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MICROFINANCE
A victim of its own success

Environmental | Social | Governance

From the publishers of RI: responsible-investor.com
Responsible investment & insurance, sustainable banking, impact investing & social finance, corporate governance & sustainability.

ISSUE 02
Winter 2015

ESG *Magazine*

COP21: green deal or greenwash?


We go beneath the surface to get the clearest picture
Integrating sustainability isn't something we just dip into. Why? Because sustainability is a key value driver. By asking the right questions, we identify ESG factors that can impact future performance. This enhances our approach to identifying long-term risk and reward potential. And that leads to better informed investment decisions. Surface facts alone don't always reveal the best opportunities. Going deeper does.
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ISSUE 02
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ESG
Magazine

Good COP, bad COP

Hugh Wheelan, *Managing Editor and co-founder, Response Global Media*

ALL EYES ARE ON PARIS this December for the outcome of the UN COP21 climate change conference that will set the environmental policy agenda for the decade 2020-2030, and beyond.

This second issue of *ESG Magazine* is the first in a two-part COP21 special. The first issue you are now reading focuses on the fundamentals of climate change for investors: international policy, investor response, fiduciary duty, CO_2 measurement and engagement, and socio/economic pressure. Let's call it the 'risks' issue for shorthand.

Its sister issue in March will highlight the technologies pioneering the environmental revolution, as well as the leading investment responses to climate change from asset owners (pension funds/insurers) and their agents (asset managers/banks). Let's call it the 'returns' issue.

In reality, of course, neither the 'risks' or 'returns' label satisfies for either publication given that climate change is a hugely complex combination.

AS, OF COURSE, IS COP21. Headline success is likely to be judged on whether the conference can establish trust between developing and developed countries over climate financing. The first step has been an upfront show of will. On mitigation and adaptation, at the time of writing, 138 countries – responsible for about two-thirds of global emissions – have produced GHG emissions reduction targets, known as Intended Nationally Determined Contributions (INDCs). Their purpose is to demonstrate how countries plan to do their bit to hold the global average temperature rise below the 2°C threshold. Investors would do well to study these plans carefully.

After the upfront commitment comes the money talk. This, as ever, could be the fly in the ointment, particularly the proposal that developed countries further support developing nations by scaling up the $100bn per year by 2020 already committed. The World Bank says there is a gap of $70bn in existing promises. Closing that gap, and prolonging the flow of capital – to clearly economical ends – is critical to building the trust necessary to reach a robust deal in Paris.

The good news is that in 2014 more money than ever before – at least $391bn – was invested in low-carbon and climate-resilient actions. The bad news is that brown financing still outstrips this, and CO_2 emissions show little sign of abating. Globally, the IEA estimates that fossil fuel 'subsidies' alone are nearly $550bn per annum.

ENCOURAGINGLY, INSTITUTIONAL INVESTORS are increasingly part of the discussion about mobilising that climate finance; and many of the biggest will be in Paris. It is fundamental, of course, given their role as shareholders and long-term financiers that they are brought clearly into the fold. Investors have the potential – and we would argue, the responsibility – to influence how seriously their investee companies, particularly energy giants, take climate change, and manage the difficult, but necessary transition. And, they can mobilise vast amounts of social capital on behalf of their billions of beneficiaries to invest in green energy, buildings and transport infrastructure, as well as support a practical, and vital, price on carbon in financial markets.

Sadly, it's taken all too long to get here: perhaps an indication of how 'financially' seriously the environment has been taken to date.

Let's hope though that we have a good COP21, which takes clear, practical steps in which markets and investors are brought on board to be good rather than bad cops in climate finance.

This issue's ESG visual highlight

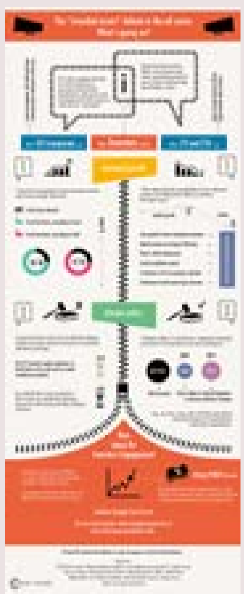
Each issue of *ESG Magazine* features a series of images or photos that we believe speak louder than words on an ESG issue.

This month, one of our main Feature articles features the award-winning 'infographics' of the Carbon Tracker Initiative. The financial NGO coined the phrases 'unburnable carbon' and 'stranded assets' to back up its stellar research work calculating the CO_2 locked up in the projected fuel reserves of fossil fuel companies, and then extrapolating by how much the CO_2 in the atmosphere would beyond the mooted 2°C danger point if it was all burned.

The research was seminal in waking investors up to the valuations of energy companies today, which are heavily based on the future projected reserves they can extract for use.

A key part of its messaging has been its infographic imagery, examples of which you can see on pages 35 and 36 of this issue, or in full at Carbon Tracker's website: http://www.carbontracker.org/cti-in-the-media/

The work of Carbon Tracker will feature prominently in the discussions in Paris. Indeed, it's hard to remember what we were talking about before their clear, insightful research, terminology and visuals were produced.



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Trending this issue: we look at how the theme of **energy efficiency** in investment is emerging strongly as a raft of supportive international policy initiatives kick in. Our **asset classroom** page looks at how the theme cuts across strategies. It posits the growing risk and return materiality factors as regulations tighten, technology develops and client demand adjusts.

On **insurance**, we profile the **Principles for Sustainable Insurance (PSI)**, which is raising its visibility on the back of announcements that insurers representing 20% of world premium volume have partnered with the UN to finance a greener environment, allied with major work on disaster risk reduction, climate change adaptation and mitigation, and financial inclusion.

Coal stocks have fallen on very hard times, and banks that finance the sector are under pressure to explain how they tally their investments in the CO_2-intense fuel with commitments to a 2°C temperature rise. Our **sustainable banking** page examines the economics and the players involved.

Finally, **microfinance** has suffered from accusations of being unethical, opaque and charging excessive interest rates to clients. An industry initiative to turn that around, the 'model legislation for financial consumer protection' is emerging: ESG Magazine looks at what it means.

TRENDS

MSCI CARBON SOLUTIONS

Tools to help institutional investors benchmark, measure and manage carbon risk

Climate change presents one of the largest economic and political challenges of the 21st century. Over the coming decades, efforts to mitigate and adapt to climate change may have wide-ranging policy, economic, and technological impacts, potentially creating risks and opportunities for institutional investors.

MSCI ESG Research offers a suite of tools that can help investors implement a fossil fuel exclusion or low carbon strategy and uncover opportunities.

- **MSCI ESG CARBONMETRICS:** Quantitative data on carbon emissions and carbon intensity, as well as reserves and potential emissions by fossil fuel type for over 8,500 companies.
- **MSCI ESG CLEANTECH METRICS:** Identify cleantech opportunities across five themes: Alternative Energy, Energy Efficiency, Green Building, Pollution Prevention, and Sustainable Water.
- **MSCI CARBON PORTFOLIO ANALYTICS:** Measure the carbon footprint and carbon risk exposure of your portfolio in comparison to informative benchmarks with this comprehensive analysis and reporting tool.
- **NEW! CARBON FOOTPRINT CALCULATOR:** Generate portfolio-level carbon footprint metrics with the click of a button, delivered real-time in Microsoft Excel.
- **MSCI GLOBAL LOW CARBON AND ENVIRONMENTAL INDEXES:** Choose from a range of innovative environmental and low carbon benchmark indexes.

Learn more about ESG Carbon Solutions or contact us **esgclientservice@msci.com**

CARBON METRICS

CO_2
LOW CARBON INDEXES

CARBON PORTFOLIO ANALYTICS

CLEAN TECH METRICS

The percentage of fossil fuels per region that needs to be kept in the ground to keep the temperature rise under 2°C

North America

86.8%

246.14bn tonnes

86.8% of regional resources

Central and South America

46.5%

19.39bn tonnes

46.5% of regional resources

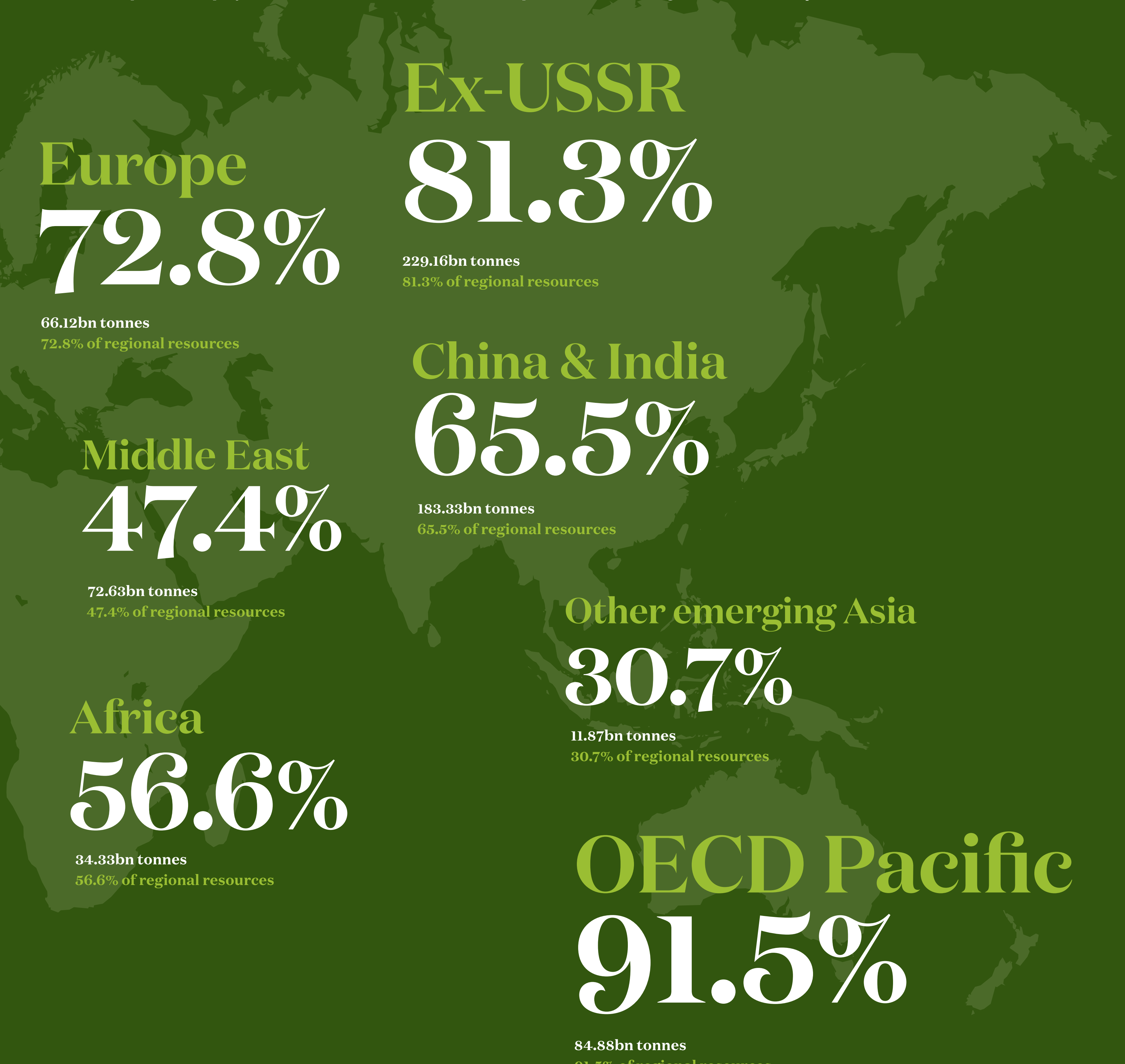
NOVETHIC, the Paris-based media and research centre, part of the Caisse des Dépôts French sovereign wealth group, aims to raise awareness among financial professionals on sustainable investment issues. Its latest Climate Risk interactive map, is a fascinating, web-based exposé of the multi-faceted challenges of climate change.

The world's economies are fossil fuel dependent. If we burn all the identified reserves of coal, oil and gas, the earth could warm by 8°C in less than a century, according to the most pessimistic projections. In this world, human civilisation would clearly be threatened and its economic and financial system unviable. In order to prevent dangerous anthropogenic interferences with the climate system, the scientists of the Intergovernmental Panel on Climate Change say global warming must be kept under a 2°C threshold before 2100.

The Novethic pedagogical app runs over five chapters and shows the carbon intensity of each country and the amount of unburnable fossil fuels. It then visualises how states, investors and companies are committing to preserve the climate via new regulatory pathways, changing business models and investment backing.

This map from the Climate Risk app shows the percentage of fossil fuels that need to be kept in the ground to keep the temperature under 2°C. The economic implications are clear and startling.

Significantly, the Carbon Risk app can be embedded into your web pages by integrating the following coding: <iframe width="100%" height="694" frameborder="0" scrolling="no" src="http://www.carbon-risk.com"></iframe>



Asset Classroom: New global initiatives mean energy saving could insulate returns across asset classes

The energy efficient frontier

DANIEL BROOKSBANK

© BASF

Keeping the heat in: capturing the energy efficiency theme could be transformative

ENERGY EFFICIENCY CAN BE a difficult theme to invest in across asset classes, and to gauge success in doing so.

Part of the problem is that it is often overshadowed by larger thematic investments such as renewable energy infrastructure. It's also just less quantifiable and visible.

It hasn't really been at the forefront of regulators' minds either.

That is changing as a raft of international initiatives start to kick in.

Energy efficiency cuts across asset classes. For example, if you are invested in real estate, you are (whether you know it or not) making a play on energy efficiency via ever-tightening regulation, tenant demand and management response to that.

The International Energy Agency's Energy Efficiency Market Report, released in October, showed energy efficiency improvements in buildings over the past 25 years saved a cumulative $5.7trn in energy expenditures. Put another way, improvements since 1990 avoided 870m tonnes of CO_2 emissions in 2014 alone. So energy efficiency is clearly material.

It's perhaps hard to make an investment case for energy efficiency as it seems like making a case for good management. And how many investors have an explicit allocation to that? Capturing the theme is difficult. But get it right and it could and should be transformative. That's the hope of the slew of initiatives trying to raise the profile of energy efficiency.

> "Energy efficiency is a key objective of the UN's Sustainable Energy for All (SE4ALL) plan"

Major institutional investors and banks have put their weight behind many of the campaigns, stressing the importance of energy efficiency ahead of the UN climate talks in Paris. This is a sign that links in the investment chain are realising the importance of the topic. Notably, the California State Teachers' Retirement System (CalSTRS), the $189.7bn US pension giant, has announced it is a lead investor in a new corporate energy productivity project.

As China gears up to make sustainability issues a major part of its five-year planning and ahead of its taking over the chair of the G20, observers expect this could push the theme forward even more.

Indeed, the G20's Energy Efficiency Investor Statement is already clear: "We recognize the need to fully embed energy efficiency into our investment process." It was signed and endorsed by the UN Environment Programme Finance Initiative (UNEP FI), the Principles for Responsible Investment (PRI) and Ceres, the US-based advocacy group.

THE DECLARATION COMMITS signatories to a six-point programme, including embedding energy efficiency into the evaluation of companies as well as company engagement and voting. Crucially, energy efficiency will also be a factor in the way asset managers are selected. When energy efficiency becomes a key differentiator when mandates are awarded – ie, when hard cash is allocated – then it will be truly material.

A set of five voluntary energy efficiency investment principles for G20 participating counties has been developed by the International Partnership for Energy Efficiency Cooperation (IPEEC), which is hosted by the International Energy Agency in Paris. The benefits of energy efficiency, in the words of the IPEEC head Benoît Lebot are "wide-ranging: economic, developmental, environmental, social".

Meanwhile, some 70 banks have banded together as the 'Alliance of Energy Efficiency Financing Institutions', an initiative coordinated by the European Bank for Reconstruction and Development (EBRD) and UNEP FI. Their nine-point declaration notes the banks "are willing to work with" institutional and public financiers. Taken together these initiatives cover much of the global capital markets.

Energy efficiency is also a key objective of the UN's Sustainable Energy for All (SE4ALL) plan, which aims to double the energy efficiency improvement rate by 2030.

SE4ALL has some serious heft behind it. It is chaired by Chad Holliday, ex-chairman at Bank of America who now chairs Royal Dutch Shell. In a move that will raise the profile of the project among investors, Rachel Kyte, the World Bank's special envoy for climate change, takes the helm of SE4All in January 2016. Her predecessor Kandeh Yumkella said: "Rachel is a strong and persuasive advocate who knows where we are and where we want to go."

Energy efficiency is in potent, efficient hands. Investors should take note of how these burgeoning initiatives could influence the companies and assets across their portfolios.

The Principles for Sustainable Insurance is seriously raising its profile ahead of COP21

Prevention over cure

MARGAUX GATTY

ON 29 SEPTEMBER, Mark Carney, governor of the Bank of England, delivered a landmark – and symbolic – speech on climate change at Lloyds of London, the historical heart of the global insurance industry. It underlined the role of insurers as 'mega-risk' managers, and posited climate change as one of the biggest. Carney issued a stark warning about the potential effects of climate change on global economic stability, drawing attention to issues such as the rise in weather-related catastrophes. He also alluded to the potential for insurers to be large-scale green financiers to lessen such risks.

Cue the Principles for Sustainable Insurance (PSI), which, while not new, is significantly raising its profile on the work Carney suggested. In June this year, the PSI announced that insurers from across the world representing 20% of world premium volume had partnered with the UN to contribute more intensively to a greener environment. Additionally, the PSI launched a new platform for insurers to support disaster risk reduction, climate change adaptation and mitigation, financial inclusion, green investment, and accountability and transparency.

The PSI started after the United Nations Environment Programme Finance Initiative (UNEP FI) conducted a series of research studies from 2006–09, before being fully developed in 2011–12.

In short, it is equivalent to the United Nations-supported Principles for Responsible Investment (PRI) for ESG integration into the insurance sector. The four principles, which are similar to the six of the PRI, include signing up to look at integrating ESG issues into insurance business lines and promoting ESG across the insurance industry. About 50 insurers are now signatories.

Until June, the PSI had been quietly active in its endeavours, involved, for example, in working with the UN World Food Programme to insure small-scale farmers in Africa in case the rains fail. Its parent, UNEP, had also partnered with insurers to develop wind power derivatives in Mexico for less windy periods.

The new, bolder move is underpinned by four major developments that form the backdrop to the PSI's strategic path. These are March 2015's Sendai Framework for Disaster Risk Reduction 2015–30, July's UN Conference on Financing for Development, September's UN Sustainable Development Goals and the November/December COP21 conference.

At the UNEP-FI Annual General Meeting (AGM) conference on 12–13 October, hosted by Amundi in Paris and produced in partnership with Responsible Investor, the PSI said work on ensuring access to insurance to the least well off who are concomitantly the most vulnerable to disasters was a double-bottom-line for insurers. Butch Bacani, who leads the insurance and investment work programmes at UNEP FI, said this would encourage "prevention rather than cure". PSI's vision he said, was "risk awareness where the insurance industry plays its full role in enabling sustainable economic growth while tackling climate change risks through mitigation or adapation". Mark Wilson, CEO of UK insurer Aviva, was cited for his comment that "profit comes after positively impacting on society".

For the 'prevention' purpose, the PSI earlier this year launched a Global Risk Map on natural disasters.

BUT ACTIONS SPEAK LOUDER THAN WORDS.

Swiss Re, Munich Re and AXA say they are now implementing the PSI principles in daily business. Axa has a PSI International Climate Resilience Survey of cities and SMEs. Munich Re and the World Bank have collaborated on surety bonds that integrate ESG factors. Astrid Zwick, head of corporate responsibility at Munich Re, said being a PSI signatory added a further positive dimension to Munich Re's management which, she said, was key to long-term successful business strategy. Swiss Re has a sustainability risk framework covering all of its business. Andreas Spiegel, head sustainability and political risk at Swiss Re and co-chair of the PSI board with Leona Murphy, chief strategy officer of Insurance Australia Group, said this included controls on sensitive business risks and corruption and human rights warning flags.

