Responsible Ownership Activity Report | **For professional investors only**

Shropshire County Council

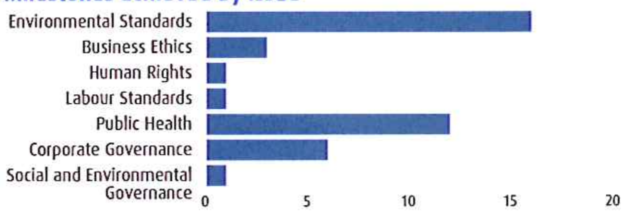
Q4 2016

The purpose of the ***reo***® (responsible engagement overlay)* service is to engage with companies held in portfolios with a view to promoting the adoption of better environmental, social and governance (ESG) practices. The ***reo***® approach focuses on enhancing long-term investment performance by making companies more commercially successful through safer, cleaner, and more accountable operations that are better positioned to deal with ESG risks and opportunities. Through a combination of constructive dialogue and active share voting, ***reo***® works to drive behavioural change with companies, and records successful outcomes as 'milestones' – changes in corporate policies or behaviour following intervention.

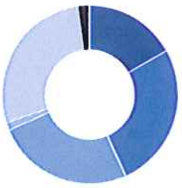
Companies engaged this quarter

Companies engaged	143
Milestones achieved	40
Countries covered	20

Milestones achieved by issue

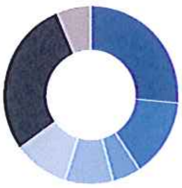


Companies engaged by country



United Kingdom	24
Continental Europe	38
North America	36
Asia (ex Japan)	2
Japan	40
Other	3

Companies engaged by issue **



Environmental Standards	71
Business Ethics	38
Human Rights	14
Labour Standards	24
Public Health	27
Corporate Governance	77
Social and Environmental Governance	17

BMO Global Asset Management

* ***reo***® is currently applied to £97.2bn ($125.9billion / €112.1billion) of assets as at 30th September 2016. ** Companies may have been engaged on more than one issue. *** This report has been compiled using data supplied by a third-party electronic voting platform provider. The statistics exclude ballots with zero shares and re-registration meetings. Meetings/ballots/proposals are not considered voted if: ballots have been rejected by voting intermediaries (e.g. where necessary documentation (such as Powers of Attorney, beneficial owner confirmation, etc.) was not in place); instructed as "Do not vote" (e.g. in share-blocking markets); or left uninstructed. This document is for professional advisors only and should not be circulated to other investors. Past performance should not be seen as an indication of future performance. Stock market and currency movements mean the value of, and income from, investments in the Fund are not guaranteed. They can go down as well as up and you may not get back the amount you invest. BMO Global Asset Management is a trading name of F&C Management Limited, which is authorised and regulated by the Financial Conduct Authority.

Priority Companies and Your Fund

The table below highlights the companies on BMO's annual priority engagement list with which we have engaged on your behalf in the past quarter and which you currently hold within your portfolio. Priority companies are selected through a detailed analysis of client holdings, proprietary ESG risk scores, engagement history and the BMO Governance and Sustainable Investment team's judgement and expertise. Each priority company has defined engagement objectives set at the beginning of each year. Engagement activity levels for priority companies are more intensive than for companies where we engage more reactively. We provide reporting on our engagement with priority companies in the form of case studies which follows the table below. For full list of priority companies please refer to the Appendix at the end of this report. For full details of our engagements with companies please refer to the online ***reo***® client portal.

				Themes engaged						
Name	Sector	ESG Rating	Response to engagement	Environmental Standards	Business Ethics	Human Rights	Labour Standards	Public Health	Corporate Governance	Social and Environmental Governance
Amazon.com Inc	Consumer Discretionary	ORANGE	Poor				●			
Anglo American PLC	Materials	YELLOW	Good	●						●
Banco Santander SA	Financials	YELLOW	Good		●				●	
Bank of America Corp	Financials	ORANGE	Adequate	●					●	
Barclays PLC	Financials	YELLOW	Good	●					●	
BNP Paribas SA	Financials	YELLOW	Adequate	●	●				●	
BP PLC	Energy	ORANGE	Good	●		●	●			
Carrefour SA	Consumer Staples	YELLOW	Adequate	●		●	●	●		
Eni SpA	Energy	YELLOW	Good	●					●	
Facebook Inc	Information Technology	ORANGE	Adequate		●				●	
GlaxoSmithKline PLC	Health Care	YELLOW	Good		●			●	●	
Glencore PLC	Materials	ORANGE	Good	●						●
Goldman Sachs Group Inc/The	Financials	YELLOW	Good						●	
HSBC Holdings PLC	Financials	RED	Good		●				●	●
JPMorgan Chase & Co	Financials	ORANGE	Adequate						●	
Monsanto Co	Materials	RED	Poor	●						
Novartis AG	Health Care	YELLOW	Good		●			●	●	
Occidental Petroleum Corp	Energy	YELLOW	Adequate	●						
Roche Holding AG	Health Care	GREEN	Adequate		●			●		
Royal Dutch Shell PLC	Energy	GREEN	Good	●			●		●	●
RWE AG	Utilities	GREEN	Adequate	●					●	
Tesco PLC	Consumer Staples	GREEN	Good		●					
UniCredit SpA	Financials	YELLOW	Good		●				●	
Volkswagen AG	Consumer Discretionary	RED	Poor	●	●				●	
Wells Fargo & Co	Financials	RED	Poor						●	

ESG Risk Rating: Rating of a company's ESG risk exposure and risk management compared to industry peers. Source: MSCI ESG Research Inc.

Top quartile: GREEN Second quartile: YELLOW Third quartile: ORANGE Bottom quartile: RED

Engagements and Your Fund: Red rated

The table below highlights the companies with which we have engaged on your behalf in the past quarter and which you currently hold within your portfolio. The table is split by ESG risk rating. For full details of our engagements with companies please refer to the online ***reo***® client portal.

