refer to Chapter 1 of this publication.



ROBECO The Investment Engineers

Robeco is a pioneer of sustainable investing, as one of the first asset managers to take it seriously in the 1990s. Since the creation of the first Groencertificaten (Green Certificates) in 1995 to the launch of the first sustainable equities fund in 1999, its importance within the firm has only grown over the past two decades. ESG analysis has been integrated in the mainstream investment process since 2010, and is now routinely applied across the entire fundamental equities, fixed income and quantitative fund ranges.

It is not just about investment: we have a dedicated Active Ownership team, with engagement specialists who enter into active dialog with the companies in our portfolios, and those of clients. We vote at approximately 5,000 shareholder meetings per year, using voting policies that are based on the internationally recognized principles of the International Corporate Governance Network (ICGN). Robeco is also a signatory to the UN Principles for Responsible Investment — gaining the top A* rating in 2017 — along with the UN Global Compact and other global and local initiatives.

ROBECOSAM

We are Sustainability Investing.

Our affiliate RobecoSAM, founded as Sustainable Asset Management in 1995, is an investment specialist that focuses exclusively on sustainable investing. It offers asset management, indices, impact analysis and investing, engagement, voting, sustainability assessments and benchmarking services. Asset management capabilities cater for institutional asset owners and financial intermediaries and cover a range of ESG-integrated investments in public and private equity, with a strong track record in resource efficiency themed strategies.

Together with S&P Dow Jones Indices, RobecoSAM publishes the globally recognized Dow Jones Sustainability Indices (DJSI). Based on its Corporate Sustainability Assessment (CSA), an annual ESG analysis of over 4,500 listed companies, RobecoSAM has compiled one of the world's most comprehensive databases of financially material sustainability information.

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