As COP21 approaches, the French Insurance Association (AFA) has published a report on 'Valuation of the Impact of Climate Change on the Insurance Sector', predicting the cost of climate change to the insurance sector in the next 25 years. The French Federation of Insurance Societies (FFSA) hosted a conference on 27 November on 'Climate Change & Financial Regulation'.

As the UN, governments and stakeholders convene in Paris for their big push on climate resilience, the insurance industry aims to be out front. The PSI is now a clear part of that move.

PSI Principles for Sustainable Insurance

- We will systematically consider ESG issues in our business principles, strategies and operations.
- We will engage with insurance industry participants to raise awareness on ESG issues, reduce risk and develop solutions.
- We will work together with society to enhance our effectiveness in implementing the Principles.
- We will be transparent by reporting on our progress and activities in implementing the Principles.

The PSI board

Co-Chairs

Leona Murphy, Chief Strategy Officer, Insurance Australia Group (Australia)
Andreas Spiegel, Head, Sustainability & Political Risk and Director, Group Risk Management, Swiss Re (Switzerland)

UNEP Representative

Eric Usher, Acting Head, UNEP Finance Initiative (Switzerland)

Members

James Wallace, Insurance Lead – ESG Office, Allianz (Germany)
Muhammad Owais Ansari, Chief Operating Officer, FWU Global Takaful Solutions, Atlanticlux Lebensversicherung/FWU Group (Luxembourg)
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Fatima Lima, Sustainability Director, Grupo Segurador Banco do Brasil e Mapfre (Brazil)
Jim Costello, Chief Executive Officer, HSBC Life Insurance Company (China)
Astrid Zwick, Head, Corporate Responsibility, Munich Re (Germany)
Vanessa Otto-Mentz, Head, Strategy, Santam (South Africa)
Tomas Carmona, Superintendent, Corporate Sustainability, SulAmérica (Brazil)
Barbara Turley-McIntyre, Senior Director, Sustainability & Corporate Citizenship, The Co-operators Group (Canada)

The major banks are ignoring calls to withdraw from coal, but is this smart business?

Big banks dig in on coal finance

JAN WAGNER

FROM A BUSINESS PERSPECTIVE, financing coal has been a no-brainer for bankers. A key source of energy since the Industrial Revolution, the industry boomed at the start of this century as quickly industrialising economies like that of China needed more power. Since 2000, global coal production has jumped 69% to about 8bn tonnes annually.

There's money to be made in such a boom, so banks were more than eager to support the coal sector, whether in the form of loans or securities underwriting. Profundo, a Dutch economic think-tank, calculates that between 2005 and 2014, 93 banks provided €373bn in finance. And among the top 20 in terms of business volume were many of the world's best-known brands (see chart). Two of the top banks are based in China – which, like the US, relies heavily on coal for power.

But the coal industry has fallen on hard times. As 2014 ended, worldwide demand for the energy source declined as the US used more natural gas from fracking and the Chinese economy slowed.

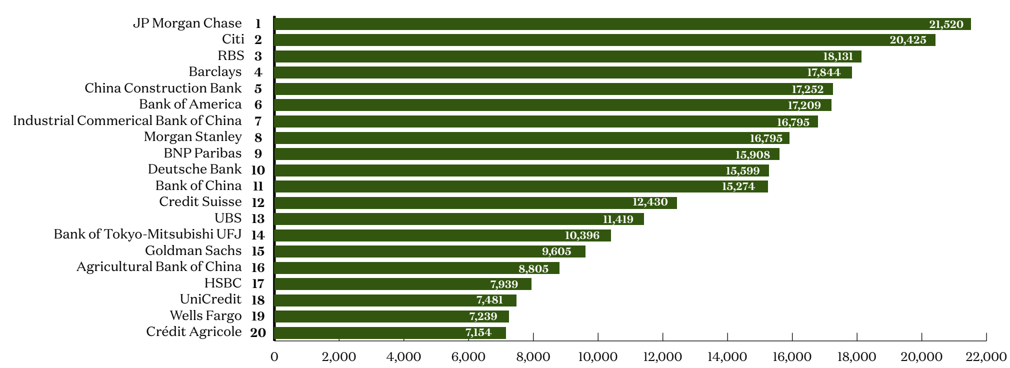
According to Greenpeace, global coal consumption fell by between 90m and 180m tonnes in the first half of this year, the largest drop on record.

The rise of renewables has weighed on demand. Another source of worry is that a global agreement to reduce emissions of carbon dioxide (CO_2) is expected from the Paris climate summit (COP21) in December. Should it have real teeth, it could spell the beginning of the end. Carbon Tracker, the UK environmental think-tank, says 80% of coal reserves must remain untouched if governments want to cut CO_2 emissions to a point where global temperature rises are kept to 2°C. The industry's troubles are reflected on financial markets, where share and bond prices of coal companies have fallen sharply.

Johan Frijns, director of BankTrack, an NGO that promotes sustainable banking, says that because coal's hugely negative impact on climate is now widely known, banks face a serious reputational risk by continuing to finance the sector. In the run-up to COP21, BankTrack has therefore devised a 'Paris Pledge' under which banks can swear to withdraw from coal financing completely. "We understand perfectly that big banks can't cancel their loan obligations from one day to the next. So the pledge gives them some flexibility on the time frame," he says. "For us, the important thing is that the banks publicly commit to phasing out coal and publish a specific plan to do so." So far, 12 banks have signed up to the pledge, though Frijns admits these institutions, most of which are ethical banks like Triodos, have never been big coal financiers to begin with.

That said, ethics as well as coal's flagging fortunes have already prompted some major banks to distance themselves from the sector. Since last May, this group includes three on Profundo's list – Bank of America, Citigroup and Crédit Agricole. In mid-October, France's Natixis went further than any peer by announcing it would no longer finance coal-fired plants or thermal coal mining projects. According to

Top 20 coal banks, 2005–April 2014, €m



Source: Profundo

> "The industry's troubles are reflected on financial markets, where share and bond prices of coal companies have fallen sharply"

Natixis, its decision was influenced not just by a desire really to embrace renewable finance, which it sees as the future, but also the "environmental, economic and regulatory risks" associated with coal. Natixis provided €1.7bn in finance to coal from 2005–14.

Frijns notes that between the moves away from coal by Crédit Agricole and Natixis and its own sponsorship of COP21, it's unfortunate that BNP Paribas remains a major coal financier (ninth on Profundo's list). BNP Paribas' response is that while it continues to finance coal, its exposure is below the worldwide average. The bank says: "The electricity mix financed by the group includes 22% coal, compared with a figure of 41% for coal in the worldwide energy mix. We are therefore doing much better than the overall worldwide average."

BNP Paribas says that before approving a coal-fired plant, it ensures that minimum energy standards are met and even checks that there are no alternative solutions for providing the energy. Just one spot below BNP Paribas on Profundo's list is Deutsche Bank. Asked about its €15.3bn in coal finance, the bank said: "It's currently not possible to meet worldwide energy demand by renewables alone. For this reason, we will continue to finance a host of energy technologies. And in some of the world's regions, there is still no alternative to coal."

Despite its recent troubles, banks are betting that coal will remain a key source of energy for years to come and there is some evidence to support this. The International Energy Agency (IEA), for example, dismisses the 'peak coal' view, saying that global demand for the stuff will actually rise to 9bn tonnes in 2019. Banks that remain in coal may be right. But those that are already withdrawing and switching to renewable finance could show that they are the true 'clean energy' leaders of their industry.

Microfinance is getting its house in order following several years of criticism

A victim of its own success

HUGH WHEELAN and MARGAUX GATTY

IN RECENT YEARS, microfinance – once the darling of NGOs, politicians and social investors alike – has suffered from serious accusations of being unethical, opaque and charging excessive interest rates to clients.

Egregious practices – notably in Mexico – were followed by the Indian microfinance boom and scandal of 2009–11, when it emerged that several dozen people in the south Indian state of Andhra Pradesh had committed suicide, reportedly because they could not pay back microfinance loans carrying heavy payback rates.

Rupert Scofield, president and chief executive officer of Washington DC-based Finca International, one of the world's first microfinance organisations, started in the early 1980s, says the industry has lived through a "perfect storm" of criticism based around a glut of capital and a dangerous slide from its original goals of poverty reduction into a lucrative loan finance industry: "Microfinance was a victim of its own success. It's still a hugely saturated sector because capital is a plentiful commodity right now."

IN RESPONSE TO THE CRITICISMS, the 10-person strong Microfinance CEO Working Group, on which Scofield sits, earlier this year established 'model legislation for financial consumer protection'.

The legislation is based on the Client Protection Principles of the Smart Campaign, a global effort to unite microfinance leaders around a common goal: to keep clients as the driving force of the industry and maintain microfinance's double bottom line objective.

The working group hopes microfinance service providers, known as MFIs (microfinance institutions) will voluntarily sign up for the industry oversight, and that this will go some way to bridging the legal and regulatory gaps that have enabled bad practices to sully the sector and overshadow its valuable work. It says the model could also be useful to policy-makers as a tool in developing actual, enacted legislation.

The group meets monthly. At the core of its model legislation is what it says will be an unbiased supervisory authority (SA) that will act as a quasi-regulator. The SA will have the broad role of industry 'supervisor' to try and prevent any violation of the Client Protection Principles. But, importantly, if a violation occurs, it will have the necessary enforcement powers to penalise the guilty parties and settle the issue. Its guiding principles are transparency, no over-indebtedness and ethical practices.

Transparency

For the supervisory authority to act as a regulator, it will require all MFIs to register and provide detailed reports of their activities. Notably, this means consistently evaluating their services to minimise the risk of harm to clients. A list of prohibited acts and disclosure principles will be set. The authority will also be allowed to collect and publish the interest rates and fees charged to clients – based on standardised disclosure and calculations – to offer other potential clients the opportunity to compare market rates. This will bring more competitiveness to the market.

No over-indebtedness

Suitability and affordability procedures that will allow a detailed assessment of the credit-worthiness of clients will be fixed to avoid over-indebtedness of clients before credit is offered. Microfinance service providers will agree to practice responsible pricing.

Ethical practices

It will be prohibited for MFIs to ask for a waiver of rights (protecting the providers from being sued by the clients) to be included in contracts. Instead, an arbitration clause will be included.

Rules on 'fair and respectful treatment of clients' will be applied. The supervisory authority will oversee that no discrimination is practised, especially at the debt-collection stage when clients are most vulnerable.

A private policy to protect clients' data will be respected and enforced by a privacy officer. Microfinance providers must also form internal complaint handling units to answer conflicts with any clients, and the SA will be there to facilitate the resolution of the conflict.

On top of the model legislation, the industry has been working on common tools for measuring social performance via an organisation called The Social Performance Taskforce. Its reference manual, The Universal Standards for Social Performance Management, lists best measurement and assessment practices.

These initiatives attempt to tackle the weaknesses that have caused the reputational slump of microfinance. For the sake of the excellent work of the majority of the sector, investors should throw their support behind them.

The Microfinance CEO Working Group
http://microfinanceceoworkinggroup.org
The Smart Campaign
www.smartcampaign.org/about
The Social Performance Taskforce
www.sptf.info

The Microfinance CEO Working Group

Shameran Abed, Director Microfinance, BRAC
Scott Brown, President and CEO, VisionFund International
Alex Counts, Founder, Grameen Foundation
Lauren Hendricks, Executive Director, CARE USA, Access Africa
Steve Hollingworth, President, Freedom from Hunger
Mary Ellen Iskenderian, President and CEO, Women's World Banking
Rosario Perez, President and CEO, Pro Mujer
Michael Schlein, President and CEO, Accion
Rupert Scofield, President and CEO, Finca International
David Simms, President, Opportunity US & Global Chief Development Officer, Opportunity International
Anne Hastings, Executive Director, Microfinance CEO Working Group
Elisabeth Rhyne, Managing Director, Center for Financial Inclusion
Maura Hart, Public Relations and Communications Manager, Microfinance CEO Working Group

Grupo Financiero Banorte: Building a lasting history with Mexico

More than just solid fundamentals... solid ESG practices that make Grupo Financiero Banorte a sound investment.

115 years of making history with Mexico due to:

- **Solid corporate governance**
  Grupo Financiero Banorte has strong policies, decision and control systems

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Empresa Sustentable

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Sustainability Indices
In Collaboration with RobecoSAM

- **Appropriate risk management**
  To achieve a good management of the risks the group has assumed, GFNorte has clearly determined its risk taking acceptance and has strengthened its risks management practices
- **Retail business transformation**
  Banorte is transforming its retail business with the aim to generate a superior customer experience.
- **Sustainable business practices**
  Grupo Financiero Banorte is one of Latin America's leading sustainable companies, and the only financial institution in Mexico in the Dow Jones Sustainability Emerging Markets Index.

  For the fourth consecutive year GFNorte is listed in the Sustainable IPC Index of the Mexican stock exchange.

  Also, it is the only Latin American company to be part of CDP's Climate A List, leading the corporate response to climate change.

GFNorte invites you to continue to build this success story together....
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GRUPO FINANCIERO BANORTE

Our cornerstone feature this issue is a COP21 special focusing on the fundamentals of climate change for investors: international policy, investor response, fiduciary duty, CO_2 measurement and engagement, and socio/economic pressure.

Al Gore and David Blood argue that the urgent need for **decarbonisation** of the global economy will have significant implications for private-sector market participants, and outline why. Another piece looks at how the transition to a **low-carbon economy** will involve significant value creation and value destruction, and what that means for investors portfolios. One thing is already clear: mainstream benchmarks are most definitely not 2°C aligned!

New **research** argues that shifts in climate change-related sentiment from new technologies, extreme weather events, and policy commitments such as the COP21 climate negotiations, could drive short-term financial returns.

However, many **pension funds** are doing little (if anything at all) to address climate risks in investment decisions: we look at the **social pressure** they are starting to face and ask if they face **legal action** for not doing so?

A starting place, of course, is **carbon measurement**: how it can actually be done, and why, despite investor progress on reporting and lobbying, do corporate greenhouse gas emissions continue to rise?

FEATURE

What's on the agenda at COP21 and what's likely to be agreed?

The green financing gap

HUGH WHEELAN

AS THE GOVERNMENTS of more than 190 countries gather in Paris for COP21 – or, to give it its official title, the United Nations Framework Convention on Climate Change, 21st Conference of the Parties – with the aim of reaching an agreement to reduce global greenhouse gas (GHG) emissions and avoid the threat of dangerous climate change, an overview of the purpose and potential outcome of the conference is key; notably for investors.

The context of COP21 is that current governmental commitments on GHG emissions end in 2020. In Paris, the 'plan' is for governments to produce an agreement on the decade 2020–30. The science has been repeated ad nauseum, but is worth reiterating. The Intergovernmental Panel on Climate Change (IPCC), the international body for the assessment of climate change, comprising the pre-eminent climatologists and scientific advisers from 195 countries, says if GHG levels continue to rise and pass the estimated threshold of a temperature rise of 2°C above pre-industrial levels, we enter the territory of dangerous, unavoidable and multi-faceted impacts from climate change. On current emissions trajectories we are heading for a rise of about 5°C.

Broadly speaking, what's on the table at COP21, as outlined in October's quixotically-named: 'Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP)' held in Bonn, Germany, is ratification of country–specific and global mitigation, adaptation and financing plans. These sit alongside agreements on technology transfer, transparency, capacity building and stocktaking of results.

On mitigation and adaptation, at the time of writing, 138 countries – responsible for about two-thirds of global emissions – have come up with GHG emissions reduction targets, known as Intended Nationally Determined Contributions (INDCs) that had already been called for. On present commitments, the EU says that by 2030 it will cut its emissions by 40% compared with 1990 levels. The US says it will cut emissions by 26– 28%, compared with 2005 levels, by 2025. China says its emissions will peak by 2030.

The purpose of the INDCs is to hold the global average temperature rise below the 2°C threshold, although their firmness is questioned. Observers believe the likely emissions reduction responses so far would mean a rise of circa 3–3.5°C. In principle, the INDCs are to be quantifiable, unconditional (at least in part), and the data/information underpinning them is to be shared. Each nation should review its mitigation policy every five years. These nation-level adaptations should be co-ordinated internationally, with special support for least developed countries (LDCs) and small island developing states (SIDS).

Global financing for mitigation and adaptation could, as ever, be a stumbling block in the talks, particularly the proposal that developed countries further support developing nations by scaling up the $100bn a year by 2020 already committed. Indeed, there are question marks about the extent to which the original money has been mobilised to date. The parties to COP21 provisionally agreed in Bonn to prioritise grant-based and concessional finance to the poorest/most vulnerable countries and factor climate change resilience into international development assistance. Importantly, they put forward a proposal to reduce international support for high-emissions and so-called 'maladaptive investments'. There is, as of yet, however, no commitment to a global price on carbon.

Reference links

Intended Nationally Determined Contributions (INDCs): *www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx*
UN Framework Convention on Climate Change: *http://unfccc.int/2860.php*
UN COP21 newsroom: *http://newsroom.unfccc.int*
IPCC 2014 Synthesis report: *www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf*

ESG Magazine's COP21 Paris events timetable for investors

NOVEMBER	
30	**Launch of COP21** *www.cop21.gouv.fr/fr* **Climate change: the finance sector and pathways to 2°C** *www.strategie.gouv.fr/evenements/climate-change-finance-sector-and-pathways-2*
DECEMBER	
1	**European Forest Institute's ThinkForest Conference** Experts, politicians and private sector speakers *www.foresteurope.org/events/thinkforest-seminar-forest-bioenergy-europe-towards-sustainable-options*
1–4	**International Conference on Water, Megacities and Global Change in Paris, hosted by UNESCO** *http://eaumega2015.sciencesconf.org/*
2	**'From the COP21 to territories: let's develop sustainable heat!'** *www.cop21.gouv.fr/fr/societe-civile/labellisation-et-soutien-aux-projets/de-la-cop21-nos-territoires-developpons-la*
2–3	**5th annual World Pension & Investments Forum, Paris** (Responsible Investor and ESG Magazine Managing Editor, Hugh Wheelan, is moderating)
4	**Climate Summit for elected representatives:** co-presided by Paris Mayor Anne Hidalgo and Michael Bloomberg, special envoy for the UN Secretary General for Cities and Climate: speakers include mayors, governors and local leaders *www.paris.fr/actualites/cop-21-un-sommet-des-elus-locaux-pour-le-climat-2725*
4–10	**'Live the climate experience'** exhibition at the Grand Palais, Paris *www.solutionscop21.org/en/program/*
5–6	**The Global Landscapes Forum:** positioning landscapes in the new international agreements on climate and sustainable development *www.landscapes.org*
7–8	**The 6th Sustainable Innovation Forum (SIF15)** organised by UNEP and Climate Action *www.cop21paris.org*
8–9	**Energy for Tomorrow Conference** hosted by the *International New York Times*: CEOs, policy-makers, energy entrepreneurs and leading academics *http://inytenergyfortomorrow.com*
11	**COP21 ends**

The Allocating Capital for Long-Term Returns report reasserts the ever-stronger business case for sustainable capitalism and suggests three interconnected ideas for action

Gore and Blood: There is no 'do nothing' option

AL GORE and DAVID BLOOD

Al Gore is chairman of Generation Investment Management and a former vice president of the United States. David Blood is senior partner of Generation Investment Management.

For more information about The Generation Foundation, visit www.genfound.org **or follow us on twitter** @GenerationFndt

THE IMPORTANCE OF SUSTAINABILITY to business and investing has intensified as financial markets are forced to address challenges posed by the effects of unabated carbon emissions, the realities of unsustainable depletion of natural resources – like topsoil and ground water – and rapid urbanisation, to name just a few. As the context of business and investing shifts, understanding the economic benefits of a more sustainable form of capitalism has become even more critical.

While governments will take centre stage in the Paris negotiations, the urgent need for decarbonisation of the global economy will have significant implications for private-sector market participants. COP21 will hopefully serve to accelerate the transition to a low-carbon economy. However, government action is just one of several key levers for change, albeit a vital one, in the push towards economic decarbonisation. The business case for considering carbon in the risk and return profile of assets is compelling and gaining momentum.