					Themes engaged						
Name	Country	Sector	Priority company	ESG Rating	Environmental Standards	Business Ethics	Human Rights	Labour Standards	Public Health	Corporate Governance	Social and Environmental Governance
CF Industries Holdings Inc	United States	Materials		RED	●						
Chevron Corp	United States	Energy		RED	●						
Continental AG	Germany	Consumer Discretionary		RED	●						
CVS Health Corp	United States	Consumer Staples		RED		●					
Dixons Carphone PLC	United Kingdom	Consumer Discretionary		RED	●			●			
EMS-Chemie Holding AG	Switzerland	Materials		RED	●						
FANUC Corp	Japan	Industrials		RED						●	
HSBC Holdings PLC	United Kingdom	Financials	✓	RED		●				●	●
Monsanto Co	United States	Materials	✓	RED	●						
SMC Corp/Japan	Japan	Industrials		RED						●	
Sumitomo Realty & Development Co Ltd	Japan	Real Estate		RED						●	
Suruga Bank Ltd	Japan	Financials		RED						●	
Volkswagen AG	Germany	Consumer Discretionary	✓	RED	●	●				●	
Wells Fargo & Co	United States	Financials	✓	RED						●	
WH Group Ltd	Hong Kong	Consumer Staples		RED	●						

ESG Risk Rating: Rating of a company's ESG risk exposure and risk management compared to industry peers. Source: MSCI ESG Research Inc.

Top quartile: GREEN Second quartile: YELLOW Third quartile: ORANGE Bottom quartile: RED

Engagements and Your Fund: Orange rated

The table below highlights the companies with which we have engaged on your behalf in the past quarter and which you currently hold within your portfolio. The table is split by ESG risk rating. For full details of our engagements with companies please refer to the online ***reo***® client portal.

					Themes engaged						
Name	Country	Sector	Priority company	ESG Rating	Environmental Standards	Business Ethics	Human Rights	Labour Standards	Public Health	Corporate Governance	Social and Environmental Governance
Amazon.com Inc	United States	Consumer Discretionary	✓	ORANGE				●			
Asahi Group Holdings Ltd	Japan	Consumer Staples		ORANGE	●					●	●
BAE Systems PLC	United Kingdom	Industrials		ORANGE						●	
Bank of America Corp	United States	Financials	✓	ORANGE	●					●	
BP PLC	United Kingdom	Energy	✓	ORANGE	●		●	●			
Central Japan Railway Co	Japan	Industrials		ORANGE						●	
Conagra Brands Inc	United States	Consumer Staples		ORANGE		●			●		●
Dentsu Inc	Japan	Consumer Discretionary		ORANGE						●	
Eastman Chemical Co	United States	Materials		ORANGE	●						
Facebook Inc	United States	Information Technology	✓	ORANGE		●				●	
Fuchs Petrolub SE	Germany	Materials		ORANGE	●						
Glencore PLC	Switzerland	Materials	✓	ORANGE	●						●
Illinois Tool Works Inc	United States	Industrials		ORANGE		●		●			
Isuzu Motors Ltd	Japan	Consumer Discretionary		ORANGE						●	
JPMorgan Chase & Co	United States	Financials	✓	ORANGE						●	
Keyence Corp	Japan	Information Technology		ORANGE	●		●	●			
Kroger Co/The	United States	Consumer Staples		ORANGE	●						
Lloyds Banking Group PLC	United Kingdom	Financials		ORANGE						●	●
Mitsubishi UFJ Financial Group Inc	Japan	Financials		ORANGE						●	
Nissan Motor Co Ltd	Japan	Consumer Discretionary		ORANGE						●	
Otsuka Holdings Co Ltd	Japan	Health Care		ORANGE						●	
Panasonic Corp	Japan	Consumer Discretionary		ORANGE						●	
S&P Global Inc	United States	Financials		ORANGE	●						
Seven & I Holdings Co Ltd	Japan	Consumer Staples		ORANGE						●	
Smith & Nephew PLC	United Kingdom	Health Care		ORANGE						●	
Societe Generale SA	France	Financials		ORANGE	●						
SoftBank Group Corp	Japan	Telecommunication Services		ORANGE						●	
Sumitomo Electric Industries Ltd	Japan	Consumer Discretionary		ORANGE						●	
Vulcan Materials Co	United States	Materials		ORANGE	●						

ESG Risk Rating: Rating of a company's ESG risk exposure and risk management compared to industry peers. Source: MSCI ESG Research Inc.

Top quartile: GREEN Second quartile: YELLOW Third quartile: ORANGE Bottom quartile: RED

Engagements and Your Fund: Yellow rated

The table below highlights the companies with which we have engaged on your behalf in the past quarter and which you currently hold within your portfolio. The table is split by ESG risk rating. For full details of our engagements with companies please refer to the online ***reo***® client portal.

					Themes engaged						
Name	Country	Sector	Priority company	ESG Rating	Environmental Standards	Business Ethics	Human Rights	Labour Standards	Public Health	Corporate Governance	Social and Environmental Governance
Air Products & Chemicals Inc	United States	Materials		YELLOW	●						
Anglo American PLC	United Kingdom	Materials	✔	YELLOW	●						●
Arkema SA	France	Materials		YELLOW	●						
Associated British Foods PLC	United Kingdom	Consumer Staples		YELLOW	●					●	
Banco Santander SA	Spain	Financials	✔	YELLOW		●				●	
Barclays PLC	United Kingdom	Financials	✔	YELLOW	●					●	
BNP Paribas SA	France	Financials	✔	YELLOW	●	●				●	
Carrefour SA	France	Consumer Staples	✔	YELLOW	●		●	●	●		
CLP Holdings Ltd	Hong Kong	Utilities		YELLOW	●						
Coca-Cola Co/The	United States	Consumer Staples		YELLOW		●			●		●
Domino's Pizza Inc	United States	Consumer Discretionary		YELLOW		●					
East Japan Railway Co	Japan	Industrials		YELLOW						●	
Enbridge Inc	Canada	Energy		YELLOW	●		●				
Eni SpA	Italy	Energy	✔	YELLOW	●					●	
GlaxoSmithKline PLC	United Kingdom	Health Care	✔	YELLOW		●			●	●	
Goldman Sachs Group Inc/The	United States	Financials	✔	YELLOW						●	
Hitachi Ltd	Japan	Information Technology		YELLOW	●						
Hoya Corp	Japan	Health Care		YELLOW						●	
Japan Exchange Group Inc	Japan	Financials		YELLOW						●	
JFE Holdings Inc	Japan	Materials		YELLOW						●	
JX Holdings Inc	Japan	Energy		YELLOW						●	
Marine Harvest ASA	Norway	Consumer Staples		YELLOW	●		●	●	●		
Mizuho Financial Group Inc	Japan	Financials		YELLOW						●	
Mondelez International Inc	United States	Consumer Staples		YELLOW		●			●		●
Mosaic Co/The	United States	Materials		YELLOW	●						
Nippon Steel & Sumitomo Metal Corp	Japan	Materials		YELLOW						●	
Novartis AG	Switzerland	Health Care	✔	YELLOW		●			●	●	
Nucor Corp	United States	Materials		YELLOW	●						
Occidental Petroleum Corp	United States	Energy	✔	YELLOW	●						
Orica Ltd	Australia	Materials		YELLOW	●						
PG&E Corp	United States	Utilities		YELLOW	●						
Praxair Inc	United States	Materials		YELLOW	●						●
Sherwin-Williams Co/The	United States	Materials		YELLOW	●						
Shin-Etsu Chemical Co Ltd	Japan	Materials		YELLOW	●					●	