The Generation Foundation, the advocacy initiative of Generation Investment Management, recently published a white paper, *Allocating Capital for Long-Term Returns*, where we reassert the ever-stronger business case for Sustainable Capitalism and suggest three interconnected ideas for action.

The tailwinds behind the uptake of Sustainable Capitalism include:

- The transition to a low-carbon economy
- More business models leveraging technology that improves asset utilisation, therefore conserving resources, in the 'sharing economy'
- Maturing field of sustainable finance: increasing demand, changing nature of consumption patterns, better tools for analysis in both accounting and reporting
- Calls to update the measurement of growth beyond GDP
- A shift in behaviours and attitude towards sustainability between generations with more enthusiasm and commitment from the Millennial generation and centennials.

Figure 1 shows three clear steps from institutional investors that would align them with this transition.

By incorporating these concepts now, investors, asset owners, corporate executives and boards can more effectively allocate capital for long-term gain.

Let's look at this more closely.

1. Three interconnected ideas to mainstream Sustainable Capitalism

Assess carbon risk and price carbon in all capital allocation decisions

The transition to a low-carbon future will revolutionise the global economy. However, investors must also acknowledge that carbon risk is real and growing. In spite of the impressive leadership emerging within the business community, it is neither realistic nor fair to expect business to do the policy work of governments. As such, we strongly support a regulated carbon price through a global pact or series of regional agreements. Momentum towards this goal is mounting as governments representing over half of emissions now support carbon pricing. By 2016, nearly 25% of all carbon emissions will be priced. Notably, about half the world's emissions that will be priced will result from the national cap-and-trade programme China has announced that it will implement in 2016.

Furthermore, an increasing number of companies apply a shadow price on carbon when conducting asset valuations, a practice we encourage in the absence of widespread regulation. In 2014, 150 companies reported using an internal shadow price on carbon with prices ranging from $8 to more than $60 per tonne of carbon. The reality, however, is that carbon largely remains an unpriced externality in financial markets today. Although it is impossible to know the exact timing of the prospective tipping point when financial markets will fully internalise carbon risk, it is critical for investors to prepare for its inevitable impact over the next five years.

Risk management

The ongoing transition to a low-carbon economy will continue to leave carbon-intensive assets stranded. Regulation targeting carbon, the rapid technological improvements of low-carbon alternatives, the continuing move towards more environmentally conscious and informed consumer choices and intensifying social campaigns for change are all combining to make it imperative for investors to apply a meaningful price on carbon in investment analysis across asset classes.

> "By 2016, nearly 25% of all carbon emissions will be priced"

Furthermore, the inclusion of a price on carbon emissions allows investors to transform what is currently treated as an uncertainty – an undesirable dynamic for any investor – into a quantifiable and manageable risk. Investors must understand the implications of the proactive decision to buy, hold or sell carbon-intensive assets, given their liabilities. The assessment of risk also requires understanding the risks to assets in alternative scenarios where collective action does not limit global temperature rise to 2°C – where, in other words, we place too low a price on carbon – because the consequences in these scenarios would certainly influence asset valuations, for example, of coastal real estate, agriculture and many other real assets.

Al Gore and David Blood: "Failure to consider ESG factors in asset holdings may constitute a breach in fiduciary duty by intentionally overlooking the possibility of maximising long-term risk-adjusted returns"

The deployment of capital into promising opportunities

Vast industries are being reworked in the transition to a low-carbon economy (see figure 2), creating new investment opportunities in assets and strategies. Identifying advantaged assets in a decarbonised economy (those with a low-carbon profile) has already proven to create significant value through billion-dollar exits in private equity markets and success in public equity markets, and will only become increasingly attractive from a risk/return profile as carbon emissions are widely priced. Investors applying a carbon price to valuations will be more likely to appropriately allocate resources and capital to this opportunity set.

Use sustainability analysis to enhance investment frameworks

Frameworks are critical tools to develop robust investment processes. They help investors achieve consistency, distinguish between signal and noise and avoid biases. For company-specific factors, sustainability as a framework considers risk management and reputation; resource efficiency – particularly in light of limited natural resources – and delivering products and services to address global sustainability challenges in ways that drive revenues, profitability and competitive position. In essence, sustainability is a lens to help the investor make better investment decisions.

Integration

Best practice sustainable investing starts with understanding the drivers of return for the portfolio, asset class or specific asset. Rather than bifurcating investment analysis into financial valuation and sustainability valuation, we encourage an approach that integrates sustainability within a rigorous investment process. At the highest level, this means forward-looking analyses of the long-term drivers of growth that will likely shape returns on financial and real assets. At a more micro level, we have found that this means integration of sustainability considerations into investment policy, asset allocation, portfolio management and securities analysis.

Comprehensive knowledge

Sustainable investing is not easy and there are no short cuts. One can never forget the fundamentals of finance and business including, importantly, valuation analysis. It is also critical to identify and focus on factors that are material and relevant within the appropriate investment time horizon.

This approach to investing – asking

2. The transformation of global industries as the economy decarbonises

Industry	Low-carbon and resource-efficient innovations			
Energy	Solar	Wind	Geothermal	Storage
Buildings	Insulating materials	Lighting	Metering	Appliances
Transport	Engines	Electric vehicles	Fleet logistics	Biofuels
Water	Irrigation	Desalination	Wastewater	Distribution
Materials	Biochemical	Biodegradeable	Nanomaterials	Plastics
Recycling	Reverse logistics	Material sorting	Sharing goods	Waste to energy
Environmental intelligence	Big data	Data centre efficiency	Remote sensing	Local digital platforms
Agriculture	Meat replacement	Forestry management	Urban farming	Precision agriculture

Source: analysis by The Generation Foundation questions that integrate sustainability at their core – yields information for analysts to review that is both quantitative and qualitative in nature. For company research, an investment process that weaves sustainability considerations throughout its analysis reveals critical information about the quality of a company's business and management team, including: how sustainability can drive product innovation; whether executives are compensated for the company's long-term success; and the potential financial and reputational implications unrecognised or mismanaged ESG risks might create.

Other lines of inquiry include culture, human capital management, governance, supply chains, selling practices, product life cycles, carbon exposure and resource utilisation, health and safety, to identify but a few. In short, analysing the answers to these questions can provide insights into a company's long-term vision, its strategy for implementing that vision, and the probability of its success.

Engaged ownership

Responsible and engaged ownership is another critical step to sustainable investing. Asset managers have an unambiguous responsibility to vote shareholder ballots and make clear their expectations to management. Areas for particular focus should include governance, remuneration, risk and reputation, capital allocation and investor communication.

Uphold the full remit of fiduciary duty

Sustainability is an important factor in the long-term success of a business. Therefore, as with any other issue related to the prudent management of capital, investors and companies have a fiduciary duty to include sustainability in decisions.

The commonly held interpretation of fiduciary duty must be updated beyond the mistaken view that its scope is limited to a narrow definition of financial responsibility that excludes sustainability. Principally, there exists a robust business case for incorporating sustainability in investment decisions to maximise long-term financial performance. Moreover, new regulation and broader legal reform are also compelling reasons for doing so.

In July 2014, the UK Law Commission's report found that "it is right that trustees should state their policy on how they evaluate risks to a company's long-term sustainability (including risks relating to governance or to the firm's environment or social impact)". The

> "Asset managers have an unambiguous responsibility to vote shareholder ballots and make clear their expectations to management"

report concluded that trustees should expand their analysis to include ESG issues.

This marked shift in policy is further evidenced by the European Union directive on disclosure of non-financial and diversity information that came into effect in December 2014. Requiring sustainability disclosure by large companies (defined as those with more than 500 employees) based in the EU, the directive signals the relevance of sustainability to prudent capital management and, therefore, fiduciary duty. This directive affects not only European companies but also many US and Asian companies with large operations or cross-listings in the EU. Moreover, similar directives exist in other jurisdictions, including important emerging markets such as China, Malaysia and South Africa.

Notable developments are taking place in the US as well. In 2013, Delaware, the legal home of 64% of Fortune 500 companies, became the nineteenth state to enact legislation establishing the public benefit corporations known as B Corporations or B Corps. B Corps require fiduciaries to balance the interests of shareholders with employees, society and the environment. To date, 27 states have passed Benefit Corporation legislation, and there are already over 1,550 known registered Benefit Corporations.

Certification for businesses with socially driven missions has also gained international traction through the non-profit B Lab, which boasts a global community of over 1,400 businesses across 42 countries that are committed to business as a force for good.

Addressing the myths

Fiduciaries are tasked with the decision to buy, sell, or hold assets. There is no passive behaviour as a fiduciary; there is no 'do nothing' task. Those who defend the traditionally held interpretation of fiduciary duty justify the active omission of sustainability considerations by asserting that sustainability dynamics do not impact financial assets.

However, this reasoning is deeply flawed, for three reasons: first, fiduciaries have a number of distinct duties, not a single duty to maximise profits, and within the reach of these duties, fiduciaries are by no means barred from considering factors other than financial return. Second, if fiduciary duty is indeed understood as an obligation to optimise financial performance, the failure to integrate sustainability considerations into investment strategies would also conflict with the performance of that duty, by neglecting to factor in the risk-adjusted performance of these assets over the medium to long term. The definition of fiduciary duty in terms of a narrow financial metric is truly based on an absurdly narrow understanding of return – one that focuses primarily on short-term prices and dividends while ignoring relevant externalities that remain mispriced. Finally, this reasoning suggests that the consideration of ESG issues only means applying exclusionary screening to the investment process, when in reality, sustainable investing strategies can be sophisticated and nuanced in range and scope.

Breach of fiduciary duty

Incorporating sustainability considerations into the capital allocation process is not only permissible for fiduciaries; we would argue that the active decision to ignore sustainability factors may in fact be a breach of fiduciary duty. This is especially true when assessing the impact of ESG considerations on the financial performance of investments.

A University of Oxford and Arabesque Partners meta-study asserts that it is possible to generate better returns by incorporating sustainability factors into investment decisions. In addition to enhanced operational performance, companies with 'solid ESG practices' also exhibited a lower cost of capital, while good sustainability practices positively influenced stock price performance.

Other studies showed above-market average return for companies with strong sustainability policies and practices. Failure to consider ESG factors in asset holdings may constitute a breach in fiduciary duty by intentionally overlooking the possibility of maximising long-term risk-adjusted returns. This was the conclusion of the Freshfields report in 2005, and we strongly believe that this interpretation of fiduciary duty holds even truer today.

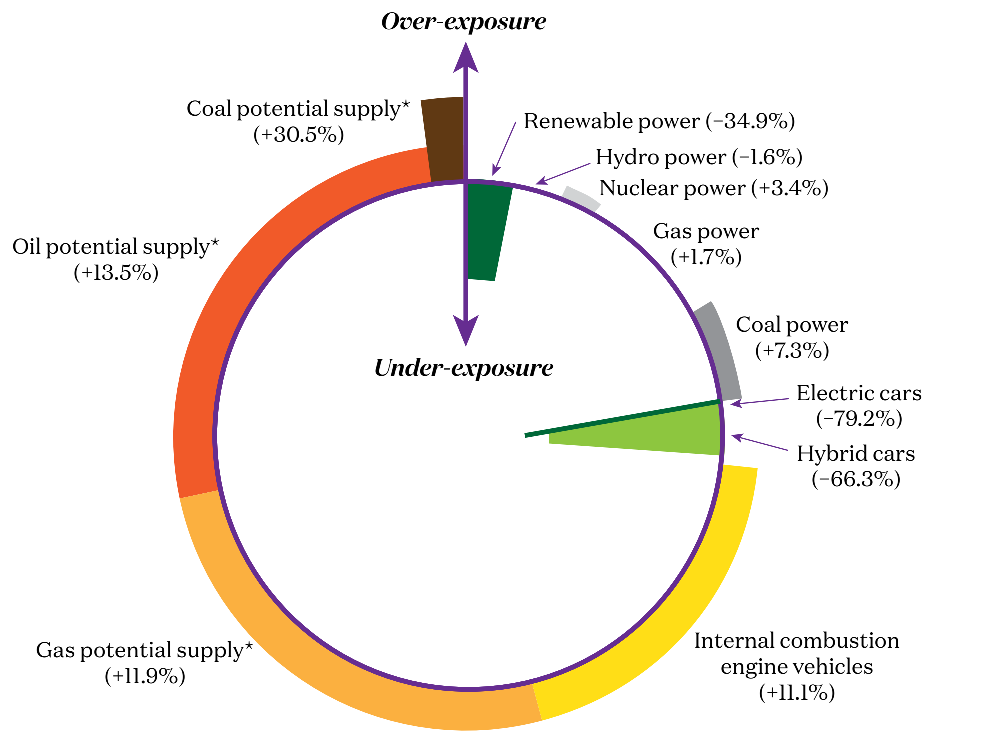
Source references for this article can be obtained from ESG Magazine

Anticipating the transition to a low-carbon economy – new benchmarks for investors

Accept the climate bet

JAKOB THOMÄ
Program Manager
MICHAEL HAYNE
Analyst
2° Investing Initiative

Alignment of MSCI World index with International Energy Agency's 2°C scenario



** Based on industry average estimates. Source: 2° II, based on IEA Globaldata and WA.*

THE CLIMATE CHANGE NEGOTIATIONS in Paris this December have already achieved one thing. The debate in the investment community is no longer about whether you believe in the transition to a low-carbon economy. The question is rather how ambitious that transition will be and how exactly it will materialise.

Every single investor portfolio is in some form betting on how the transition will occur, and is thus exposed to risks associated with this transition. This is true even if that bet is as simple as saying that a transition won't take place. Investors should be reminded that it's not if you bet, but how you bet.

Our recent research for the first time lifts the veil on this bet, allowing investors to understand if the implicit bet in their portfolio strategy is aligned with their investment beliefs. 2° Investing Initiative launched a free equity portfolio check in October, realised as part of the SEI metrics project involving half a dozen partners. The check involves testing equity portfolios vis-à-vis their alignment with the 2°C decarbonisation trajectory, as defined by the International Energy Agency (IEA).

THE KEY INNOVATION involves both the benchmark and data. The results don't tell you what your portfolio did last year, but whether the forecasted level of renewable power exposure – for example, in 2020 – in your portfolio is in line with decarbonisation trends pulled together from a range of energy and technology indicators. Focusing, at this stage on roughly 10–15% of market capitalisation (eg, oil and gas, automobile, electric utilities, coal mining) with an associated 60–80% of GHG emissions, the model will be extended to other technologies and asset classes, notably fixed income, in 2016.

One thing is already clear: mainstream benchmarks are most definitely not 2°C aligned. The MSCI World, for example, is under-exposed to renewable power by 35% relative to what is needed to achieve a 2°C transition. The European STOXX 600, in turn, overweights coal power by 16%. And you'd have better luck finding a needle in a haystack than electric vehicle production in the S&P 500 – underweighted by 97% relative to what the exposure should be under the IEA 2°C scenario.

Indeed, these results make all the sense in the world. Companies don't believe in a 2°C world. Nor do investors, apparently. Policymakers do, however. The 2°C policy consensus stands – at least for now. Commitments in Paris look like they'll get us a good part of the way there: 2.7°C warming, according to the latest estimates of country commitments.

It is by no means clear we'll succeed though, and betting on a 2°C portfolio might seem downright foolish at this stage. But betting on a business as usual scenario may be equally foolish. We don't promise that a '2°C portfolio' (ie, the portfolio aligned with a 2°C decarbonisation trajectory) will outperform. But it does appear the most promising approach if we do achieve a 2°C decarbonisation pathway; just as the 3°C portfolio fits a 3°C pathway, and a 6°C portfolio a 6°C pathway.

RISK IS NOT JUST ABOUT being over-exposed to high-carbon technologies. It also may involve being under-exposed to the products and services powering tomorrow. Sector exposure to utilities doesn't tell the whole story. A 'green' utility and a 'brown' utility are on fundamentally different trajectories. Finding the right exposure mix aligned with an investor's investment belief thus appears as the way forward for risk management. It extends current sector and geography diversification management practices to energy and technologies.

The transition to a low-carbon economy – whatever form it ultimately takes – will involve significant value creation and value destruction. Paris this December will be one step of many on this transition pathway. Investors now have the choice whether to anticipate this transition or continue to bet that tomorrow will look like today

This project is part of the Sustainable Energy Investment Metric consortium funded by the European Union and the French government. The members include CIRED, WWF Germany, Kepler-Cheuvreux, Climate Bonds Initiative, Frankfurt School of Finance & Management, CDP, WWF European Policy Office and the University of Zurich. The project aims to develop a climate performance framework and associated investment products that measure the exposure of financial portfolios to the 2°C economy and other decarbonisation pathways.

Green Beta: fiduciary friendly carbon investing

FROM RISING SEA LEVELS to extreme weather, there is mounting scientific evidence that global warming is real and immediate. As investors, what solutions do we have to build a greener economy? In 2014, Mellon Capital collaborated with Mercer and Imprint Capital to create the Carbon Efficiency Strategy for our mutual client, the US-based McKnight Foundation (with $2 billion in assets), to help support transitions to a low-carbon economy. As we celebrate the one-year anniversary of this strategy that we term Green Beta, we want to share our approach to creating this low carbon investment strategy without undermining the key responsibility of a fiduciary to generate a reasonable return on capital.

A fresh perspective – beyond fossil fuel

The fossil fuel divestment campaign deserves credit for raising the climate change issue in the investment arena. While the stranded assets argument, which drives the economic argument for divestment, is powerful and has a number of prominent advocates, in our view it's incomplete. It requires assumptions about energy supply and demand that are driven by many complex factors such as regulations and innovations. In addition, it represents a practical challenge: more than 85% of global energy is produced from coal, oil, and gas[1]. The global economy is so energy-dependent that it is currently impossible to implement a near-term wholesale shift away from fossil fuels and the technologies that use them without a massive, and potentially unacceptable, economic impact. Therefore, we must accept that significant changes in energy production by alternative means will likely come about more gradually.

While we certainly don't dismiss the climate risk associated with fossil fuel assets, we believe that they represent a less effective yardstick for addressing the immediacy of global warming. Until a model is developed to estimate such risk more reliably, we prefer to focus on carbon emissions – it is these that are raising temperatures, creating air pollution, and damaging fragile ecosystems today. Global temperatures increased 0.68°C above the

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Head of Equity Portfolio Management, Mellon Capital Management, a BNY Mellon Company

long-term average in 2014, making it the warmest year on record[2]. The earth will not cool down by itself. The greenhouse gases emitted today will stay in the atmosphere for many decades to come, so we must focus on what we put in the air every day to create a sense of urgency for reducing carbon emissions. Almost every company emits greenhouse gases and contributes to global warming to some extent. As we invest, we have a choice to make regarding the companies that we invest in and how much capital we allocate to them. That choice can have an environmental impact as we support those companies that take strides to make the world more sustainable.

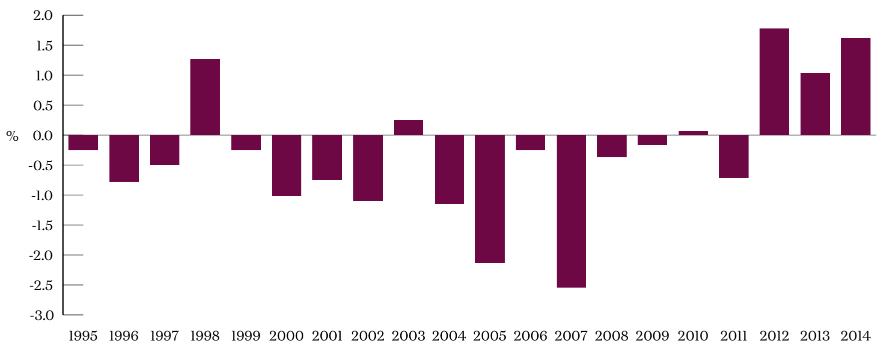
Investment risk from divestment

Divestment imposes investment risk in terms of increased volatility. To illustrate this impact, we can consider the energy sector as a proxy for fossil fuels, and exclude this sector from the MSCI All Country World Index (ACWI) to create a custom ACWI ex Energy Index. The ex-post tracking error of this ACWI ex Energy Index against its parent Index from 1995 to 2014 is 1.30% per annum (the ex-ante tracking error is 0.99%). Figure 1 depicts the difference in annual returns of the custom MSCI ACWI ex-Energy Index vs the standard MSCI ACWI Index. While the divestment approach might look smart in light of the recent plunge in oil prices, the same approach would have struggled to gain adherents during the strong energy run-up from 2004 to 2007.