ESG Risk Rating: Rating of a company's ESG risk exposure and risk management compared to industry peers. Source: MSCI ESG Research Inc.

Top quartile: GREEN Second quartile: YELLOW Third quartile: ORANGE Bottom quartile: RED

Engagements and Your Fund: Yellow rated

					Themes engaged						
Name	Country	Sector	Priority company	ESG Rating	Environmental Standards	Business Ethics	Human Rights	Labour Standards	Public Health	Corporate Governance	Social and Environmental Governance
St James's Place PLC	United Kingdom	Financials		YELLOW						●	
Takeda Pharmaceutical Co Ltd	Japan	Health Care		YELLOW					●		
Ted Baker PLC	United Kingdom	Consumer Discretionary		YELLOW				●			●
UniCredit SpA	Italy	Financials	✔	YELLOW		●				●	
Unilever PLC	United Kingdom	Consumer Staples		YELLOW		●			●	●	●
Yara International ASA	Norway	Materials		YELLOW	●						

ESG Risk Rating: Rating of a company's ESG risk exposure and risk management compared to industry peers. Source: MSCI ESG Research Inc.

Top quartile: GREEN Second quartile: YELLOW Third quartile: ORANGE Bottom quartile: RED

Engagements and Your Fund: Green rated

The table below highlights the companies with which we have engaged on your behalf in the past quarter and which you currently hold within your portfolio. The table is split by ESG risk rating. For full details of our engagements with companies please refer to the online ***reo***® client portal.

					Themes engaged						
Name	Country	Sector	Priority company	ESG Rating	Environmental Standards	Business Ethics	Human Rights	Labour Standards	Public Health	Corporate Governance	Social and Environmental Governance
Aeon Co Ltd	Japan	Consumer Staples		GREEN	●		●	●	●		
Ajinomoto Co Inc	Japan	Consumer Staples		GREEN		●			●		●
Anheuser-Busch InBev SA/NV	Belgium	Consumer Staples		GREEN	●	●		●	●		●
Antofagasta PLC	Chile	Materials		GREEN	●		●				
Arconic Inc	United States	Materials		GREEN	●						
AstraZeneca PLC	United Kingdom	Health Care		GREEN		●			●	●	
Banco Bilbao Vizcaya Argentaria SA	Spain	Financials		GREEN						●	
Burberry Group PLC	United Kingdom	Consumer Discretionary		GREEN						●	
Cardinal Health Inc	United States	Health Care		GREEN					●		
Croda International PLC	United Kingdom	Materials		GREEN	●						
Denso Corp	Japan	Consumer Discretionary		GREEN						●	
Ecolab Inc	United States	Materials		GREEN	●						
EI du Pont de Nemours & Co	United States	Materials		GREEN	●						
Enagas SA	Spain	Utilities		GREEN	●					●	
Enel SpA	Italy	Utilities		GREEN	●						
Evonik Industries AG	Germany	Materials		GREEN	●						
Fuji Heavy Industries Ltd	Japan	Consumer Discretionary		GREEN						●	
FUJIFILM Holdings Corp	Japan	Information Technology		GREEN						●	
General Mills Inc	United States	Consumer Staples		GREEN		●			●		●
Heineken NV	Netherlands	Consumer Staples		GREEN	●						
Honda Motor Co Ltd	Japan	Consumer Discretionary		GREEN						●	
Industria de Diseno Textil SA	Spain	Consumer Discretionary		GREEN			●	●			
InterContinental Hotels Group PLC	United Kingdom	Consumer Discretionary		GREEN		●		●		●	●
International Flavors & Fragrances Inc	United States	Materials		GREEN	●						
Kansai Paint Co Ltd	Japan	Materials		GREEN						●	
KDDI Corp	Japan	Telecommunication Services		GREEN						●	
Kerry Group PLC	Ireland	Consumer Staples		GREEN	●						
Kubota Corp	Japan	Industrials		GREEN						●	
Kyocera Corp	Japan	Information Technology		GREEN						●	
LendLease Group	Australia	Real Estate		GREEN						●	
Marks & Spencer Group PLC	United Kingdom	Consumer Discretionary		GREEN	●	●	●	●			
Merck & Co Inc	United States	Health Care		GREEN					●		
Merck KGaA	Germany	Health Care		GREEN					●		

ESG Risk Rating: Rating of a company's ESG risk exposure and risk management compared to industry peers. Source: MSCI ESG Research Inc.