Voice of influence – beyond divestment

Investment performance considerations aside, those divesting their holdings in fossil fuel companies lose their voice of influence. There

1. Annual return impact from energy divestment



Source: Mellon Capital and MSCI. Returns are gross of tax. Tracking error as of 31 December 2014, ex-ante = 0.99%, ex-post= 1.30%

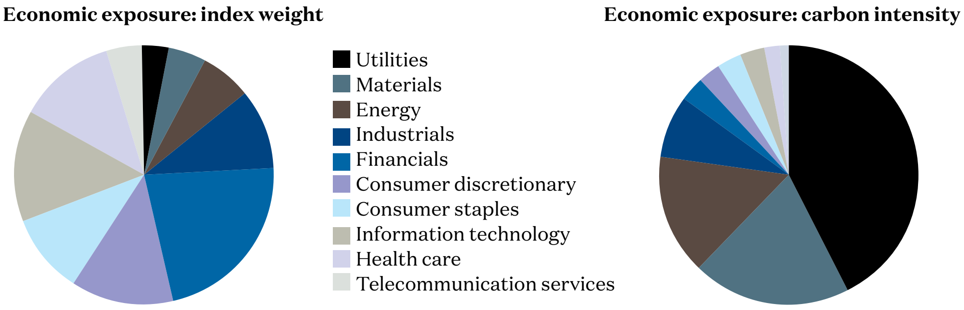
is also risk that the holdings, and with them the voice of influence on climate change issues, pass to other investors that are less concerned with such issues. Aside from coal, which has the highest level of carbon per unit of energy and faces a range of sensible substitutes in power generation, we believe that oil and gas assets can benefit from technological advances in energy production. This motivates us to engage with companies that produce and use fossil fuels to adopt more environmentally friendly corporate policies in order to improve their carbon footprint. In addition, energy companies happen to be a very convenient target, while many companies in the other sectors – predominantly utilities, materials and industrials – operate while ignoring or dismissing global warming. Fighting global warming is a long journey, from reducing carbon emissions in the near term to building a more environmentally friendly energy infrastructure globally. We believe that divestment is a missed opportunity to influence changes, and engagement is a better strategy.

Two objectives in one fiduciary-friendly strategy: environmental impact and financial responsibility

As investors assess the carbon exposures in their portfolios, many will likely conclude that those exposures come predominantly from their index allocation, as McKnight determined in 2013 with Mercer's carbon footprinting analysis. Given that index-based investing, by definition, tends to be broad-based, it includes companies that are heavy emitters of greenhouse gases. This is an important insight because, even with a benchmark-centric strategy – green beta investing – investors would be able to decarbonise their overall holdings in a defensible manner. We believe fulfilling both the environmental and financial objectives in a green beta strategy can be achieved by striking the appropriate balance between reducing carbon exposure and achieving suitable beta exposure as measured by tracking error. In our opinion, a moderate tracking error – less than 0.50% as described in our Carbon Efficiency Strategy – is considered commensurate with fiduciary responsibility.

To illustrate this point, consider the right-hand chart in Figure 2, which shows that the three most carbon-intensive sectors in the MSCI ACWI Index – utilities, energy, and materials – account for more than 75% of the overall carbon emissions intensity[3] of the index, and yet represent slightly less than 15% of the overall index composition (left). One potential pitfall in pursuit of quick carbon emissions exposure reduction is to significantly underweight these three sectors, which can introduce unintended sector tilts. We think it's better to take a sector neutral approach whereby we overweight the less carbon intensive companies and underweight their

2. Carbon emissions intensity and MSCI ACWI index weight



As of 30 September 2015. Source: Mellon Capital and MSCI ESG Research

more carbon intensive counterparts within each sector. Not only does this process allow us to maintain proper sector exposure, but it also presents a more sensible comparison between peers. For instance, energy companies are ranked among themselves and not compared to financials. A truly robust strategy goes beyond the sector level and neutralises exposures even at the industry level. This is particularly important when considering a sector as diverse as consumer discretionary, where an unintended bias can be created between two different industries that form part of the sector (auto and apparel, for example).

> "In evaluating an approach to addressing the issues raised by fossil fuels and their impact on global warming, investors should consider their fiduciary responsibility in tandem with their desire to decarbonise their investments"

In addition to evaluating companies' carbon intensity, we employ carbon readiness, which measures how proactive companies manage and mitigate climate change risk, to determine the magnitude of the over or underweight in the strategy. Everything else equal, a company more ready to manage climate change risk, is overweighted more or underweighted less.

Beyond sector/industry and country constraints, risk control is necessary at other levels in order to create a well-balanced green beta strategy. Most high carbon intensity companies exhibit factor characteristics of lower volatility, larger market capitalisation, orientation towards value and away from growth, and higher yield, to name a few. It's important to compensate for these factor exposures arising from underweighting such companies in order to achieve lower carbon exposure. Furthermore, individual security misweights must be limited so as to avoid introducing idiosyncratic risk to the strategy.

Conclusion: Green Beta

Since 2011, the fossil fuel divestment movement has elevated awareness of global warming and its implications for investing. Combatting global warming is a long journey, and taking the first step demands deliberation and planning, especially with respect to fiduciary responsibility. In evaluating an approach to addressing the issues raised by fossil fuels and their impact on global warming, investors should consider their fiduciary responsibility in tandem with their desire to decarbonise their investments. Since its launch in October 2014, the Carbon Efficiency Strategy has helped the McKnight Foundation reduce the carbon emissions exposure of their investment by over 50% and maintain a low tracking error of less than 0.50%, fulfilling both environmental and financial objectives. We believe this Green Beta approach offers a great opportunity to broadly mobilise the investment community to do its part in reducing emissions in the near term.

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1 Source: BP Statistical Review of World Energy 2015
2 Source: National Aeronautics and Space Administration Goddard Institute for Space Studies GISS Surface Temperature Analysis (GISTEMPP and National Oceanic and Atmospheric Administration 16 January 2015
3 Carbon intensity is defined as carbon emissions per unit of sales.

Pension funds owe legal and fiduciary duties to consider climate risks

A breach of trust?

NATALIE SMITH
Lawyer, Climate Litigation, ClientEarth

THE FINANCIAL RISKS associated with climate change have become widely acknowledged. From stranded assets to questions around insurability, climate change is now understood to pose tangible threats to the economic viability of businesses and investment portfolios alike.

In his landmark speech at Lloyds of London in September, Bank of England governor Mark Carney said the "challenges posed by climate change pale in significance compared with what might come … once climate change becomes a defining issue for financial stability, it may already be too late".

It therefore comes as a surprise that institutional investors like pension funds are not doing more (if anything at all) to address climate risks when making investment decisions in the best interests of pension fund members.

In fact, not only should pension fund trustees (and asset managers) consider climate change from an economic perspective, they should do so from a legal one too. The law is clear with respect to what trustees must consider when exercising their investment powers: they must consider material financial risks to the fund. This ensures that trustees generate the best risk-adjusted returns for pension savers on retirement in a manner that is fair to all members of the scheme.

If the financial analysts are right, and a mounting body of evidence suggests that they are, then the financial risks associated with climate change should factor squarely within the investment considerations of trustees. Ignoring these risks places savers' pensions in jeopardy and trustees could be held legally accountable for failing to adequately discharge their investment and fiduciary obligations.

"The financial risks associated with climate change should factor squarely within the investment considerations of trustees. Ignoring these risks places savers' pensions in jeopardy and trustees could be held legally accountable for failing to adequately discharge their investment and fiduciary obligations"

What the law says

The investment obligations of UK pension fund trustees are prescribed by pensions legislation and the common law. As a starting point, the Occupational Pension Schemes (Investment) Regulations 2005 sets out how trustees must exercise their investment powers and why.

These regulations effectively require trustees to balance risk against returns. Trustees must exercise their investment powers to ensure that risks to the scheme as a whole are properly measured and managed so that significant financial detriment to the fund is avoided.

Supplementing these (and other) statutory duties are common law duties, such as the duty to treat members fairly as between them (eg, not preferring the short-term interests of older members over the long-term interests of younger members) and the duty not to act under the dictation of another (eg, trustees should not automatically accept the investment decisions of asset managers to which investments powers have been delegated).

There is already strong evidence to suggest that trustees should be incorporating the financial risks of climate change into the investment decision-making process. Ignoring these risks jeopardises the future savings of (particularly younger) pension fund members, who potentially face lower returns generated by high-carbon investments.

Losses are already being felt in coal investments, spurring legal action in the US by beneficiaries. *Lynn v. Peabody Energy Corp.* (Case No. 4:15-cv-00919) and *Roe v. Arch Coal Inc.* (Case No. 4:15-cv-00910) are examples of claims by beneficiaries seeking compensation from trustees and directors for continued investments in company stock (largely coal assets), resulting in a drop in the value of pensions by 96% over three-and-half years. According to the beneficiaries, the trustees and directors (the 'fiduciaries') breached their duties of prudence and loyalty by allowing the pension plan to continue investing in company coal stocks when it was clearly imprudent to do so.

Legal avenues available

In the UK, litigation is also an option for pension fund members and can take one of two forms: contentious or non-contentious. Contentious litigation requires the claimant to meet a high threshold burden of proof and involves significant costs and time. Non-contentious litigation, on the other hand, is less expensive and is quicker to resolve. The parties can seek clarification from a judge on how the law should be interpreted in practice. A precedent along these lines would set a clear legal benchmark for trustees, and finally put to rest the confusion that pervades this area.

Pension fund members seeking to hold their funds to account may also file complaints with the Pensions Ombudsman on maladministration or legal grounds; use the whistleblowing service of the Pensions Regulator to report malpractice, poor administration or breaches of the law; and/or send letters before action, putting funds on notice of litigation if parties cannot achieve early resolution of the dispute.

Pension fund trustees must contend with a number of ongoing concerns, from underfunding in the face of waning returns to unfavourable demographics. However, as fiduciaries owing the highest standards of conduct under statute and common law, they must consider all risks to savers' pension pots, including the financial risks posed by climate change. If trustees continue to ignore these risks, they may find themselves facing legal challenges.

How can carbon and other emissions be accurately and effectively monitored in the face of increasing regulation?

What gets measured gets managed

MARIEKE BECKMANN
Research Lead, UK National Physical Laboratory Centre for Carbon Management

BASING INVESTMENT DECISIONS on climate data requires data that is trustworthy. Emission figures for businesses are often calculated using a bottom-up approach. This estimates emissions based on activity data (for example, electricity consumption) multiplied by a 'carbon factor'. In other words, it calculates the amount of greenhouse gas emitted based on activity performed. Carbon factors are established using direct measurements, however there is always some level of uncertainty, as carbon factors are created from a number of measurements. Looking at emissions calculations for a complex multinational company, one can imagine that there are a large number of assumptions around amalgamations of different emissions data sets, giving room for uncertainty. This can be addressed by implementing direct measurements of specific sites.

There are various emissions measurement methods that can be applied with a range of sophistication, accuracy levels and costs.

A system on the more sophisticated end of the range is the Differential Absorption LIDAR (DIAL), a mobile facility able to monitor atmospheric pollutants remotely at ranges of up to 3km. Concentration and spatial distribution of atmospheric pollutants can be determined directly, producing 3D concentration profiles in real-time situations where emissions need to be pinpointed and quantified. It measures upwind and downwind to differentiate between emissions which could be blown onto the site from other sources and covers a wide range of gases and volatile organic compounds, including: SO_2, NO_2, NO, ozone, for example, and higher aromatics such as alkanes, petroleum and diesel vapours, HCl and H_2S.

A less sophisticated, and lower cost, option is a portable remote infrared imaging system. These are popular for leak detection within the gas industry as they can be used systematically to check individual valves and

Differential Absorption LIDAR (DIAL)

other common sources. Although they cannot quantify the volume of the leak, they can establish the main leaking components that can subsequently be fixed.

Other systems fill this gap by measuring the amount of emission present in the air, but do not pinpoint the source. Cavity Ring-down Spectroscopy (CRDS) can be left in situ to provide continuous quantification of ambient emission concentrations with very high accuracy. The source of the leak can sometimes be inferred by combining these measurements with wind measurements and a site map in a model. CRDS instruments are usually fixed in their location, which means the strategic positioning of these systems needs to be appropriate. The DIAL method can be used to plan and monitor this on a regular basis. Combining CRDS with infrared imaging systems can furthermore provide a cost-effective solution to accurately monitor emissions across sites and activities on a continued basis.

> "Direct measurements give a handle on emissions data, ensuring companies are efficient in their business processes but also capable of dealing with new regulations that may come through"

A mixture of methods is the best way to ensure appropriate direct measurements are done. These will help companies achieve the required uncertainty [certainty?] levels when reporting on emissions, whether on a voluntary basis or required by law. Take methane for example: a highly potent greenhouse gas that the US Environmental Protection Agency is now targeting, the EU is currently assessing, and international climate negotiations are starting to take into account. Direct measurements give a handle on emissions data, ensuring companies are efficient in their business processes (ie, capturing saleable gas in the case of methane emissions) but also capable of dealing with new regulations that may come through.

As a result of the changing state of regulation, companies, particularly those with large greenhouse gas emissions, may soon have to be more accurate than currently required when reporting them. The impact on those businesses (positive or negative) will filter down to those investing in them. Accurate emissions data should therefore play a role in not just business but investment decisions. The technology is available to facilitate this, and the political and business will looks set to follow.

Can we expect more from investor engagement to really bring down CO_2 levels?

A rising emissions quandary

Dr RORY SULLIVAN
Senior Research Fellow, ESRC Centre for Climate Change Economics and Policy, University of Leeds

"The drawback of intensity targets in this context is that absolute emissions can increase and targets can still be achieved"

OVER THE PAST FIVE YEARS, there has been a step change in the number of investors engaging on climate change. There has also been an escalation in the demands that are being made of companies.

Investors have moved far beyond the basic climate change-related disclosures requested in the early iterations of the Carbon Disclosure Project (now CDP). They are now asking:

- The world's highest emitting companies to make year-on-year reductions in their greenhouse gas emissions, to publicly disclose their emission reduction targets and to invest in projects that provide positive returns on investment. One example is CDP's Carbon Action initiative, which aims to help companies generate positive returns through carbon-reducing and energy-efficiency projects, thereby helping build long-term sustainable businesses.
- Coal, oil, gas and electricity companies to assess and disclose their exposure to stranded assets. For example, the aims of the Carbon Asset Risk Initiative (see chart on page 27) are to prevent shareholder capital being wasted on developing high-carbon and high-cost fossil fuel reserves, and to ensure that fossil fuel companies acknowledge and plan for the escalating physical impacts of climate change.
- Companies to improve the quality of their management and reporting of their greenhouse gas emissions. An example is the 'Aiming for A' coalition which aims to ensure that companies better manage their climate change-related risks and opportunities.

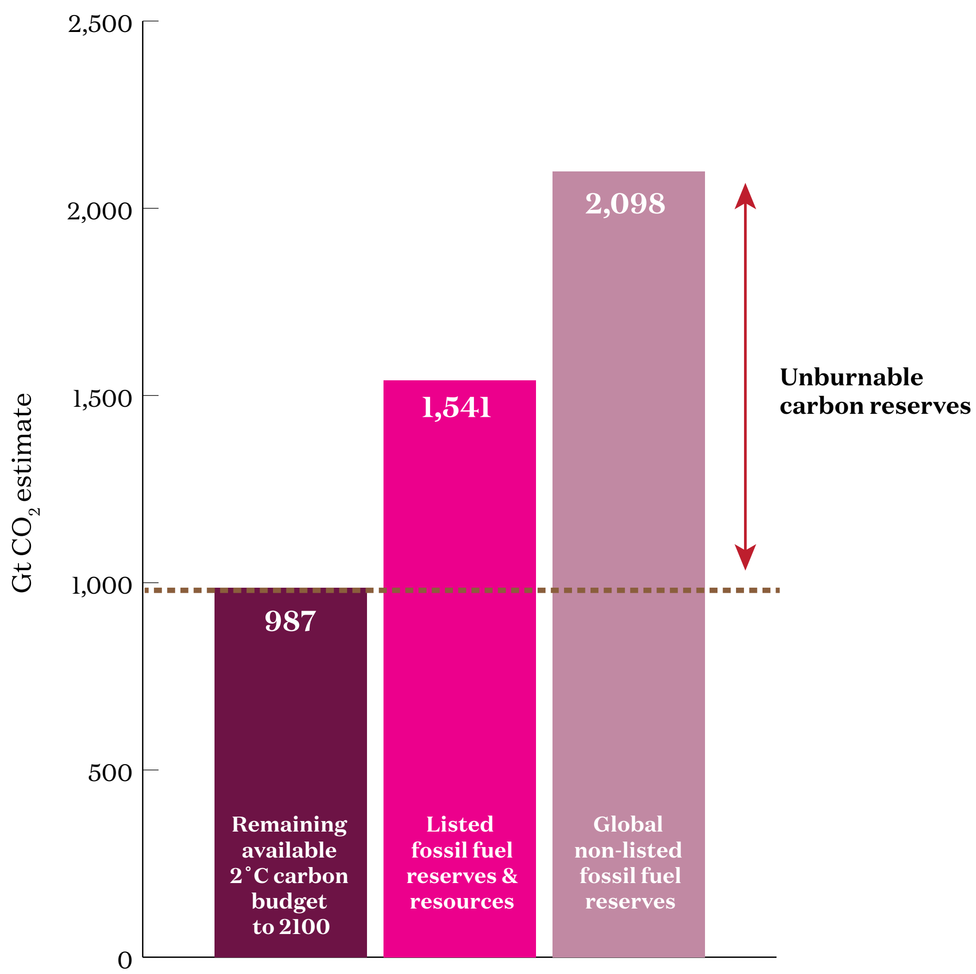
These and other investor engagement initiatives have been demonstrably successful. For example, in its most recent annual Carbon Action progress report, CDP reported that 79% of the companies covered by the engagement had published emissions reduction targets. Similarly, in its review of progress on the Carbon Asset Risk Initiative, Ceres noted that more than 20 of the 45 companies covered by the initiative had provided detailed information about how they view their exposure to carbon asset risks. Ceres commented that these increased disclosures had spurred internal changes in companies, highlighting examples such as the acknowledgement by BHP Billiton and Exxaro of the need to reduce greenhouse gas emissions, Total's investments in solar and Statoil's creation of a new renewable energy division focused on offshore wind.

MORE GENERALLY, investor engagement is widely acknowledged as having played a catalytic role in improving the quality of the information being reported by companies on their greenhouse gas emissions and on their greenhouse gas management strategies, and in encouraging companies to set energy efficiency and greenhouse gas emission reduction targets.

These are all important and welcome contributions. Yet, despite the progress that has been made, the reality is that greenhouse gas emissions from companies continue to rise. An analysis of the outcomes from investor collaborations on climate change points to three uncomfortable truths.

The first is that relative performance is different to absolute performance. Specifically, while some companies have succeeded in reducing their emissions over a number of years, it is very difficult to sustain these reductions over longer periods of time. Ultimately, it is very difficult for the gains from energy efficiency to keep pace with business growth. This point is acknowledged in the Carbon Action progress report, where CDP

Fossil fuel assets at risk: unburnable carbon reserves



A significant portion of the world's fossil fuel reserves will need to remain in the ground in 2100 if we are to avoid catastrophic levels of climate change.

Fossil fuel companies, however, continue to develop reserves that may never be used.

Source: Ceres, Carbon Tracker

states: "The drawback of intensity targets in this context is that absolute emissions can increase and targets can still be achieved."

The second is that better management systems and processes do not necessarily lead to better performance. A recent study analysed the impact of 23 different carbon management practices – including policies and commitments, the presence of climate change-related targets and the scope and level of ambition of these targets, the quality and granularity of reporting, companies' awareness of climate change-related risks and opportunities, the integration of climate change into business strategy, and internal incentive structures – on the greenhouse gas emissions of a universe of 433 companies.

The study, the first large-scale, quantitative study of the impact of corporate carbon management practices on corporate greenhouse gas emissions, found no statistically significant evidence that any of the 23 carbon management practices had influenced corporate greenhouse gas emissions. Refinements to the analysis – such as including only companies that were considered to have better than average quality of emissions measurement, excluding companies in the financial sector, only including heavy industry, analysing absolute emissions rather than emissions relative to output, grouping the carbon management practices in different ways – all produced broadly similar findings.

The third is that better risk management processes do not necessarily lead to emissions reductions. A focus on corporate risk management processes will result in companies looking at the risks to their businesses and the actions they can take to manage these risks. While in some situations this may lead to companies taking the decision to reduce their absolute greenhouse gas emissions, this is not the only conclusion that companies might reach. They could – and there are many examples – conclude that they should focus on being more efficient (but not necessarily that they need to reduce their absolute emissions), that they shift certain activities to regions where they are less exposed to regulatory risk, that they outsource certain risks or that they simply accept certain risks as part of the cost of doing business.

So what does this mean for investor engagement? The assumption underpinning investor collaborations on climate change has been that raising climate change-related issues with companies and encouraging companies to adopt management systems and processes should not only make these companies better investments over the medium and longer term but should also lead to reductions in corporate energy use and/or greenhouse gas emissions. Yet, as discussed above, the evidence that is available suggests that investors cannot simply assume that the adoption of certain management practices and risk management processes will 'automatically' lead to greenhouse gas emission reduction.

This conclusion points to the importance of investors focusing much more explicitly on absolute greenhouse gas emissions in the design and the implementation of their engagement programmes on climate change. While management practices and processes are important, the question investors should be asking is: how will the suggestions they make to companies affect the greenhouse gas emissions from these companies? More specifically, investors should encourage companies to express their carbon targets in terms of the absolute, rather than relative, emission reductions they are looking to achieve, and they should expect companies to ensure that the management practices and processes being adopted are directed towards this end.

This is not a one-off process. It requires investors to play an active role in monitoring company performance, and to be willing to ask companies to explain how the carbon management practices that have been adopted have influenced the carbon management actions that they have taken and, in turn, how these actions have influenced the company's total greenhouse gas emissions.

Ultimately, if investors really are concerned about absolute levels of greenhouse gas emissions, then that is what they need to focus on. They cannot simply assume that the adoption of better corporate carbon management practices will, in and of themselves, deliver the sort of absolute emission reductions that are required if we are to avert dangerous climate change.

Clean technology funds – decarbonising towards a sustainable economy

PASCAL DUDLE
Thematic Portfolio Manager
Vontobel Asset Management

Pascal Dudle is a thematic portfolio manager at Vontobel Asset Management AG in Zurich. He has been working on management of Clean Technology and ESG equity strategies since 2001. He and his team of specialised analysts invest in cleantech, including companies with significant impact on greenhouse gas reduction, following a balanced approach with exposure to both proven, economically viable as well as potential disruptive technologies.

YOU DON'T HAVE TO GO BACK many years to remember a time when the words investing and sustainability only coexisted in marketing brochures. In the real world of investing, the two rarely met. Today, the situation is completely different. There is a strong, ongoing, global drive from both regulators and investors demanding that corporations commit to building a longer-term sustainable economy. A joint venture, spearheaded by investors and the United Nations Environment Program (UNEP), has produced the Montreal Carbon Pledge, in which signatories commit to measuring and publicly disclosing the carbon footprint of their investment portfolios on an annual basis. With such a united front from the public and private sector that affects services and products integral to our daily lives, it is already driving investor behaviour.

Going to the source

The vast majority of greenhouse gases are coming from energy-related sectors, of which more than 80% are attributable to electricity and heat generation, industry and transportation. Investors hoping to decrease their carbon footprint by not investing in these sectors at all would be fooling themselves. These sectors affect every business and every person on the planet, ignoring them is simply not an option. The question therefore becomes: How can the biggest emitters of greenhouse gases decarbonise?

Calculating correctly

To effectively decarbonise our society, we need to address the high emission activities of corporations, which requires a full understanding of their greenhouse gas emissions throughout the entire product lifecycle. These are defined as scopes 1, 2 and 3[1]:

Scope 1 All direct emissions of the company's own facilities and operations

Scope 2 Indirect emissions from consumption of purchased energy: electricity, oil, gas, heat, etc.

Scope 3 ***upstream*** supply chain: waste generated, employee commuting, etc.
downstream sold products: distribution of products, use of products, disposal, etc.

Until recently, companies have focused on emissions that fall under scope 1 and 2 and these are fairly well standardised and widely available among listed companies in developed markets. However, scope 3 is still in its infancy and leaves much room for individual interpretation (despite accounting standards being defined). Scope 3 emissions are not a mere detail, they are in fact often far larger than those in scope one and two.

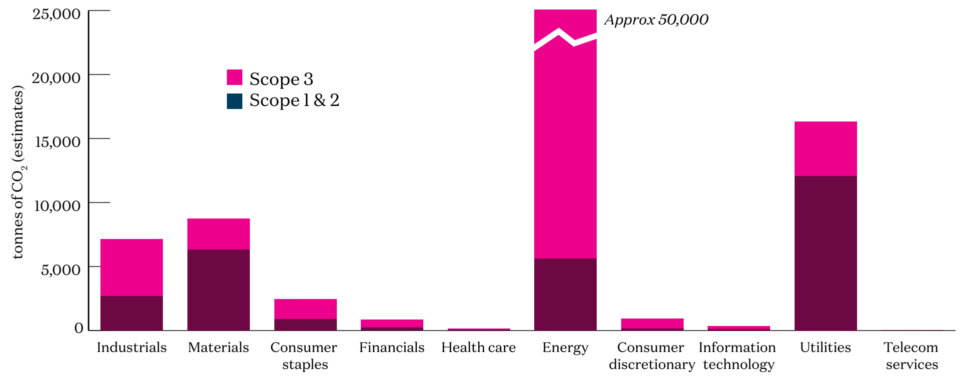
Emissions under scope 3 are further classified into upstream and downstream. Upstream emissions include those indirect emissions generated by the company's operations, e.g. from supply chain and

1 The Greenhouse Gas (GHG) Protocol is the most widely used international accounting tool to quantify and manage greenhouse gas emissions.

employee commuting. Downstream emissions include future emissions from the products sold by the company, including recycling costs, they are the emissions that often have the largest carbon footprint. For example: Honda's sustainability report shows that almost 90% of all emissions are generated by the use of the vehicles it sells. It is therefore clear that the focus of decarbonisation should concentrate on the biggest emissions contributors, those which fall under scope three, particular those that are classified as downstream.

Currently, many investors will measure only scope 1 and 2 (and increasingly also scope three upstream), which does not give a full account of a company's carbon footprint. What is in fact required is a holistic approach which takes into consideration the full lifecycle impact (including all of scope three), relative to peers. Such a holistic approach reduces climate risk and still maintains a well-diversified portfolio with limited tracking error.

1. Intensity of greenhouse gas emissions by sector and by scope



Source: Principles for Responsible Investment, Vontobel Asset Management

Reducing the emission profile of a portfolio by investing in clean technology companies

Clean technology companies offer a direct, solution-oriented approach to greenhouse gas reductions and a more environmentally sustainable future. Cleantech investing focuses on the companies that develop technologies, products, processes or services that materially increase resource efficiency and thereby lower greenhouse gas emissions in areas where absolute emissions are highest. It also takes into consideration factors that go beyond the 'mere' carbon footprint, such as the reduction of materials used and end of life recycling aspects.

As we know, most greenhouse gas emissions occur in power generation, heating, transportation and industrial businesses. Cleantech investing involves allocating capital to businesses that can have the biggest greenhouse gas reduction impact thanks to innovation, economic viability and scaling up potential. Such companies also offer above average revenue growth and can command healthy profit margins as consumers will increasingly buy products with higher energy efficiency, thus lower running cost.

Thematic clean technology funds provide a solution

Thematic clean technology equity funds are leading the initiative to tap institutional investors' money to finance the decarbonisation of economic activities and thus are playing a prominent role in the formation of a 'sustainable financial system'. Cleantech funds directly target clean energy and energy efficient solutions, effectively channelling institutional money into companies that support the realisation of a low carbon economy.

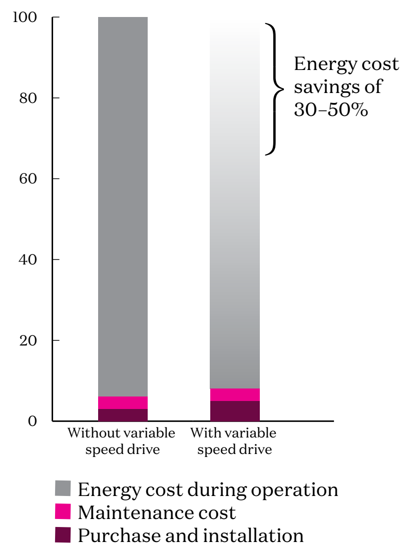
Dedicated thematic fund managers develop specialised, qualitative industry expertise enabling them to optimise the mix between disruptive and high potential technologies and the proven, economically viable and socially accepted ones. Well balanced cleantech portfolios will not only increase environmental effectiveness but also reduce volatility and offer superior investment returns.

2. The high impact of electric motors

- Electric motors consume about 28% of the world's electricity, in pumps, ventilators and many other applications.
- Intelligent motor control methods such as variable speed drives regulate the revolutions of a motor and can reduce energy consumption by 30% to 50% and as much as 90% in extreme cases
- Scope 1, 2 and 3 (upstream) are almost negligible compared with the huge contribution coming from scope 3 downstream emissions (of products sold)
- The higher purchase price of a motor with a variable speed drive is a fraction compared to the saved energy cost running the equipment its entire lifetime. The short payback time offers the ultimate low-risk return for the buyer.

Source: data ABB, Vontobel Asset Management

Lifecycle cost for motor and drive



Investors take up the challenge of carbon footprinting

FIONA REYNOLDS
Managing Director
Principles for Responsible Investment (PRI)

Make the Montreal Pledge

Mark Carney's speech in September to Lloyds of London, when he talked about the significant financial risks presented by climate change, caused shockwaves among some in the financial sector. Carney's dire warning that investors face "potentially huge" losses from climate change action that could make vast reserves of oil, coal and gas "literally unburnable" and his acknowledgement that there was a danger the assets of fossil fuel companies could be left stranded by tougher rules to curb climate change have prompted considerable criticism.

However, for organisations like the PRI, his comments made good sense.

One of the points Carney raised was the suggestion of a "climate disclosure task force" to create a voluntary standard for the information companies producing or emitting carbon should disclose.

He also noted that information about companies' carbon footprints would give investors a better idea of potential risks at a time when scientific evidence was showing that eventually, "climate change will threaten financial resilience and longer-term prosperity".

Carney was right to highlight this point because only when companies understand their carbon footprint can they take action to reduce it. And, many businesses, once they start measuring their emissions, identify ways they can do things differently that save money as well as carbon.

In September 2014, during the annual PRI in Person conference in Montreal, Christiana Figueres, executive secretary to the UNFCCC, one of the keynote speakers, challenged the PRI and those attending the event to take more definitive action on climate change. We decided to take up the challenge by launching the Montreal Carbon Pledge, which was supported by the UN Environment Programme Finance Initiative (UNEP FI) as an entry point to the Portfolio Decarbonisation Coalition, which seeks to mobilise a critical mass of institutional investors to commit to gradually decarbonise their portfolios.

Supporting Montreal Carbon Pledge signatories make a commitment to measure and disclose the carbon footprint of their portfolio, or a portion of their portfolio. Disclosure must be through a company website, annual report, sustainability report, responsible investment report or other publicly visible client/beneficiary reporting channel. The idea behind the pledge was to encourage investors to do something tangible around climate change, rather than just sign a letter or statement. We also felt that our signatories, as institutional investors, have a duty to act in the best long-term interests of their beneficiaries. And part of this fiduciary role includes acknowledging that there are long-term investment risks associated with greenhouse gas emissions, climate change and carbon regulation.

The Montreal Carbon Pledge has captured global investor interest, with signatories coming from Europe, the US, Asia, Africa and Australia, including the University of California, AXA, BNP Paribas, HSBC Global Asset Management, Old Mutual, Aviva, CalPERS, PGGM, AP4 and Catholic Super.

The Montreal pledge had six founding signatories and now, within a year, has the support of 100 investors who collectively represent over $8trn in assets under management.

The pledge has become an important vehicle for investors who want to assess their own carbon risk and also be able to see carbon risk disclosure from companies so that risks within portfolios can be addressed.

Measuring the carbon footprint of a portfolio means organisations can compare it to global benchmarks, identify priority areas and actions for reducing emissions, and track progress in making those reductions.

Investors who have already measured the carbon footprint of portfolios say that doing so can improve their understanding of the portfolio risks and opportunities that climate change presents, give them answers to stakeholder questions on climate change and allow them to publicly demonstrate commitment to tackling climate change.

Global investors have a huge role to play in helping to set climate policies ahead of COP21. By taking up initiatives like the Montreal Carbon Pledge, investors can send a clear message to policymakers worldwide that they need to commit to a strong global deal in Paris this December.

The Montreal Carbon Pledge remains open for sign-up by asset owners and investment managers. To be included in an announcement on the Montreal Carbon Pledge during COP 21 in December 2015 in Paris, investors must sign-up, complete and disclose a carbon footprint including the AUM this has been applied to by 1 December. Sign-up to the Montreal Carbon Pledge is still possible after 1 December, but will not be included within the announcement during COP 21.
http://montrealpledge.org/


›› Invest in the everlasting.
Green Bonds – Made by KfW.
If you are looking for a sustainable investment, KfW is your partner of choice. As the leading German development agency, KfW takes its responsibility seriously, funding green projects across the globe. Our innovative measurement concept for environmental and social impact of your investment encourages new quality standards. In support of responsible investing, KfW is a PRI signatory since 2006 and ranks continuously among worldwide ESG rating leaders. So if you are searching for a reliable partner, take a look at kfw.de/investor-relations.
KfW

How a group of PRI signatories evaluated investment strategy choices in response to climate change

Blocking out the carbon noise

CARY KROSINSKY
Adjunct, Yale University

THE PRI'S 2015 Climate Change Asset Owner Strategy Project was put together working with nine PRI signatories, including some of the very largest. Starting with the Montreal Carbon Pledge (see page 30), we then looked at what asset owners can consider among all of the possible strategy choices at their disposal for making a difference on climate change.

The project aimed to assist asset owners in blocking out the 'noise' around climate change; to understand and address it, while facilitating a peer-to-peer exchange across geographic markets and investment approaches. An important first phase was a paper providing the case for why asset owners needed to address climate change, including the implications of a global carbon budget as well as fiduciary duty and universal ownership/ social values.

We were especially mindful of the complexities inherent to the data and scopes of coverage, as per my article on Responsible Investor (see reference box below), and as further detailed in the first PRI Publication from this project entitled Reducing Emissions.

The lack of global assured data remains a challenge.

Reliable data on scope 3 emissions (emissions that are a consequence of the activities of an organisation but come from sources not owned or controlled by it) is typically lacking as well, and which is more often than not the largest proportion of a company's footprint. For example, Ford's footprint is 90% use of cars and trucks, Unilever's detailed assessments find 68% of its footprint coming from consumer use of its products, and so 'low carbon' indexes that measure only scopes 1 and 2 leave the largest component of those sectors on the cutting-room floor.

Also remaining unsolved is how to measure change meaningfully when most analysis relies on estimation. As was seen in the original 'Environmental P&L' reports of Puma and Novo Nordisk, and although Kering has since made nice progress on 'real' data in its brand-wide analyses, when scope 3 is the majority of footprints, and largely based on estimation, there's no reliable way to measure change. So the field lacks the ability to set investment goals and see if they have been achieved against what is a large and meaningful proportion of the global footprint coming from consumption.

Noise cancelling: closing in on the essentials of climate change

> "What is recommended is an expansion out of COP21 from the global climate negotiations to a broader deal involving not only governments, but investors and corporations"

For all of the data challenges that remain, and there are many, we were able to pinpoint some critically important categories of activity for asset owners to consider in our forthcoming Pilot Framework for Action on Climate Change, with a series of new case studies, those being:

- Investment choices, such as thematic low carbon and positive sustainable investing.
- Engagement with companies, such as those that Carbon Asset Risk and the Aiming for A coalitions are performing.
- Engagement with policymakers, such as on levelling the playing field on the price and cost of energy.
- Engagement with outsourced managers, and to construct methods of holding them to minimum standards of performance, including integrating ESG.
- Divestment remains an option, after a process has been put in place, as has been recently discussed or performed by Norges Bank, AXA and others.

It has been particularly interesting to collaborate with a truly global group of investors on this project, with different regional realities, and varying approaches taken to date. As a result, the project required multiple meetings and conference calls to get everyone on the same page, but this worked out very well in the end.

In fact, the process made clear that a similar approach would be quite useful for global climate negotiations in general. With COP21 expected to leave gaps unfilled, including on the investment side, as is similarly being reported in the work of the UN Environment

Programme (UNEP) Inquiry for the Design of a Sustainable Financial System, bringing investors to that global negotiation table seems a requirement if we are ever to make true progress on climate. Oddly, the UN Sustainable Development Goals (SDGs) lack investor commitments, but there is still time.

INVESTORS CANNOT SOLVE climate change on their own, they need policy commitments that are locked in place so that long-term investments can be made with confidence. Corporates similarly need assured policy in order to take full actions.

What is recommended is an expansion out of COP21 from the global climate negotiations to a broader deal involving not only governments, but investors and corporations as well, backed by the voice of a majority of the public, applying the steps listed above on a global basis.

Perhaps only with such expanded agreement across disciplines can investment be made at the scale required and with the confidence necessary. Engagement would truly also be effective if deployed at such significant levels.

Governments are also needed to influence their own state owned enterprises, often an underrated component on global climate change issues, given their majority ownership and control of the world's remaining fossil fuel reserves.

> Divestment doesn't change the big picture of annual greenhouse gas emissions into the atmosphere that remain at or near an all-time high of between 40-50 gigatonnes per year"

Asset owners can divest from fossil fuels (those who divested coal in 2015 certainly wish they had the foresight to do so in 2012, before the sector lost most of its value). Divestment can make sense after a process determines change isn't happening, and that there is no business case. Oil companies may well continue to be under pressure to achieve past levels of profit and yield and shareholders are understandably increasingly asking for cash back rather than making wasteful capital expenditure plays on expensive oil when Saudi Arabia has made clear it wants and likely needs to be the world's low-cost provider geopolitically.

But divestment doesn't change the big picture of annual greenhouse gas emissions into the atmosphere that remain at or near an all-time high of 40–50 gigatonnes a year. Unless that figure starts to decrease as a decadal average rapidly, we will start to see worsening climate effects, including food and water shortages.

The global economy likely requires action now. The steps above, if taken by a majority of investors, may give the world its only chance for both societal success and maximum financial value at the same time.

Reference articles on Responsible-investor.com

How to optimize carbon footprinting practices in the light of the Montreal Carbon Pledge: why most techniques overlook the largest opportunities for company decarbonisation

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ESG Magazine talks to Mark Campanale, co-creator of the Carbon Tracker Initiative, the research organisation behind 'unburnable carbon' and 'stranded assets'

A new breed of financial NGO

Can you talk about some of the background to the Carbon Tracker Initiative?
It goes back to the Earth Summit in 1992. Nick Robins [co-director, UNEP Inquiry into the Design of a Sustainable Financial System] and I were heavily involved in drafting the World Business Council for Sustainable Development's 'Changing Course' report for the summit. Along with people like Tessa Tennant [co-founder of CDP] we rallied global investors to sign a declaration that financial markets be aligned with the goals of the summit and its pledges on forests and biodiversity.