Top quartile: GREEN Second quartile: YELLOW Third quartile: ORANGE Bottom quartile: RED

Engagements and Your Fund: Green rated

Name	Country	Sector	Priority company	ESG Rating	Themes engaged: Environmental Standards	Business Ethics	Human Rights	Labour Standards	Public Health	Corporate Governance	Social and Environmental Governance
Merlin Entertainments PLC	United Kingdom	Consumer Discretionary		GREEN		●					
Murata Manufacturing Co Ltd	Japan	Information Technology		GREEN						●	
Next PLC	United Kingdom	Consumer Discretionary		GREEN			●	●			
Novo Nordisk A/S	Denmark	Health Care		GREEN		●			●		
Novozymes A/S	Denmark	Materials		GREEN	●					●	
NTT DOCOMO Inc	Japan	Telecommunication Services		GREEN						●	
PepsiCo Inc	United States	Consumer Staples		GREEN		●			●		●
Repsol SA	Spain	Energy		GREEN	●						
Roche Holding AG	Switzerland	Health Care	✔	GREEN		●			●		
Royal Dutch Shell PLC	Netherlands	Energy	✔	GREEN	●			●		●	●
RWE AG	Germany	Utilities	✔	GREEN	●					●	
Sanofi	France	Health Care		GREEN					●		
Sika AG	Switzerland	Materials		GREEN	●						
Skandinaviska Enskilda Banken AB	Sweden	Financials		GREEN	●						
Solvay SA	Belgium	Materials		GREEN	●						
Statoil ASA	Norway	Energy		GREEN	●						
Stora Enso OYJ	Finland	Materials		GREEN	●						
Sumitomo Mitsui Trust Holdings Inc	Japan	Financials		GREEN						●	
Tesco PLC	United Kingdom	Consumer Staples	✔	GREEN		●					
Tesla Motors Inc	United States	Consumer Discretionary		GREEN	●				●		
Tokio Marine Holdings Inc	Japan	Financials		GREEN						●	
TOTAL SA	France	Energy		GREEN	●						
United Utilities Group PLC	United Kingdom	Utilities		GREEN						●	
Vodafone Group PLC	United Kingdom	Telecommunication Services		GREEN						●	
Voestalpine AG	Austria	Materials		GREEN	●						
WPP PLC	United Kingdom	Consumer Discretionary		GREEN						●	

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Milestones and Your Fund

The table below highlights the companies with which we have recorded milestones on your behalf in the past quarter and which you currently hold within your portfolio. Milestones are engagement outcomes which we have identified and is rated on the extent to which it protects investor value. For full details of our engagements which led to these milestones please refer to the online *reo*® client portal.

Name	Country	Sector	Priority company	ESG Rating	Themes engaged: Environmental Standards	Business Ethics	Human Rights	Labour Standards	Public Health	Corporate Governance	Social and Environmental Governance
★★★											
Enagas SA	Spain	Utilities		GREEN						●	
★★											
AbbVie Inc	United States	Health Care	✔	YELLOW					●		
Antofagasta PLC	Chile	Materials		GREEN			●				
BP PLC	United Kingdom	Energy	✔	ORANGE	●						
Daiichi Sankyo Co Ltd	Japan	Health Care		ORANGE					●		
Eisai Co Ltd	Japan	Health Care		GREEN					●		
Exxon Mobil Corp	United States	Energy		ORANGE						●	
GlaxoSmithKline PLC	United Kingdom	Health Care	✔	YELLOW		●					
Kroger Co/The	United States	Consumer Staples		ORANGE	●						
Lundin Petroleum AB	Sweden	Energy		GREEN	●						
Oil Search Ltd	Australia	Energy		GREEN	●						
PepsiCo Inc	United States	Consumer Staples		GREEN	●				●		
Pfizer Inc	United States	Health Care	✔	RED					●		
Royal Dutch Shell PLC	Netherlands	Energy	✔	GREEN	●					●	
Sanofi	France	Health Care		GREEN					●		
SoftBank Group Corp	Japan	Telecommunication Services		ORANGE						●	
Takeda Pharmaceutical Co Ltd	Japan	Health Care		YELLOW					●		
Telefonica SA	Spain	Telecommunication Services		GREEN	●						
Telia Co AB	Sweden	Telecommunication Services		GREEN							●
Tullow Oil PLC	United Kingdom	Energy		ORANGE	●						
Wal-Mart Stores Inc	United States	Consumer Staples	✔	YELLOW				●			
★											
Astellas Pharma Inc	Japan	Health Care		GREEN					●		
AstraZeneca PLC	United Kingdom	Health Care		GREEN					●		
Banco Bilbao Vizcaya Argentaria SA	Spain	Financials		GREEN						●	
Bayer AG	Germany	Health Care		YELLOW					●		
Bristol-Myers Squibb Co	United States	Health Care		YELLOW					●		
EDP - Energias de Portugal SA	Portugal	Utilities		GREEN	●						
Electricite de France SA	France	Utilities	✔	YELLOW	●						
Engie SA	France	Utilities		GREEN	●						
HSBC Holdings PLC	United Kingdom	Financials	✔	RED	●						

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Top quartile: GREEN Second quartile: YELLOW Third quartile: ORANGE Bottom quartile: RED

Milestones and Your Fund

Name	Country	Sector	Priority company	ESG Rating	Themes engaged: Environmental Standards	Business Ethics	Human Rights	Labour Standards	Public Health	Corporate Governance	Social and Environmental Governance
Iberdrola SA	Spain	Utilities		GREEN	●						
Johnson & Johnson	United States	Health Care	✓	ORANGE		●					
Merck & Co Inc	United States	Health Care		GREEN		●					
Novo Nordisk A/S	Denmark	Health Care		GREEN					●		
SSE PLC	United Kingdom	Utilities		GREEN	●						
Wells Fargo & Co	United States	Financials	✓	RED						●	

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ESG Viewpoint

December 2016

Thomas Hassl, Analyst, Governance and Sustainable Investment

Emission management in carbon intensive sectors

- **Goal:** Managing the risks and opportunities stemming from climate change trends and regulation
- **Engagement since:** 2016
- **Sectors involved:** Chemicals, Construction Materials, Steel and Aluminium

Key summary

- Tightening regulatory requirements paired with changing stakeholder expectations are altering the competitive environment of carbon intensive companies.
- We examined how companies in carbon intensive sectors have assessed the impacts of climate policies on their business and how these impacts are translated into corporate greenhouse gas (GHG) mitigation strategies.
- Our engagement identified significant discrepancies among company practices. This was particularly the case with regards to scenario planning and the use of mechanisms to incentivise energy efficiency strategies.

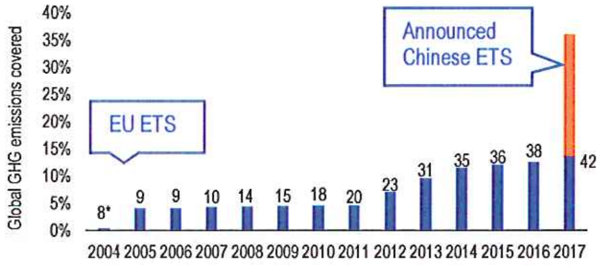
Background

The past two years have witnessed a historic step forward in taking global action on climate change. In December 2015, the leaders of 195 countries adopted the first-ever universal, legally binding global climate agreement at the Conference of Parties (COP)21 climate change summit in Paris to keep the global average temperature increase to well below two degrees Celsius (2°C) and to pursue efforts to hold the increase to 1.5°C. Over the course of 2016, several major economies, including China, the US and EU, have ratified the agreement. These are significant steps in reaching the 55-party target needed for the agreement to enter into force (this is now at 86 as of writing). The threshold was reached and the agreement entered in force in early October this year, a month before the COP22 summit in Marrakech.

For the corporate sector, this policy change comes with growing pressure to address and disclose climate change management strategies and related metrics, as well as to contribute its share in meeting the carbon reduction targets as reflected in Nationally Determined Contributions (NDCs). In this context, carbon pricing schemes and Emission Trading Schemes (ETS) in particular are gaining traction as the preferred policy instrument for many governments. At the time of writing, about 40 national jurisdictions and over 20 cities, states, and regions are putting a price on carbon. This translates to a total coverage of about 13% of global GHG emissions. These numbers are expected to increase, with 101 countries accounting for 58% of global GHG emissions considering using carbon pricing, according to a recent survey conducted on behalf of the World Bank.[1]

[1] World Bank Group "State and Trends of Carbon Pricing" October 2016.

Regional, national and subnational carbon pricing initiatives: share of global GHG emissions covered



Source: World Bank Group October 2016. Forecasts thereafter.
*Number of implemented initiatives.

Most ETS' currently being implemented focus on the most energy intensive sectors such as power generation and industrial plants (in the EU, ETS also include Airlines). For companies operating in these sectors, the inclusion under ETS directly increases operational costs and, therefore, impacts profitability and shareholder value.

The cost aspect constitutes the key driver for the corporate sector to meet carbon reduction goals in a cost efficient way, either by trading emission allowances or investing in carbon reduction strategies. However, it becomes increasingly evident that this aspect also triggers unintended, but foreseeable, side effects, such as "carbon leakage", i.e. the possibility that carbon intensive companies move part of their production to countries with less stringent climate measures, as this becomes economically viable. Steel, construction materials and chemicals companies, the focus group of this engagement project, are potentially all exposed to carbon leakage.

We believe that a global carbon market, which facilitates cross border trading of carbon allowances and covers a critical mass of relevant markets (>80%) would largely eliminate the incentive to relocate carbon intensive business segments. Such a market allows those who have the financial responsibility for reducing emissions to purchase emission reductions wherever this is most cost-effective[2]. In particular, it would eliminate the allocation of free allowances to sectors deemed to be exposed to a risk of carbon leakage. This has been proven to harm the efficiency of the EU ETS to an extent that it even provided significant windfall profits to certain cement and steel companies, including **Lafarge** (€37 million of sales in 2014) and **ArcelorMittal** (surplus of 7 million European Emissions Allowance (EUA) in 2015, worth around €40 million at current prices). While Article 6 of Paris Agreement provides the basis for facilitating international recognition of cooperative carbon pricing, the political hurdles, including the recent US election outcome, are likely to be too high to expect an agreement in the near future.

For carbon intensive companies to better assess and understand the economics of climate change, it is vital to assess and compare different adaptation strategies and their economic viability under different policy scenarios. Issues to consider include the availability of technological innovations, demand pressure stemming from product substitution and cost pressure due to carbon pricing. It is becoming increasingly important for corporates to consider these aspects in conjunction with current and expected carbon pricing liabilities.

Engagement action

Our engagement targeted steel, construction materials and chemicals companies worldwide. While we believe that key risk drivers and corresponding best practice management standards are equally applicable among companies operating in all three sectors, our engagement also considered sector specific aspects including opportunities. Biofuels used by cement and steel companies to replace fossil fuels in the production process for example, constitute an opportunity for chemicals companies such as **Novozymes**, who specialised in the development and production of these substitutes.

Our project followed a two-step approach. In Phase 1, we approached companies with solid GHG management programmes, substantiated with quantifiable improvements of key carbon metrics in recent years. In Phase 2, we then reached out to lagging companies to express our concerns and asking them to compare their climate change approach and practices against those of more advanced peers that we had identified in the first phase of the project. These advanced practices include:

- **Board oversight:** Dedicated board resources and expertise on climate change economics and effective oversight to ensure that business models are resilient to rapid energy transition pathways.
- **Scenario planning:** The use of scenario planning to understand how the likely direction and speed of an energy transition, as reflected in the COP21 agreement and national carbon reduction commitments, will impact future profits and shareholder value.
- **Emission reduction targets:** Defining suitable long-term reduction goals in line with anticipated regulatory requirements, market trends as well as overarching corporate climate commitments.
- **Mitigation strategies:** Group-wide mechanisms to incentivise energy efficiency strategies, underpinned by

Continued

a carbon shadow price, for example. The implementation of a carbon shadow price helps to prepare for the impact of tightening regulatory requirements on operations or the company's value chain as well as to align incentives to meet the company's GHG reduction targets. We also encourage companies to allocate and report on dedicated research and development expenditures for low-carbon solutions along the product life-cycle.

- **Transparency and commitment:** Public disclosure of detailed information on the management of carbon related risks, opportunities and metrics. We also encourage companies to have the systems and processes in place to monitor and respond to tightening carbon reporting requirements.

Following our initial outreach to 64 companies, we had comprehensive engagement calls with 19 and received written answers from another 18.