Our thinking was that if want to prevent global warming you needed to change the business models of fossil fuel companies. Jeremy Leggett [founder of Solarcentury], Tessa and I organised a paper called 'The long-term financial consequences of climate change', authored by Mark Mansley [now chief investment officer of the Environment Agency Pension Fund]. Greenpeace, the NGO, booked a hotel room for a 60–70-person launch, and three people turned up ...

We were a bit early! My belief is that fossil fuels is a major supply-side problem for investors, as well as a demand issue. Others argued that demand was key, and organisations like CDP were created and have been very successful. Nick and I continued to work on the supply-side theme, which we called reserves replacement, based on the 'proven and probable' reserves of fossil fuel companies, because these companies maintain their value by replacing their reserves each year.

What crystallised the creation of Carbon Tracker?
There were a couple of market issues in the early 90s that really bugged me. One was the IPO of a company called Asia Energy. In the circular to investors and broker's notes coal was described as an 'alternative' energy, which it was – to wood. But, in Bangladesh, where Asia Energy was building the world's largest coal power station, research showed serious increased flooding as a result of climate change. There was a caveat in the Asia Energy circular, however, that the coal power station was on high ground, so at no risk of flooding ... My jaw hit the floor!

Another issue was an attempt to IPO the Australian arm of the group that became Xstrata. In the prospectus there were just 15 lines about climate risk in a 300–400-page report. It wasn't considered, because the Kyoto Protocol hadn't been ratified. I went to see Friends of the Earth to investigate. Mark Mansley produced a fantastic paper on the issue and Friends of the Earth wrote to the Financial Services Authority questioning whether there had been be a breach of listing rules. The FSA's answer was broadly: "We don't have the power to decide whether it is or not because companies and directors are legally required to disclose all material information, and if there is nothing about climate change in the prospectus then it can't be material ..."

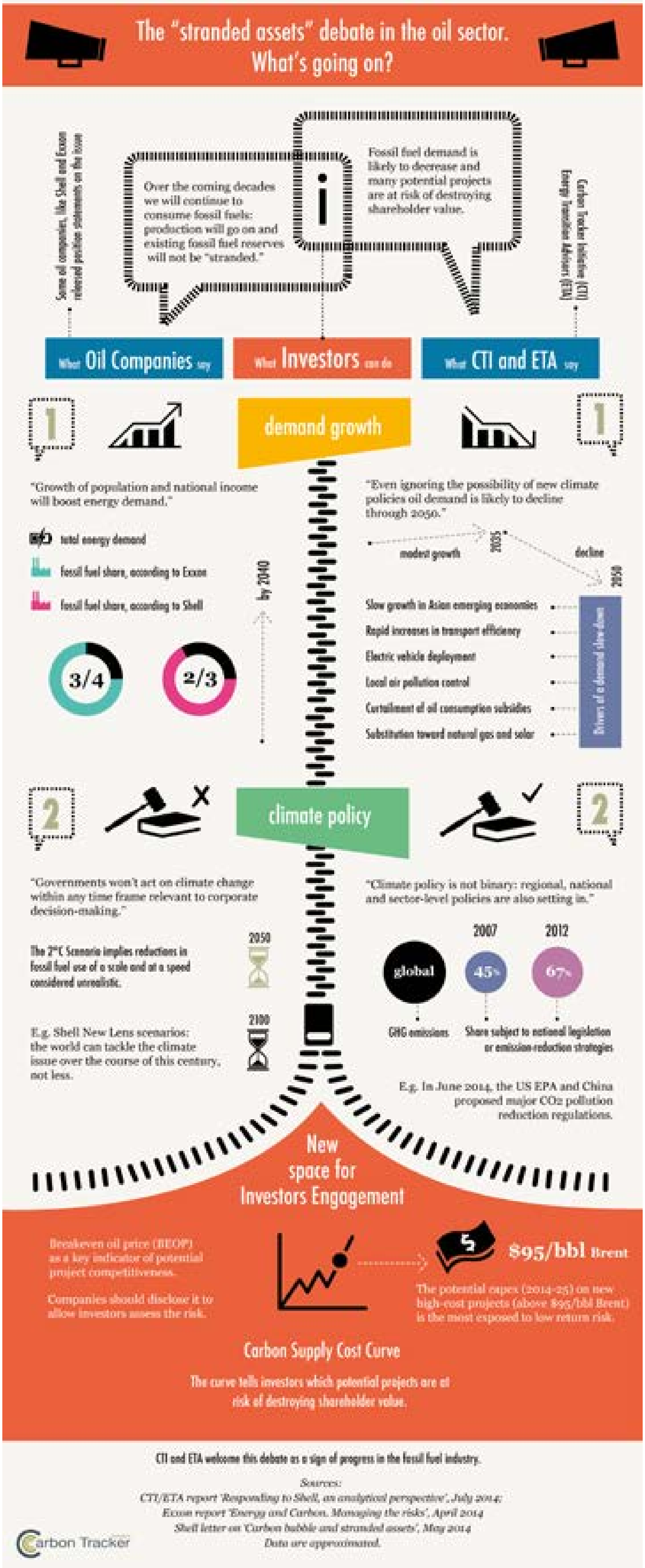
Mark Campanale: "Policy-makers think business and finance is the same thing, and it isn't. The interests of the two aren't the same. What we needed to hear was the voice of finance"

How did things evolve?
I wanted to look at the whole market risk. I did my first financial presentation on this in around 2003–04. The question we asked was the following: "If you were to release all the CO_2 in the reserves of public companies, by how much would you increase the parts per million of CO_2 in the atmosphere, and does it take you beyond 2°C? We also calculated that a huge percentage of the world's fossil fuels companies were listed on the London Stock Exchange. In 2007, Nick and I wrote an article for the UK Conservative Party's 'quality of life' challenge they were running at the time. In it, we looked at how far investors were exposed to the fossil fuel issue, using, for the first time, the terms "proven, probable, unburnable" reserves. It was ignored.

I then started presenting the ideas at conferences. Jeremy Leggett wrote a supportive article in *The Guardian* newspaper, which was seen by The Growald Family Fund [philanthropic fund investing in climate advocacy] who backed us. Nick and I then decided to start Carbon Tracker in 2009 with money from the Tellus Mater Foundation [the grant-making trust for a low-impact future]. Our first hire was Conor Riffle [now director, cities and data product innovation, at CDP] who spent a whole summer analysing the reserves of fossil fuel companies and justifying the mission. Then the Rockefeller Family Fund gave us a grant to fund follow-up research. We were fortunate to hire James Leaton [former senior policy adviser at WWF-UK focusing on the oil and gas sector and related finance] who leads Carbon Tracker's research. We then published the 'unburnable carbon' report on the world's financial markets 'carbon bubble'.

Was the mission to show that politicians were talking a lot about the 2°C target but doing nothing about it?
Yes and no. What rankled me as much was the plethora of climate initiatives and letters from investors talking about carbon and impending disaster, while many were actually investing more and more into fossil fuels. SRI houses

Carbon Tracker's award-winning infographics have been a key part of its messaging (see left and page 36)



were launching funds with best-in-class fossil fuel companies! I was gutted to the core by the thought that if the London stock exchange was becoming more fossil fuel intense then so were we. We were moaning about carbon while our organisations were writing cheques to really dirty fossil fuel companies being listed in London. I called it the carbon carrousel.

My theory of change is that government policy only shifts when investors get on board. Policy-makers think business and finance is the same thing, and it isn't. The interests of the two aren't the same. What we needed to hear was the voice of finance.

Isn't the business of finance to make returns?

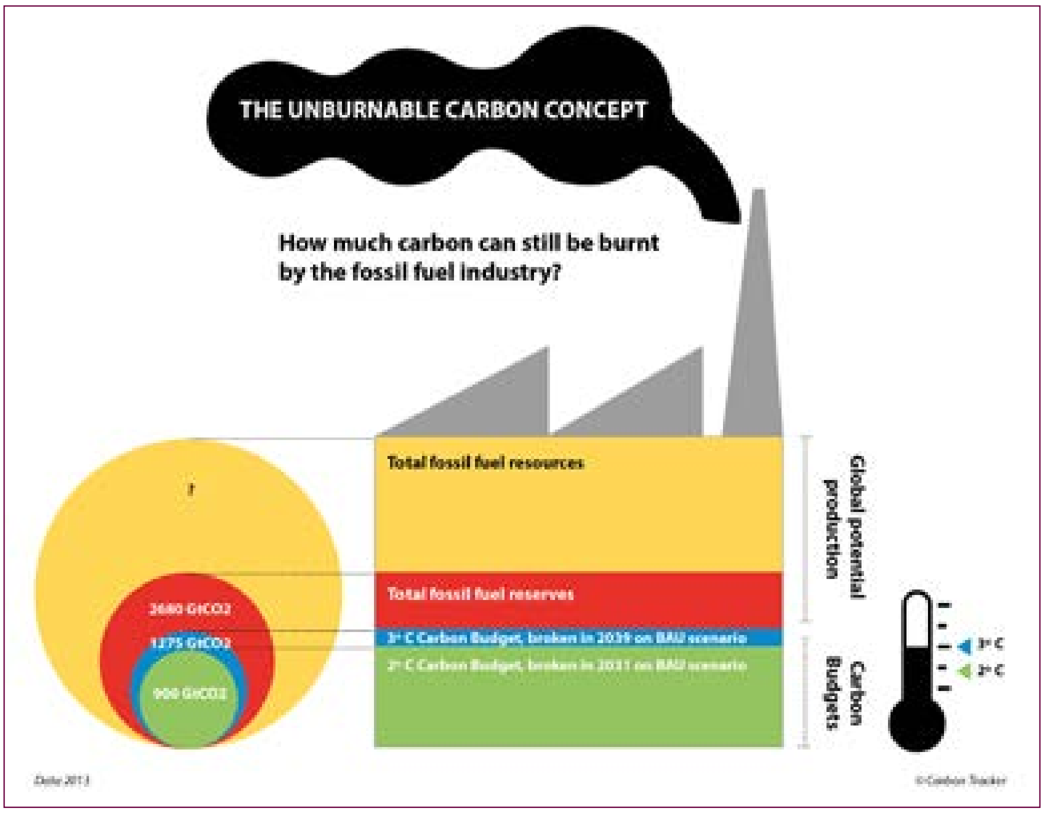
It's not in the interests of pension funds to ruin the planet and make the place unhabitable. They have an equal fiduciary duty to a scheme member aged 18 as they do to a person retiring.

Isn't it the job of governments to lead, and investors to follow that lead?

To some extent. However, business has lobbied government extensively to do nothing, saying it needed to protect shareholders. What governments didn't realise is that shareholders thought it was OK for corporates to ruin the planet.

What we needed to do was to drive a wedge between business and finance in order to bring the financial community out in support of a climate deal. The 'Stranded Assets' thesis that we developed was that wedge. Once investors realised fossil fuel companies couldn't burn all their reserves they started to think of the associated risks that are not properly priced. That led to a second report on Stranded Assets and Wasted Capital in 2013 arguing that investors were pouring billions, soon to be trillions, into assets that will be stranded in a 2°C world.

Somebody from Rockefeller gave a copy of the Stranded Assets report to Naomi Klein, the author, who read it and gave it to Bill McKibben [environmental activist and 350.org founder] who wrote the article, titled: 'Global



Warming's Terrifying New Math' in *Rolling Stone* magazine. It kicked off massive public exposure because it showed our ideas in very accessible terms based on the big three numbers: 2°C, 565 gigatons and 2,795 gigatons [2°C is the limit scientists say rising global temperature should be kept below to avoid dangerous global warming, 565 gigatons is the amount of carbon dioxide that can be released into the atmosphere by 2050 to stay below 2°C, 2,795 gigatons is the amount of carbon dioxide contained in the proven coal and oil and gas reserves of fossil-fuel companies and producer countries].

But Bill didn't read our conclusions, which were that systemic risk needed sustained thinking to resolve it, including financial market regulators, accountants, lawyers, bankers, ratings agencies, etc.

Do you think you've succeeded in rousing that systemic thinking?
I think we have. If you look at the recent statement by Mark Carney on carbon risk, and the work of the Bank of England on climate, some of it has come straight from Carbon Tracker.

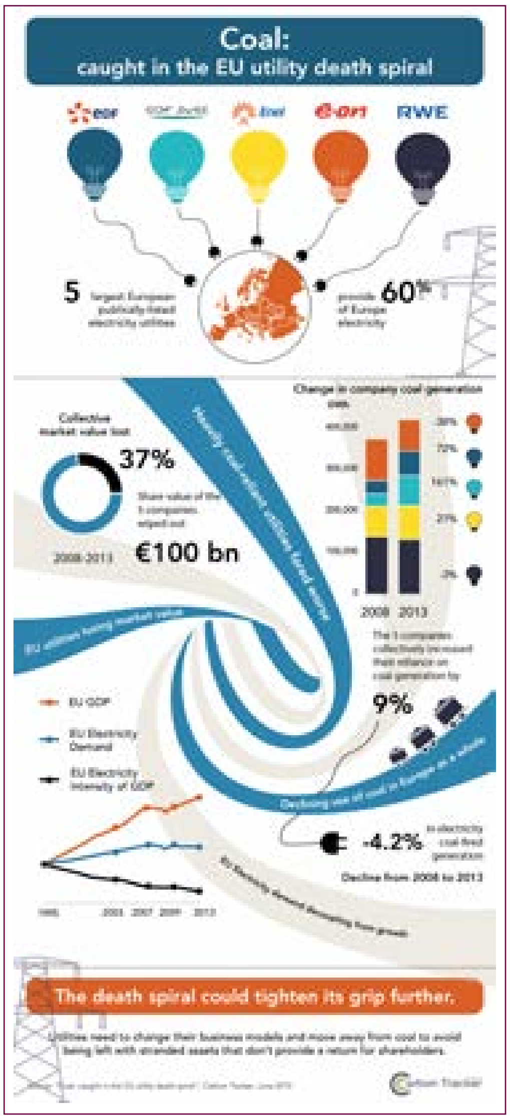
What do you think that success is due to?
Three things. The first is the divestment movement. Even though we have never advocated divestment, it framed the issue perfectly for NGOs, civil society groups and student movements around the world, and made financial institutions have to start to think about the issue.

The second is the formidability of the numbers. Fossil fuel companies plan to develop 1,500 gigatons of CO_2 in their reserves over the next 30–40 years – that's before you bring in government reserves. The carbon budget for a 2°C rise is 565–900 gigatons. Something has to give, especially with coal.

The third factor was financial regulators, particularly in the US, starting to go after oil companies like Exxon and Peabody over emissions transparency, based on the narrative that we helped develop. Citigroup published research saying there was $100trn of revenues at risk in the fossil fuel industry. Then Obama came out to say all the fuel can't be burned.

I think it's because we've always tried to do research in financial language that Wall Street and the City of London understand, but which keeps it simple. As an organisation, being joined by Anthony Hobley [former partner and global head of the Sustainability & Climate Finance Practice at Norton Rose Fulbright, the global law firm] as CEO, for our work with organisations like the OECD, etc, has been invaluable. We've also worked with many smart minds: Mark Fulton, Paul Spedding, Mark Lewis, Jemma Green and others who have advised us like Catherine Howarth and Meg Brown.

"We argue that cost reductions on electric batteries, solar and wind power mean that for oil the future equals rising costs, and for coal it means disappearing markets"



What's next on the research agenda?
We recently produced three reports called 'Carbon Cost Curves' for oil, coal and gas, so investors can understand their risk exposure and start directing capital away from high cost, excess carbon projects. The logical thing is for investors to ask oil companies with high cost projects outside the carbon 2°C budget, what they are doing about it? This takes us to how to allocate that carbon budget between coal, oil and gas.

We roll out our synthesis report on that at COP21. In it we argue that cost reductions on electric batteries, solar and wind power mean that for oil the future equals rising costs, and for coal it means disappearing markets. We're launching a tool called CapEx Tracker to monitor the projected spends of fossil fuel companies just to see how out of kilter they are with the 2°C carbon budget.

What are your expectations from COP21?
I think it will clarify that finance is crucial to a climate agreement, both in providing green finance and destroying brown finance. The INDCs require emissions to drop 30–40% in the next 20 years. But you've got Shell and Exxon saying that demand for oil is going to grow by the same amount over that period. Unless you have significant reduction in the use of coal for power, how is it going to be possible to meet emissions targets? I think Paris will help crystallise these clear business risks.

Fossil fuel divestment campaigns have ballooned in the past year. We examine why and how

Wall St feels the heat

VIBEKA MAIR

IT'S NOT AN EXAGGERATION to say that the fossil fuel divestment campaign – the global movement to pressure institutions to sell gas, oil and coal stocks – caught on like wildfire this year; a hallmark of the social media age. The total assets committed to fossil fuel divestment worldwide grew 50-fold, from $52bn in 2014 to a massive $2.6trn by September of this year, according to a report from Arabella Advisors, the philanthropy consultancy firm.

The commitments came from just over 2,000 individuals and 460 institutions, the most high profile being the $900bn Norwegian Sovereign Wealth Fund, which has dumped dozens of coal companies, and the $866m Rockefeller Brothers Fund, which will sell all of its fossil fuel stocks.

Until these announcements, the divestment movement was dominated by religious groups, charitable foundations and academic institutions, which often had negligible holdings in fossil fuels.

This all changed when the Rockefeller family, which famously made its fortune in oil, announced last year that the charitable fund would withdraw a landmark $50bn from fossil fuels over five years and reinvest it in clean energy. "The divestment movement is on fire, and Wall Street is beginning to feel the heat," says Jamie Henn, a co-founder of 350.org, the group that has helped catalyse the divestment drive.

THE FOSSIL FUEL DIVESTMENT campaign was born on US university campuses and has since evolved into a global divestment movement led by 350.org, the climate awareness group, spearheaded by longtime climate activist Bill McKibben. 350.org provides a framework and support for autonomous divestment movements globally. It also works with a number of NGO partner organisations including Fossil Free, the WWF and Divest-Invest, a relatively young campaign urging organisations to exit fossil fuels and reinvest in climate solutions.

The main focus of divestment campaigns has been universities and faith organisations. But this is changing with burgeoning campaigns targeting major pension funds and financial institutions.

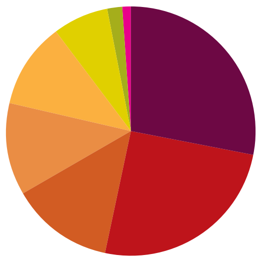
Japanese campaigners have just started a movement targeting the country's $1.2trn Government Pension Investment Fund, the largest asset owner in the world. In South Africa, major financial services group NedBank is facing calls for divestment.

In Europe, many high-profile firms such as Deutsche Bank, Dutch pension plan ABP and France's ERAFP are under campaigner pressure. And in the UK there is a coordinated

Fossil fuel divestment overview

$2.6trn
approximate value of institutions divested

479
institutions divesting



Types of institution divesting

- Faith-based groups 28%
- Foundations 25%
- Pension funds 13%
- Governmental organisations 12%
- Colleges, universities and schools 11%
- NGOs 7%
- For-profit corporations 2%
- Health 1%

Source: Fossil Free (http://gofossilfree.org/commitments/): website includes a list of divesting organisations

Divestment campaigns evolve into positive impact

FACED WITH MOUNTING CRITICISM that divestment campaigns don't work, but shift the problem to less concerned shareholders, students at Cambridge University in the UK have evolved their approach. Positive Investment Cambridge (PIC) developed four years ago, when student activists started to question the efficacy of fossil fuel divestment.

The group decided to adopt what it calls a more 'nuanced approach' and start a conversation about how Cambridge University invests. PIC garnered support from the university's faculty, and eventually the administration voted in favour of an official review into how Cambridge, which has an estimated $3.6bn endowment fund, can maximise the positive impact of its investments. A working group was created in May involving students, academics and administrators.