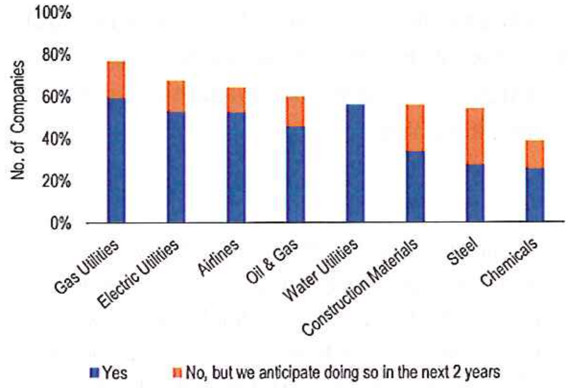
Company response

Generally, our engagement revealed that climate change related issues receive significant management attention across these companies, which is unsurprising given the carbon intensity of their operations. Out of the 37 companies we engaged, no fewer than 30 (81%) had direct or indirect – through sub-committees – board responsibility over climate change. Also, most carbon intensive companies transparently disclose their (Scope 1 and 2) carbon emissions (97%) and set emission reduction targets and deadlines (82%), albeit with varying quality.

Larger performance dispersion is evident in relation to the target setting process, as well as the underlying considerations and assumptions used. Only a few companies have compelling rationales and even fewer consider climate change scenarios – such as a 2°C pathway – when setting the magnitude of these targets. Finally, only a few also use a science-based approach to target setting.

With regards to scenario planning and the use of mechanisms to incentivise energy efficiency strategies we see widespread discrepancies among company practices. While an increasing number of companies are starting to use carbon pricing to factor in the cost of carbon in their capital expenditure (CAPEX) and operational expenditure, we note that the proportion of companies is still relatively small compared to other carbon intensive sectors such as oil and gas and utilities (see next chart).

Number of companies reporting to use an internal price on carbon



Source: CDP December 2016.

CRH – Best practice example

CRH is considered a leading construction materials company in terms of carbon management and is recognised for its solid carbon metrics. Our engagement with the company largely confirms this view. Unlike many of its peers, the Irish company's carbon management strategy considers both tightening regulatory requirements, reflected in the NDCs submitted by countries as part of the COP21 Paris Climate Agreement, and the broader Sustainable Development Goals. The company aligns its carbon reduction targets with these standards and conducts sensitivity analysis to stress test its business model against different climate scenarios. In terms of emission reduction, the company collaborates with different industry bodies in order to research and develop mitigation strategies which help the company meet its carbon reduction target to reduce emissions by 25% by Financial Year (FY) 2020 relative to FY1990 levels, one of the strictest carbon reduction targets in the construction materials industry.

They, said:
"... such a facility costs hundreds of millions of [US] dollars, it would be silly not to consider a carbon price when assessing the Net Present Value (NPV) of a chemicals plant."

BASF

To assess and prepare for tightening regulatory requirements, companies implement different strategies with varying degree of quality and suitability. Less than one third (27%) of the companies engaged use scenario planning to assess their exposure to various climate change outlooks. Others, such as **Voestalpine** take a more practical approach and make sure to have the technological solutions on hand to compile with even the most stringent emission reduction targets, once they materialise. Similarly, **Vale** is developing a so-called marginal abatement cost curve (MACC), which helps the steel company prioritise different emission reduction projects. Most carbon intensive companies we engaged, however, follow a more regulatory driven approach. They focus their efforts on monitoring and complying with prevailing regulatory requirements, rather than assessing and preparing for potential tightening of such regimes. Our engagement did not reveal any concrete plans to relocate carbon intensive operations to jurisdictions with less stringent carbon regulation. Companies exposed to carbon leakage, however, signalled that they are considering such moves if the financial exposure increases due to tightening regulations and if carbon policy is not harmonising across geographic regions.

From an opportunity perspective, companies appeared to be better prepared to capitalise on the potential stemming from climate change. Chemicals companies in particular develop and market a multitude of products that – compared to conventional alternatives – make a positive contribution to reducing GHG emissions in their applications. Examples of such products include lighter material, catalysts for light and heavy duty vehicles, wind turbines, chemicals needed to produce solar panels and Lithium-ion batteries used in electric vehicles, for example. Also, many construction materials and steel and aluminium companies anticipate changing market trends and devote increasing CAPEX to the development of climate-friendly products that are in line with sustainable mobility or the green building concepts.

Assessment

Growing cost pressure to comply with climate change related regulation across the globe, coupled with changing stakeholder expectations are altering the competitive environment of carbon intensive companies, and are revealing both opportunities and threats. For companies in carbon-intensive sectors to better assess and understand the economics of climate change, it is vital to assess and compare different adaptation strategies and their economic viability under different policy scenarios.

Our engagement revealed that compared to their peers in the energy and mining sectors, companies operating in the steel, construction materials and chemicals industry are less advanced in modelling and managing their climate change exposure. Especially with regards to scenario planning and the use of mechanisms to incentivise energy efficiency strategies. We identified widespread discrepancies among company practices, ranging from purely regulatory-driven approaches to forward-looking exposure assessments based on scenario modelling.

We expect engagement around emission management in carbon intensive sectors to intensify over the coming years. We are positive that the increased pressure will help raise the bar and encourage more companies to strengthen their practices and disclosure.

ESG Viewpoint

November 2016

Yo Takatsuki, Associate Director, Governance and Sustainable Investment

Pharma: Access to success in the developing world

Goal: Drive business growth and improve access to healthcare in developing countries

Engagement since: 2007

Sectors involved: Pharmaceutical

Key summary

- The rapid growth of emerging economies and the developing world presents long-term opportunities for the major pharmaceutical companies.
- The industry has thus far encountered a mixture of success and disappointment due to not fully appreciating the size of the challenge, especially in improving access to medicines and healthcare.
- Leading companies are now implementing novel, business-focused practices with the combined goal of delivering commercial success and sustainable social development in a world where two billion people still do not have access to health-related products they need.
- Over the past ten years of engagement, we have seen broad improvements in industry practices around access to healthcare provision in the developing world. Many more major companies now have strong programmes in place but some laggards remain.

Background

Advanced economies – the US, Europe and Japan – have traditionally been the drivers of revenue growth and profitability for the major pharmaceutical companies. This established picture, however, is now under challenge. As developed economies continue to constrain or cut back on healthcare funding, spending in developing economies is rapidly increasing. Medium-term healthcare annual growth forecasts in developed economies are in low single digits in percentage terms. In the major emerging markets nations – namely Brazil, Russia, India, China, Mexico and Turkey – growth is at or close to double digits. Also:

- Nearly a third of the global pharmaceutical market will be from outside the advanced economies by the end of 2016 – double the proportion from a decade ago[1].
- Pharmaceutical spend in the developing world (major emerging markets and other lower-income countries) overtook those of the European Union's five major economies (Germany, UK, France, Italy and Spain) in the early part of this decade[2].
- The developing world will be a key contributor to global pharma sales growth in the coming years, with $190 billion of new sales forecast to be accounted for by 2020[3].

[1] Strategy & research "Pharma emerging markets 2.0"
[2] McKinsey & Co research "Pharma's next challenge"
[3] McKinsey & Co research "Pharma's next challenge"

Continued

In the next two decades, it is forecast that the middle class will expand by another three billion people, almost exclusively from the developing world[4]. Increasing prosperity and improving longevity has also resulted in a gradual shift from the traditional communicable diseases of low-income countries – such as tuberculosis, malaria and HIV/AIDS – to non-communicable diseases – such as diabetes, cancer and cardiovascular diseases. This presents further opportunities for companies with treatments in these areas.

Barriers to success

Despite the broadly positive macro trends in the industry's favour, most pharmaceutical companies have thus far encountered a mixture of success and disappointment outside of the major advanced economies. Our research and discussion with pharmaceutical companies and industry experts have identified some of these common pitfalls and difficulties:

- Treating all developing world countries as a single homogenous entity. This has led to go-to-market strategies which are not tailored to the specifics of the country. There has been a growing recognition that one-size-fits-all sales-oriented strategies are not adequate and need to be complemented by country-specific access to market-based strategies.
- Underestimating the challenge of navigating local regulatory requirements. Unlike in advanced countries, regulation and approval processes can be volatile and less predictable. To overcome this, companies have increasingly developed local expertise through acquisition or hiring, but this takes time and effort to bear fruit.
- Overcoming bribery and corruption. Cash in envelopes are largely a thing of the past now following the establishment of tough, extra-territorial legislation in the US and UK. Facilitation payments to local officials and middle-men have morphed into consultancy contracts or other seemingly above-board arrangements. Business ethics is an area with which we have undertaken extensive engagement with pharmaceutical companies but is not a focus of this piece.
- Weak intellectual property protection. Less complex drug molecules and formula are under threat of being copied by local generics producers. However, the industry's ferocious defence of their Intellectual Property (IP) has done much reputational harm (such as in South Africa over antiretrovirals).
- Poor access to healthcare infrastructure and service. This is cited by the World Health Organization as one of the biggest barriers to improving health. It is wide ranging in nature and reflects the resource poor nature of many developing economies. This includes low quality and lack of: hospitals and clinics, doctors and nurses, diagnostic tools, manufacturing, sanitation and the distribution and supply of medication. It is also affected by broader societal issues such as poor standards of water, electricity, education and transport.

The final point is crucial but difficult. It can often be beyond the resources and ability of a pharmaceutical company – however big they may be – to singlehandedly overcome and resolve the issue of poor healthcare infrastructure. It requires a wide range of stakeholders bringing expertise, commitment and resources for healthcare development to be successful. Despite the rapid growth in healthcare spending in developing countries and potential business opportunities, there continues to be significant hurdles in creating a viable commercial business strategy. At a wider-level, failure to overcome these barriers has major implications for the achievability of healthcare targets and, ultimately, sustainable social development in a world where two billion people still do not have access to health-related products they need.

Access to Medicine Index

A key player driving the industry's practices over the past ten years has been the Access to Medicine Foundation (ATM Foundation). This Dutch not-for-profit has analysed the top 20 research-based global pharmaceutical companies and ranked them according to their efforts to improve access to medicine in developing countries. The first Access to Medicine Index (ATMI) was published in 2008 and a new index has followed every two years. The latest 2016 Index was released on 14th November 2016[5].

Refinements over the years to the analytical framework – which now includes close to 100 indicators on company performance related to 50 or so diseases in low income countries – has reflected the ever evolving practices within the industry. The Index has acted as a useful and robust benchmark for companies, investors and stakeholders to compare a wide range of approaches within the industry to improve access to medicine.

As the Index gained traction with institutional investors, the ATM Foundation has started to collaborate more closely with the global asset management community. They have organised a series of engagement initiatives including an Investor Statement putting forward the view that access to medicine is a material issue to long-term

[4] Ernst & Young, 2014

[5] Access to Medicine Index

Continued

shareholder creation. We are signatories alongside 56 other institutional investors[6]. Over the past two years, we have met them on numerous occasions including at their office in the Haarlem, Netherlands and have developed a positive working relationship.

Engagement action

Our engagement history with pharmaceutical companies on this issue is extensive. It can be traced back to May 2007 when we had a discussion with **AstraZeneca**. At the time the methodology for the first Access to Medicine Index was being consulted with the industry. In total, our records show that we have had 150 engagements with 27 companies[7]. This includes 19 of the 20 largest global pharmaceutical companies on the ATMI such as **Pfizer**, **Novartis** and **GlaxoSmithKline (GSK)**. The only exception being Germany's Boehringer Ingelheim which is privately held and issues no equity or bonds. Our engagement also included emerging markets companies – some of which are major manufacturers of generic drugs such as **Ranbaxy Industries** and **Glenmark** – to increase awareness of these issues.

During the past ten years or so of engagement with the industry's leading players, our most important recommendation has been for access to healthcare to be clearly driven by commercial imperatives and to be better integrated into the business' main strategy. From an initial starting point of reticence, we have seen many companies doing increasingly more to improve their approaches to access, with a range of new initiatives and innovations. There has been a slow but gradual shift from philanthropic approaches to focusing on delivering commercial opportunities and establishing new business models. Transparency and disclosures from companies on these areas have improved drastically.