Ellen Quigley, a spokesperson for PIC, says the outcome of the review could carry great weight among other large institutional investors: "This is a detailed, year-long study of responsible investment undertaken by some of the world's finest minds – we are delighted."

The working group will investigate all options for socially responsible investment, says Quigley, including energy efficiency financing, coordinated shareholder engagement, and divestment. PIC expects support from some of the university's big-name alumni, and other universities have expressed interest in launching parallel movements.

PIC is also hoping to influence Cambridge University's constituent colleges, which hold more than $4.3bn in their separate endowment funds.

Quigley says PIC has remained friendly with Fossil Free Cambridge campaigners. "There is a role for surgical divestment, considering the decrease in confidence in coal."

The working group will release a preliminary report soon, and its final report in May 2016. Quigley says it remains to be seen whether Cambridge's council will accept its recommendations, but PIC is determined to put forward a robust case for creating an endowment that contributes to a low-carbon economy. "This is divestment 2.0," she says.

[redacted]

campaign targeting the country's 418 local government pension funds that collectively invest $21.6bn in fossil fuels.

In the US, divestment activists are supporting politicians seeking new laws to compel public pension plans to dump fossil fuel shares. Most notably, 350.org has organised a network of Californians to lobby for new laws requiring the state's public pension plans, the largest in the US, to exit thermal coal.

The mandated divestments from the California Public Employees' Retirement System (CalPERS) and the California State Teachers' Retirement System (CalSTRS) will arguably be symbolic, considering that thermal coal represents just 0.02% ($97m) of their combined $476bn in assets.

However, Brett Fleishman, a senior analyst with 350.org, argues: "They are trendsetters and new-norm makers. When CalPERS and CalSTRS divest from coal, city and state pension boards across the country will start to ask themselves if they should get out too."

It has already set a precedent. There are pending fossil fuel divestment bills targeting the $176.8bn New York State Common Retirement Fund and Massachusetts' $62.3bn public pension fund. State-level 350.org campaigners are actively involved in lobbying.

THIS YEAR, 350.org also started gaining traction with mainstream media, launching a campaign with *The Guardian* newspaper calling on UK medical charity the Wellcome Trust and US-based Bill & Melinda Gates Foundation to divest from fossil fuels. The campaign almost certainly moved Bill Gates to call divestment a "false solution" in an interview with US-based political and social affairs magazine *The Atlantic* this October.

Gates is not alone. Virtually, all major asset owners have resisted pressure to divest. Commitments from major institutions such as Australia's HESTA Super, Oxford University and the Church of England only concern coal.

So it could be argued that the fossil fuel divestment movement has had little influence on the world's capital markets.

But former divestment movements, such as the anti-apartheid campaign or the protests around tobacco, were not considered a success because they financially impacted their targets. This was never the goal. Rather, they sought political impact and moral awareness.

And this is happening. This year, the governor of the Bank of England Mark Carney warned investors face 'huge' climate change losses and Pope Francis called on investors to divest from fossil fuel companies.

350.org says more fossil fuel divestment commitments will be announced in the run-up to COP21, signalling that the movement's spread shows no sign of abating.


Divestment campaigns across the globe (*clockwise from top left*): Oxford, New York, Melbourne, Manila, Berlin

Freedom of information: a carbon data tactic

WHEN THE UK'S Local Authority Pension Fund Forum (LAPFF), which represents 64 funds with combined assets of over £115bn, recently published a guidance paper explaining its position on investment in fossil fuels, it noted that campaigners were increasingly using the country's Freedom of Information (FOI) Act to publish the amount of assets funds held in carbon-intensive companies, and then to push for divestment.

In September, a campaign by Fossil Free UK, which is linked to 350.org, published data showing that local government pension funds with £230bn in assets invested £14bn of that total – or 6% – into fossil fuel companies.

UK local authorities are obliged to respond to FOI requests, unless the data is commercially sensitive. Fossil Free UK put in FOI requests at 101 UK local authorities to source the information, and said it used publicly available data where there was no response.

In the Fossil Free UK data, the top five UK pension fund investors in fossil fuel companies were all LAPFF members. FOI requests at pension funds are usually handed on to the fund managers that run the assets, some of which are understood to be taking legal advice on the information they should hand over. UK law firm Client Earth is reported to be preparing a legal test case by members of a UK pension fund alleging that the fund is breaching its fiduciary duty by not considering the potential impacts of climate change on its investments.

The tactic is by no means restricted to the UK, many European countries have FOI rules – Dutch journalists use the slang term 'Wobbing' to mean getting documents through FOI – as do other states, including the US, with varying degrees of toughness.

One of the most interesting FOI routes in the environmental context is the EU Environmental Information Regulations (EIRs) statute, enshrined in an EU Directive from 2003–04. EIRs work in the same way as FOIs. Their premise is that governments alone cannot protect the environment. Therefore, EIRs enable campaigners and journalists to request data to act as a check on governments through public disclosure.

How climate change sentiment can impact investment in the short term

An unhedgeable risk?

Dr JAKE REYNOLDS
Director, Sustainable Economy, Cambridge Institute for Sustainability Leadership

CLIMATE CHANGE POSES a grave threat to humanity in the 21st century, with significant implications for the investment industry. The risk is generally assumed to be long term, but recently published research from the University of Cambridge Institute for Sustainability Leadership (CISL) and the investor platform it convenes, the Investment Leaders Group, shows that financial markets may not be immune in the short term.

The report *Unhedgeable Risk: How climate change sentiment impacts investment* reveals that short-term shifts in market sentiment induced by awareness of future climate risks could lead to economic shocks and losses of up to 45% in a typical equity investment portfolio. Around half (53%) of this decline would be 'hedgeable' if investments are reallocated effectively, with the other half (47%) 'unhedgeable', meaning that investors and asset owners would be exposed without system-wide action to address the underlying drivers of risk.

Though asset prices are not only made up of fundamental analysis, until now no studies have quantified how changes in investor sentiment on climate change could impact financial markets in the short term.

> "Short-term shifts in market sentiment induced by awareness of future climate risks could lead to economic shocks and losses of up to 45% in a typical equity investment portfolio"

The Investment Leaders Group brings together 11 large asset owners and fund managers with the mission to help shift the investment chain towards responsible, long-term value creation. It commissioned this research to explore how shifts in market sentiment, driven by changes in investor concerns about the future effects of climate change, could impact the value of equity and fixed income portfolios over the next three to five years.

THE STUDY SHEDS LIGHT on the exposure of different asset classes, regions and sectors and, ultimately, investment portfolios, to shifts in climate change-related sentiment, which can be triggered by new technologies, extreme weather events, and policy commitments such as may emerge from the COP21 climate negotiations. The study, undertaken by the University of Cambridge's Centre for Risk Studies (CRS), Centre for Climate Change Mitigation Research (4CMR) and the Judge Business School, modelled the impact of three plausible sentiment scenarios on four different types of investment portfolios (see tables, left).

The study suggests that the investment industry should begin to see climate change as

Sentiment scenarios

1. Two Degrees
Limiting average temperature increase to 2°C as recommended by the UN Intergovernmental Panel on Climate Change (5% probability)
2. Baseline
Where past trends continue (business as usual) with no significant change in the willingness of governments to step up actions on climate change
3. No Mitigation
Oriented towards economic growth without any special consideration of climate challenges (5% probability)

Portfolio structures

1. High fixed income
Mostly fixed income, mimicking the strategies of insurance companies
2. Conservative
60% fixed income, 40% equity, mimicking certain pension funds
3. Balanced
50% fixed income, 50% equity, mimicking certain pension funds
4. Aggressive
35% fixed income, 60% equity, 5% commodities, mimicking certain pension funds

[redacted]

a risk factor in the short term, as well as the better-studied risks from physical impacts arising from changing temperatures in the medium to long term. It shows that short-term shifts in market sentiment created by growing awareness of future climate risks could lead to a loss of value of up to 45% across an aggressive equity investment portfolio. At 23%, the losses in a typical fixed income portfolio may be lower, but still considerable (see table below).

WITH MORE THAN HALF of potential losses 'unhedgeable', the study points to a market failure requiring system-based action to secure the long-term interests of investment funds and their beneficiaries such as pension holders. As Mark Carney, governor of the Bank of England and chairman of the Financial Stability Board, recognised in his recent speech at Lloyds of London, while carbon-related policy is for governments to decide, financial policy-makers have an interest, if not a responsibility, to ensure that the financial system is resilient to any transition hastened by those decisions. Whether the world adopts a 'Two Degree' or 'No Mitigation' scenario there will be implications for investors, spearheaded by sentiment shifts in financial markets. As world leaders converge in Paris, this finding is timely.

At the macroeconomic level, the study shows that shifts in market sentiment cause global economic growth to reduce in both scenarios over a five- to 10-year period as a result of economic adjustment. In the longer term, however, the study shows that economic growth picks up most quickly along a low carbon pathway (Two Degrees), with annual growth rates of 3.5% versus 2% for the No Mitigation scenario.

The report calls for business, government and finance institutions to work together to ensure the economy moves on to a low-carbon pathway. Asset owners and fund managers can play a leadership role in this respect and, in doing so, secure the interests of their savers and wider beneficiaries. Many have started managing the carbon intensity of their portfolios and others actively invest in technologies offering strong financial returns while enabling the transition to a low-carbon pathway.

In the aftermath of the 2008 financial crisis, the concept of stress testing gained strength in the banking sector and this study shows that the same is also possible, and valuable, for the investment industry. Stress testing investment portfolios against a broad range of sustainability risks can provide insights into potential short-term losses and gains. Further research of an interdisciplinary nature is necessary to formulate the scenarios and their effects on the financial system with greater precision, but these early results are already clear.

Investors can act to reduce their exposure to short-term climate sentiment risks, but not eliminate them. System-wide action is required to protect savers' long-term financial interests against the systematic components of climate risk. Most importantly, the study shows that investors should concern themselves with the immediate risks posed to their portfolios by sentiment shifts, and not only the fundamentals of climate change itself in the long term.

Summary of portfolio performance measured by the 5% value at risk

Portfolio structure	Baseline	Two Degrees	No Mitigation
High fixed income	0	–10%	–23%
Conservative	1%	–11%	–36%
Balanced	1%	–11%	–40%
Aggressive	1%	–11%	–45%

Source: Unhedgeable Risk: Stress testing sentiment in a changing climate (CISL, 2015)

Award-winning research demonstrates that environmental regulation is good for capital markets

MARGAUX GATTY

THE STOCK MARKET FAVOURABLY values large firms, and especially those in carbon-intensive industries that are transparent in their environmental reporting, demonstrating that environmental regulation is desirable for the capital markets, according to new award-winning research. Philipp Krüger, assistant professor of responsible finance at the University of Geneva and junior chair of the Swiss Finance Institute, won the 2015 Moskowitz Prize for SRI for his paper, *Climate Change and Firm Valuation: Evidence from a Quasi-Natural Experiment*.

The Moskowitz Prize, which is awarded by The Berkeley-Haas Center for Responsible Business, is the only global award that recognises outstanding quantitative research in socially responsible investing. Krüger's paper examines the impact of the mandatory Greenhouse Gas (GHG) Emissions Disclosure Act that passed into law in the UK in 2013. The law applied to firms listed on the main market of the London Stock Exchange, and now requires that every UK company report comprehensive data on its GHG emissions in its annual report. In the paper, Krüger explores the causality between environmental disclosure and firm value, based on the resulting data via a two-stage research process.

He first analysed company valuations increase pre and post the 2013 regulation of UK quoted firms in relation to similar firms listed on other European exchanges that are not covered by the Emissions Disclosure Act. The results showed that UK quoted firms experienced a higher valuation post regulation than their European peers.

The second stage compared UK quoted companies that did not publicly report their emissions ('non-compliant') to those that did ('quasi-compliant'), before the regulation was introduced. This second test ensured the previous result was not falsified by unobservable factors as both reference groups are affected the same way by exgoneous shocks. The results show that UK non-compliant firms showed a higher increase in valuation. The research implies that investors value the transparency of GHG emissions reporting.

The author backs his research and the desirability of environmental regulation with two theories. Krüger says the 'Porter hypothesis' argues that environmental regulation does not have to be costly to firms as it highlights weaknesses such as resource inefficiencies that are then addressed through innovation, thus increasing value. The second theory goes that environmental regulation is beneficial to firms as it reduces information asymmetries for investors that will then be more likely to trade.

To consolidate his research further, the author examined which company sizes and industry sectors were the most influenced by the regulation. The paper showed that the regulation had a stronger impact on larger firms, as it is commonly understood that climate change will have a bigger impact on those. It also had a stronger impact on carbon-intensive sectors, as investors believe the negative impacts on climate are stronger.

Finally, according to the author, it is as important to understand 'how' the environmental regulation impacted valuation. Krüger studies the origin of the increased company value post regulation. The results indicate that it comes via capital market activity in the form of increased stock liquidity and lower information asymmetries, rather than effects such as capital expenditure.

In the Global Financial Crisis of 2008 – the effects of which we are still very much living with in 2015 – smart people made 'rational' decisions to boost financial returns while turning a blind eye to the critical **systemic risks** they were creating. Our lead article argues that it's time for investors to start reporting on both portfolio and systems-level performance to prevent **future crises**. In our ESG interview, **Saker Nusseibeh**, Chief Executive Officer at Hermes Investment Management, concurs, adding that the crisis was a failure of governance and asset management, as he discusses Hermes' new series of Responsible Capitalism papers.

Education is the key to learning from history, and our **academic research** digest features recent award-winning studies on sustainable finance.

The recent **forest fire** crisis (and the ones before it) in Indonesia is a recurring environmental, social and economic disaster. We look at the investor risk and responsibility angle, and ask whether **ESG disclosure in Japan**, one of the biggest financiers to SE Asia, can help prevent mass tropical deforestation in the region.

Switching to another highly topical debate, implementation of the **Dodd-Frank CEO/worker pay ratio** reporting requirement in the US, we highlight where media articles are already raising the biggest controversies.

In the **ESG Café**, we get busy with a healthier and more sustainable lifestyle, by cycling, and then recycling.

ANALYSIS

Balanced assets

It's time for investors to start reporting on both portfolio and systems-level performance

STEVE LYDENBERG
Founder, The Investment Integration Project
Partner, Domini Social Investments

WILLIAM BURCKART
Founder, Burckart Consulting
Strategic Advisor, The Investment Integration Project

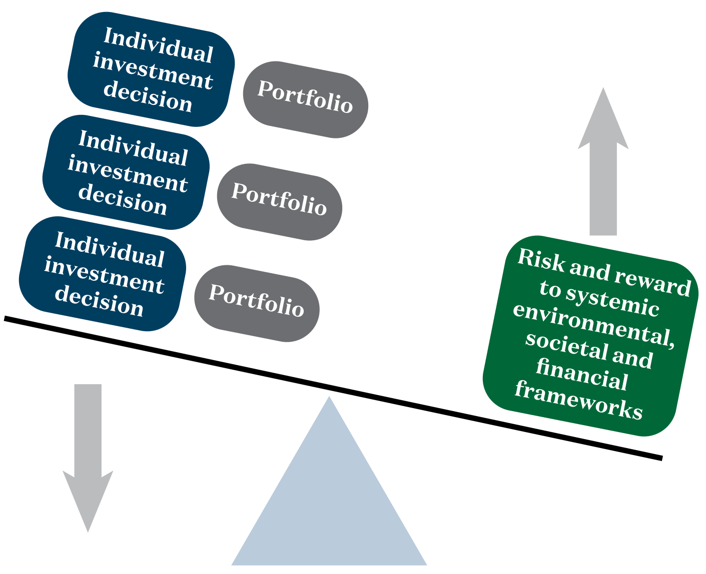
ON 18 SEPTEMBER 2008, the global financial system came within a hair's breadth of complete meltdown. This worst case was ultimately avoided, but the collapse that day of Lehman Brothers with its $600bn in assets helped trigger a worldwide economic crisis. Some 6m people lost their jobs, the Dow plunged 5,000 points, cash-strapped banks needed government bailouts, General Motors and Chrysler declared bankruptcy and the US unemployment rate skyrocketed to almost 10%. All because very smart people making rational decisions to boost portfolio returns turned a blind eye to the systemic risks they were creating.

In the seven years since, some progress in stabilising finance has been made. However, fundamental change remains elusive, despite what many would like to think. Over 1,300 institutional investors with assets under management of almost $60trn have pledged to take environmental, social and governance (ESG) factors into account in their portfolio management, in committing to the UN-backed Principles for Responsible Investment. The major pension fund California Public Employees' Retirement System recently announced that it would gradually require all of its external investment managers to identify the ESG risks in their investment processes.

These same asset owners, however, are making relatively little effort to relate their investment decisions to their impacts on global environmental, societal and financial systems that they operate within. In our new report, *Portfolios and Systemic Framework Integration: Towards a Theory and Practice*, The Investment Integration Project (TIIP) argues that investors need to acknowledge their ability to impact these systems, and that asset owners should begin asking their money managers to report on these impacts.

They should do so because, as figure 1 illustrates, the cumulative decisions of portfolio managers can disrupt these systems, making all portfolios suffer – or can strengthen and enhance them, generating gains for all. This interrelationship between portfolios and systems has all too frequently been ignored.

1. The interreaction between portfolios and systems



THE RESPONSIBLE INVESTMENT community has developed tools to help asset owners and managers integrate ESG factors into portfolio-level decision-making, and to understand and measure the ability of portfolio investments to help solve environmental and social problems. The corporate ESG guidelines developed by the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB) help investors measure risks avoided or opportunities seized at a portfolio level. The Impact Reporting and Investment Standards (IRIS) metrics help investors assess the social and environmental impacts of specific portfolios. Various other metrics such as CDP's indicators of portfolios' carbon exposure help assess specific risks.

But these tools stop short of providing an understanding of the systemic influence of investors' decisions. Indeed, investment theory currently encourages, and even directs, managers to consider their portfolio-level investment decisions as if they are without impact on the environmental, societal and financial systems that provide the foundations on which their investments are built.

Managers are effectively told they should not consider the potentially globally disruptive effects of climate change unless they can demonstrate their impact on the price of specific stocks in their portfolios. The performance of the markets as a whole is not factored into measurement of managers' investment success or failure because – the assumption is – market forces are beyond their influence and control.

The problem with this assumption is that it does nothing to help protect asset owners and managers from systems-level risks or to help them enhance systems-level rewards, when in fact, the potential of asset owners and managers' portfolio-level decisions to support or undermine these systems has never been greater.

The sheer size of their assets under management tells the tale of this potential. Globally, collective assets stand at some $250trn. It's difficult to argue that assets of $250trn, growing daily, are without impact. And this potential influence is concentrated in remarkably few hands. Andy Haldane, executive director for financial stability at the Bank of England, has pointed out that the top 10 asset managers globally have a market share of almost 30% of the asset management sector, with assets estimated at over $80trn in 2015 and projected to reach $400trn by 2050.

A NUMBER OF OBSTACLES stand today between money managers and their ability to understand that their portfolio-level decisions can collectively create systems-level risk and rewards.

To begin with, managers – like their corporate executive peers – are told that their first duty is to generate the greatest returns in the shortest time possible: the invisible hand of the market will then guide their efficient actions to the best outcome for society with no one intending anything other than his or her own self-interest. This philosophy has led to an increasing short-termism in the markets that is "troubling both to those seeking to save for long-term goals such as retirement and for our broader economy," as Laurence Fink, the CEO of BlackRock, wrote in a letter to 500 of the US's largest companies in April of 2015.

Second, it is difficult for money managers and asset owners to see how their individual decisions can meaningfully impact these systems. What real difference does it make if one continues to profit from fossil fuels when climate change is driven by far more than any single decision? Nor will a single investment in a 'green' chemistry company make or break this emerging technology, so why make the effort to evaluate its complexities?

In addition, few tools exist that allow asset owners and money managers to evaluate their systems-level impacts. The PRI's Reporting Framework requires the reporting of much relevant information. But establishing managers' intentionality with regard to systems-level effects, and drawing lines that connect the factors reported on to those systems are the next steps on the road to a deeper understanding of this important phenomenon.