We significantly intensified our engagement with pharmaceutical companies in 2015 by initiating a project on this topic. The objective was to leverage the knowledge we have developed – especially of leading industry practices – over the past decade and to encourage companies with weaker practices to learn from and adopt them.

The project included[8]:

- One-to-one engagement with nine pharmaceutical companies. This included discussions with companies which we identified as having the most advanced practices (e.g. Novartis, Novo Nordisk) but also engagements with those over which we had concerns as having the weakest practices. Three of ATMI's lowest ranked companies are Japanese (Takeda Pharmaceutical, Daiichi Sankyo and Astellas). We engaged with these companies, which included a trip to Tokyo for meetings.
- A collaborative engagement initiative with the ATM Foundation and 40 other institutional investors representing $5 trillion of assets. We wrote to all 19 of the listed companies on the ATMI calling for full cooperation with the data collection and submission for the 2016 Index. This also included intensive engagement with **Roche** following its refusal to submit data. This was due to oncology treatments, in which Roche is a specialist, not being a part of the ATMI's scope of assessment. We encouraged the Swiss company to reconsider but this did not change the company's decision.

Assessment

We assess from our engagement on this issue that there are clear business-driven practices which pharmaceutical companies can adopt in the developing world – within both the largest emerging markets and the lowest income countries. From an investor's perspective, we have identified the following corporate practices which we consider to be material to shareholder value creation:

1. **Governance:** Senior management and board-level strategic oversight, commitment and accountability;
2. **Performance**: Clear objectives supported by measurable, time-bound targets which are regularly reviewed and monitored;
3. **Pricing:** Sophisticated and intricate approach to inter- and intra-market equitable pricing to ensure different populations with varying levels of affordability can access treatments;
4. **Capability advancement**: Contribution to the development of local healthcare infrastructure and supply chains with a transparent, long-term plan for cooperating with local stakeholders.

[6] Investor Statement Access to Medicine Index http://www.accesstomedicineindex.org/sites/2015.atmindex.org/files/investor_statement_atmf.pdf

[7] BMO reo engagement database: Jan 1 2006 - Nov 1 2016

[8] *reo* clients will find full detail and reports on each engagement within the online client portal. Search for engagement project "Access to medicines".

Continued

Based on these four practice areas, we see three broad levels of company performance within the industry:

- **Leading:** These are companies with the most sophisticated and nuanced approaches to delivering their strategic goals in the developing world. All four areas of practices identified previously will be in place (or clear steps are being taken to achieve it). A wide range of products are available and there are pipelines of relevant treatments for developing countries. We see companies in this category taking key steps to overcome manufacturing, distribution and affordability challenges by implementing novel pricing models in cooperation with local partners to ensure patients across the wealth/poverty spectrum can receive medication – while still making a profit. Reporting and disclosures are transparent and detailed. Of 23 companies we assessed, we rate ten companies within this category[9].
- **Average:** These companies have implemented key steps and are making progress, but there are a number of important areas which still need to be addressed compared to industry leaders. Companies may have adopted sophisticated approaches but these can be limited to certain countries/regions and are yet to be adopted business-wide globally and on a global scale. Of 23 companies we assessed, we rate seven companies within this category.
- **Weak:** Those in this category are laggards and are yet to develop a sufficient level of internal expertise or capability to overcome the challenges of developing world markets. As a result, most of the approaches adopted have little link to the central business strategy and there is little focus on delivering genuine commercial success. Many in this category see their presence in the developing world as being driven by philanthropy and motivated by corporate social responsibility. Of 23 companies we assessed, we rate six companies within this category.

Pricing

Our discussion in the past two years with companies has focused in particular on pricing. This is an area in which we have seen some big steps being taken. The underlying issue is that the affordability of western treatments is a key barrier in the developing world. Traditionally, this has resulted in global pharmaceutical companies predominantly targeting wealthy, urban patients (who pay out of their own pockets).

This has changed of late, with companies in the "Leading" category, in particular, establishing equitable pricing strategies that include affordability considerations. This has led to implementations of:

- *inter*-country equitable pricing (charging different prices for same drug for example between Netherlands and India);
- *intra*-country equitable pricing (charging different prices for same drug between different segments in the same country).

A number of leading companies such as **Gilead** commit to both and report specific details on its performance.

Intra-country equitable pricing – which we consider to be particularly critical to establishing long-term success in a developing/emerging market – is based on different pricing tiers. We have seen a number of companies differentiate amongst the tiers in the following ways: packaging/branding, manufacturing and distribution.

For example, the lowest, poorest, rural tiers are accessed by keeping costs to a minimum through local or outsourced production, different packaging/brand name, and distribution via development agencies and missionary groups. These steps are aimed at clearly differentiating one tier to the next and overcoming concerns of medications produced for poorer tiers being sold at lower prices to wealthier patients. This also means that companies can still have presence across the country and establish the corporate brand along the socioeconomic spectrum. The business model at lower tiers seeks to break-even or make a slim profit. Importantly, it also switches the corporate mentality and approach from a purely philanthropic activity to one that is delivering commercial opportunities.

[9] For more information on our engagement and assessment of specific companies, ***reo*** clients should refer to the client-only confidential Appendix of this piece.

Conclusion and next steps

Pharmaceutical companies are faced with a great opportunity to capitalise on the long-term growth potential in the developing world. There has been a realisation amongst some that a blunt go-to-market approach rarely results in the desired commercial success and that a tailored approach is required to place themselves in a position to enjoy the improvements in the country's economic fortunes.

Our engagement over the past ten years in this issue with the industry has driven the adoption of important practices. Our focus has primarily been on the largest companies in the industry but the challenge is to ensure that the wide range of players in the global healthcare market also adopt the innovative mind-set that we now see among the companies in the "Leaders" category.

As a next step, we will consider the analysis and findings of the 2016 Access to Medicine Index. We will also engage companies such as Roche on its plans in this area in the coming years. We will continue our dialogue with various stakeholders, including the ATM Foundation. The key objectives will continue to be establishing commercial success for companies in fast-growing developing markets and ensuring billions of the poorest people in the world have better access to an adequate standard of healthcare.