To bridge the gap between portfolios and systems, as illustrated in figure 2, asset owners will need to take three concrete steps:

- acknowledge the connection between investment decision-making and systems-level risks and rewards;
- determine which systemic frameworks they can most appropriately and usefully focus on; and
- implement investment practices that allow them to contribute to the preservation and enhancement of these system while simultaneously achieving competitive financial returns for their portfolios.

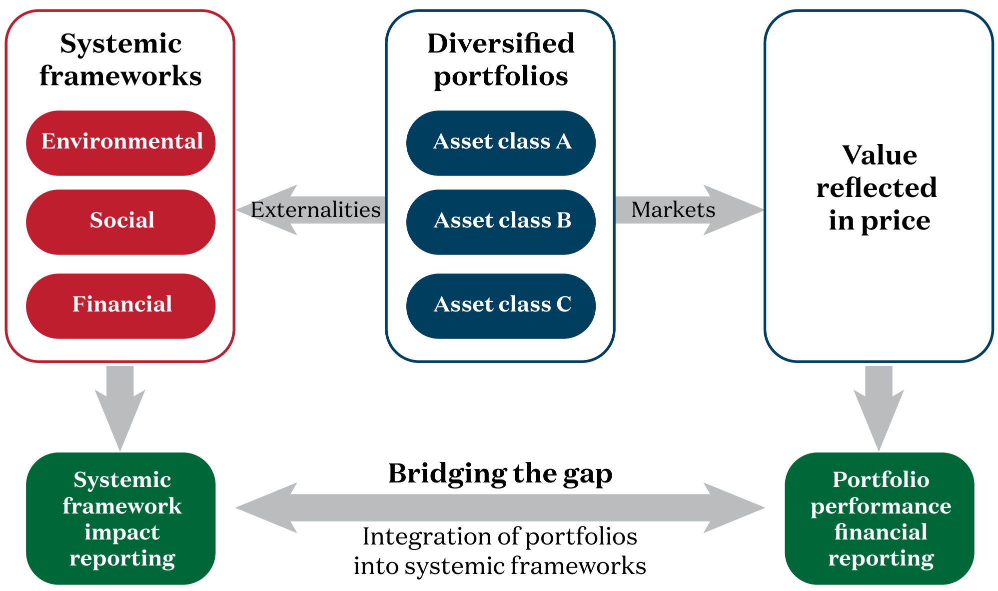
A world in which asset owners and money managers seek to enhance simultaneously the strength of systems and their relative portfolio performance will benefit all. The obstacles between us and such a world, while substantial, are not insurmountable. The first step in overcoming them is to recognise that all investments have impacts beyond the portfolio. Once we acknowledge that fact, the rest will follow.

As Mark Carney, the governor of the Bank of England, forcefully put it at the Conference on Inclusive Capitalism in London in May 2014, "We need to recognise the tension between pure free market capitalism, which reinforces the primacy of the individual at the expense of the system, and social capital, which requires from individuals a broader sense of responsibility for the system. A sense of self must be accompanied by a sense of the systemic."

Investment decisions that intentionally manage systems as well as portfolios can create a rising tide of investment opportunities – and help avoid burning down the house in which we all reside.

The report, Portfolios and Systemic Framework Integration: Towards a Theory and Practice, *can be found at: www.investmentintregrationproject.com*

2. Bridging the gap between portfolios and systems



Investing in water

CLAUDIA QUIROZ

Fund Manager at Quilter Cheviot, an Old Mutual Group company

Claudia is the Lead Fund Manager of our award-winning sustainable investment strategy, the Climate Assets Fund – recently shortlisted for a performance award at the Professional Adviser Awards 2015. She also manages segregated portfolios on behalf of private clients, pensions and charities with a focus on sustainable investment. Claudia holds an MBA from Cass Business School in London and joined Quilter Cheviot from Henderson Global Investors in 2009. She has 15 years' experience in Sustainable & Responsible Investment and is a member of the Chartered Institute for Securities & Investment. At Quilter Cheviot, she sits on the International Equities Investment and Responsible Business Committees.

POPULATION GROWTH IS driving higher water demand, while changing weather patterns are decreasing the supply of fresh water across the world. These issues are causing utilities and regulators to consider numerous solutions, including new infrastructure (reservoirs, water pipelines and desalination), and new operating models in order to improve water efficiency.

According to the United Nations, the world population is set to increase to 9.6 billion people by 2050, and the demand for fresh water is expected to increase by more than 50%. To meet the increasing demand, particularly from emerging economies, we anticipate significant investment by both the private and the public sector, alongside important government and political support around the world. We believe these projects will provide attractive investment opportunities.

Rising water infrastructure investment

The world's water demand and supply imbalance has been well documented, with Global Water Intelligence (GWI) identifying that an investment of US$1 trillion is needed globally for water infrastructure and water preservation by 2022. This is expected to create a US$500 billion infrastructure market, growing at 6% per annum.

Agriculture

Agriculture is a thirsty industry, currently consuming more than two-thirds of the world's fresh water. Agricultural water uses include both irrigation and livestock rearing. For example, depending on age, weight and the season, a cow consumes around 95 to 190 litres of water per day, compared to 150 litres per day per person in the developed world.

When it comes to growing cereal crops, farmers using conventional methods of irrigation can waste up to 40% of total water withdrawals, particularly in developing countries. Therefore, efficient and economic irrigation is fundamental to conserving water in the agricultural sector. Lindsay Corporation, for example, has developed central pivot mechanised irrigation with very low rates (around 5%) of water waste. Manufacturers of irrigation and agriculture equipment include Jain Irrigation (India), Kubota (Japan), Lindsay Corporation (United States) and Toro Co (US).

Water utilities

With budget-constrained governments, the private sector is moving in to supply water and dispose of wastewater across the world. There is an increasing need for water utilities companies to focus on cost savings and customer service in order to thrive in this newly competitive marketplace.

We have seen increasing regulatory support for water utilities, particularly in emerging markets. Companhia de Saneamento Básico do Estado de São Paulo (SABESP), in Brazil, operates water, sewage and industrial wastewater systems and provides sanitation services.

The water utility segment includes companies like American Water Works (US), Pennon Group (UK), Hera (Italy), Veolia Environnement (France) and SABESP (Brazil).

Water conservation technologies

There is an array of companies offering solutions to preserve and conserve water, not only for industrial users but also for households. In the UK, for example, we use more water per person per day than in Germany – 150 litres compared to 110 litres.

A growing population plus an increase in the usage of water per capita is driving the adoption of once considered "luxury technologies" into everyday life. For example, Geberit has developed behind-the-wall cisterns for the residential and commercial sectors, reducing water flush volume by about a third. The company is a beneficiary of rising living standards and demand for environmentally friendly products.

Companies involved in water products and technologies to drive water conservation and preservation include Ecolab (US), Geberit (Switzerland), Kurita Water Industries (Japan) and Pentair (US).

Desalination

Desalination, the process of converting salt water to drinking water, remains energy and carbon intensive. As water is heavy and incompressible, specialist pumps, piping and innovative technologies are required to deliver fresh water to where it is needed. Nevertheless, within the right conditions, desalination is a viable alternative to provide fresh water to coastal and drought prone areas.

According to GWI the global annual spending on desalination will rise 60% to US$16 billion by 2020. Currently, there are about 14,500 desalination plants operating worldwide, with another 244 plants under construction. In the UK, for example, Thames Water opened the first large-scale desalination plant in London in 2010, designed to provide up to 150 million litres of drinking water per day.

Global manufacturers of desalination plants include General Electric (US), Befesa Medio Ambiente (Spain), Suez Environnement (France), Hyflux (Singapore) and Acciona (Spain).

Portfolio construction

The water industry includes a very broad range of companies such as water utilities; pipe manufacturers; specialty chemical producers; measurement; monitoring and testing firms; equipment manufacturers; irrigation companies and membrane manufacturers, just to mention a few.

From a portfolio construction point of view, the diversity of the water industry is attractive, in our view, and exposure to innovative water technologies means portfolio managers can position their fund according to the current economic cycle. Exposure can be gained via a spread of asset classes, including equity, bonds and private equity.

In summary

The estimated US$1 trillion needed globally for water infrastructure and water preservation represents an attractive investment opportunity for investors seeking to understand the water supply and demand imbalance, and the accompanying opportunities.

Academic research: The ESG Magazine digest of the best of the latest cutting-edge studies on sustainable finance

Prize-winning papers

In this issue, we present the winners of the PRI and Sycomore award for the most outstanding research in responsible investment

BEST QUALITATIVE PAPER

Case study: Can ESG factors really be captured like financial data?

John Roberts, Professor
Anna Young-Ferris, Lecturer
The University of Sydney Business School


Roberts and Young-Ferris's paper – *Immature or Impossible: Making Environmental, Social and Corporate Governance Issues Calculable for Investors?* – examines a large global fund manager (anonoymously titled InvestCo) and its struggle to incorporate ESG issues into a traditional financial accounting framework. Analysing three barriers InvestCo encountered, the authors explore whether ESG is too fledgling to be integrated and/or if it will ever be possible to do so.

The study draws on observations from 60 interviews and 67 meetings conducted by Young-Ferris over three and a half years.

The first barrier is trust. Investment analysts do not have confidence in ESG data because it is not numerical and, therefore, material enough for them. Hence, investment analysts treat it as alien.

The second struggle concerns the methodology used by data providers. InvestCo said the volume and diversity of the qualities captured by ESG data, and simplified by the providers, obscured the truth. It did not always account for context. It also allowed bias since larger and richer firms were able to produce bigger ESG reports. Finally, InvestCo struggled to 'assign' responsibility to internal actors. Therefore, it fell into the cracks between the ESG integration and finance teams, creating confusion.

The paper concludes that as the aim of ESG accounting is public visibility, one should not attempt to subordinate it to investment analysts because, while they do not currently see ESG as material, it certainly is to society and the environment.

BEST QUANTITATIVE PAPER

Is the 'sin stock premium' an illusion?

Hampus Adamsson, Research Fellow
Andreas Hoepner, Associate Professor in Finance
ICMA Centre, Henley Business School, University of Reading


Adamsson and Hoepner's paper – *The 'Price of Sin' Aversion: Ivory Tower Illusion or Real Investable Alpha?* – challenges the myth of the 'return on vice' revealed by an influential 2009 Hong & Kacperczyk (H&K) study. This study found that so-called sin stocks (alcohol, tobacco, gaming) outperformed other stocks because of reputational and political considerations, which had pushed away 'ethical' institutional investors.

Adamsson and Hoepner argue that when the data is re-examined through a 'real-world' investment lens, taking into account criteria such as market cap, liquidity and trading volume, the result of the 2009 study is challenged.

Adamsson and Hoepner account for the size of the firms researched, where the previous study only accounted for equal-weighted portfolios of sin-stocks. The authors argue that in the previous research a small-cap size bias was created by the weighting given to small-cap and large-cap stocks. Careful correction of this bias, they say, results in the 'return on vice' disappearing. This authors also account for these biases within sectors.

Using US data, the equal-weighted portfolios outperformed in line with H&K's results. However, the value-weighted alcohol and tobacco portfolios no longer showed any significant outperformance and the gambling portfolio underperformed by 42 basis points.

BEST STUDENT PAPER

Do beneficiaries' beliefs affect funds' decisions?

Lisa Schopohl, PhD student
ICMA Centre, Henley Business School, University of Reading

Schopohl's paper – *Red versus Blue: Do Political Dimensions influence the Investment Preferences of State Pension Funds?* – demonstrates that US state pension funds with Democratic leanings are more likely to invest in companies that account for ESG issues than US pension funds with Republican leanings. The paper highlights that the driving force here is not pressure by state politicians but fund members' political leaning.

By proving that institutional investors are influenced by politics, the paper reveals the enormous impact these funds (some managing assets worth \$200–300bn) can have on the financial markets. Indeed, if the political climate changes and Republicans win the next US elections, the research says it could trigger an exodus from ESG investing.

These findings imply that institutional investors are driven by social aims more than financial risks or returns when it comes to ESG investment preferences. However, the author mentions that this is not detrimental to beneficiaries because it provides indirect value. Indeed, the beneficiaries' pensions are invested according to their political beliefs.

These findings were the result of a methodology connecting funds' portfolio holdings to ESG performance of companies held. It looks particularly at the relation of a company's weight in the portfolio to the ESG performance of the company. The author then analyses whether the relationship changed in accordance to the political leaning of fund members. The political leaning was based on the political leaning of the states where the funds were located.

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ESG Interview: Saker Nusseibeh, Chief Executive Officer, Hermes Investment Management: "The 2008 financial crisis was a failure of governance and asset management"

It's time for responsible capitalism

HUGH WHEELAN

When Hermes Investment Management, the £30bn London-based fund manager wholly owned by the BT Pension Scheme, published in October its annual Responsible Capitalism survey of 109 UK and European institutional investors, it made for equivocal reading.

In a subsequent four-part series of related papers, the manager noted in paper one, *Responsible Capitalism and our Society*, that while there is a growing awareness of ESG issues amongst institutional investors, the shift is not being broadly reflected within investment decision-making. Seventy-nine per cent of respondents considered significant ESG risks with financial implications as sufficient reason to reject an otherwise attractive investment. And 90% believed fund managers should price in corporate governance risks as a core part of their investment analysis, alongside financial metrics.

But the survey showed a clear tendency to behave contrary to this, with reporting requirements such as IFRS17, the triennial valuation cycle and modern portfolio theory driving pension schemes to think in short-term nominal returns, according to 44% of respondents.

The second related paper, *Responsible Capitalism and Diversity*, revealed that despite a number of high-profile campaigns on gender diversity, less than a quarter of institutional investors believe female representation at board level to be important. A third paper, *Responsible Capitalism and Sustainability*, said 48% of respondents believed ESG factors were unimportant when assessing direct property investments, despite the built environment being one of the biggest contributors to CO_2 emissions.

ESG Magazine spoke to Saker Nusseibeh, Chief Executive Officer of Hermes Investment Management, about Hermes' conception of responsible capitalism.

You've been talking in the media recently about why Hermes sold out of Volkswagen for reasons of governance prior to the US Environment Protection Agency scandal?

Yes, the Volkswagen governance structure was flawed. Our global fund employs a complex governance and ESG matrix. It's not a tick-box exercise. It's partly based on feedback that we get from our Hermes EOS Stewardship business. The best-governed companies score 100, the worst 0. On average if we go below 70 that's a good reason to sell a stock. Otherwise, you are endorsing significant risk. Volkswagen kept on declining to below 70, and there are other car companies to hold, so we sold out.

What are the relevant governance signals? If this is a fraud issue, how can you spot it?

Well, governance by clique is a bad sign, and that's what was happening at Volkswagen. It's good to have personalities in businesses, but not unchecked. Governance is a check-and-balance system. And since we are talking here about responsible capitalism, the 2008 financial crisis, in my view, was a failure of governance, and more specifically it was a failure of the asset management industry. The reason is that asset management's job is to analyse the market; that's our skill set. We analysed, so why did we not say what was going on? It's because we never had the guts collectively, and individually, to go to the investment banks, and say: 'I'm sorry your return on equity (ROE) in the high teens is abnormal, cut back it's too dangerous.' None of us, collectively, had the courage to go to the likes of AIG and ask them about their asset base for insuring collateralised debt securities.

Is that because everyone believes everyone else will be making the same mistake/decision?

I think so. That's why we created The 300 Club [a think-tank of influential European fund management investment heads working to highlight irrational and dangerous market behaviour: www.the300club.org].

There seems to be a very Friedmanesque view of the world in asset management, which comprises of either: A: being the index, or B: making as much money from clients as possible. The mantra is that the job is to maximise returns for shareholders and investors, and sometimes prioritise the former over the latter. I harp on about the financial crisis because when we talk about investment returns we never take into account the effects of 2008. If you want to know how much the markets made for you in the last 15–20 years you should add back as a negative the debt that governments have had to take on board as a result of quantitative easing. Otherwise, it's an illusion.

> "If you want to know how much the markets made for you in the last 15–20 years you should add back as a negative the debt that governments have had to take on board as a result of quantitative easing. Otherwise, it's an illusion"

That sounds fine in principle, but why is that the job of the asset management industry?

Because we control the economy, that's why we're responsible. The savings industry controls the wealth of the world and our decisions shape that world, so we cannot say that it's not our business.

But having power without responsibility has been the best way of making money since time immemorial, hasn't it?

Yes, but I think there is blowback today, and it started in 2008. The public might be at an

Saker Nusseibeh:
“If fund managers want to be better at what they do, they’ve got to incorporate ESG factors into investment. It’s as simple as that”

informational disadvantage to the financial system but it ‘ain’t stoopid’. Investors are beginning to talk about the need to invest differently. The UK Association of Member Nominated Trustees recently came up with its Red Lines ESG-based governance policy. What’s interesting is that our Responsible Capitalism survey shows a majority of asset owners believes ESG is important. But, they say they would not select managers on the basis of ESG. They’re saying: “It’s important, but I’m going to ignore it.”

Why do you think that is?
I think it’s because there is pressure for people to take ESG on board, so there’s pushback.

We believe that every bit of informational advantage helps. So if our peers don’t want to do this, great. But at some stage, they’re going to wake up. The way I interpret our survey is that a large number of investors are beginning to see the broad importance of an ESG approach, but they are reluctant to make decisions based on that understanding yet.

Can there be much real change in the absence of client pressure?
The client side is still slow because of continuing uncertainty over fiduciary duty. But it’s incredible really that the investment world has such a narrow view of its responsibility to its beneficiaries. What’s so strange about governance? It’s about good corporate management! Why wouldn’t investors look at the ‘sustainability’ of a company business model or try to understand the environmental impact of its operations?

My view is that those people who practice finance in a very free, liberal fashion do not want to change that much. There is a lot of bad science in economics and most of neo-classical economics is flawed, and we know that. Economics used to be part of political science, because you cannot separate, as we do, the financial system from society; it’s nonsense.

The majority of the stock market is owned by ordinary people, yet the average beneficiary in the UK is going to retire on between £10,000–15,000 per annum; at or below the minimum wage. Conversely, the asset management industry’s margins have gone up since 2008! However, there is now real concern that the business model of many fund managers is unsustainable. Houses that provide ‘semi-skills’ in asset management are being eaten up by BlackRock and Vanguard because of a lack of real ‘investment’ rather than speculation in the system.

Aren’t you in the luxurious position of being able to talk your own book because you have a big pension fund backing you?
Yes and no. BT would not keep us as third-party managers if we did not actually beat the benchmark, and proximity creates direct pressure. But, it does give us a unique advantage in that we actually know who we work for. We make investment decisions for our ‘shareholders’ that will determine how they’re going to live in 30 years’ time. Therefore, I need to ask myself, if I push for the short-term additional 1% return that will boost my bonus, how much might I be removing from long-term prospects for the pot or for the society my members retire into? Am I putting at risk a member’s employment? What about the employment of their children? What about society’s infrastructure?

You’re an outlier; the world seems in a sort of headlong rush the opposite way?
I disagree. I’m a fund manager, and because I’m a fund manager I’m a contrarian. We look at all the financial fundamentals, but we also look at ESG. And we’ve grown our third-party institutional sales from 8% of revenue when I joined to 46%. When you go to Australia, the Nordics, Asia, they are really on board with this because they’re not stuck in the past.

What needs to happen in your view for ESG to be taken seriously by asset managers?
We’ve done research on good governance and can clearly show it makes a difference. The environment is another example. It doesn’t matter if you think the world is warming up or not: what is important is to understand when and how governments will put a tax on carbon, and the impact it could have on your valuations. If fund managers want to be better at what they do, they’ve got to incorporate ESG factors into investment. It’s as simple as that.

You bring diversity into one of the Responsible Capitalism papers. A lot of people on the side of liberal economics say diversity is an issue that finance should ‘do something socially’ about because the market is not responding.
Companies say they want to hire the best people, yet decide to halve the talent pool. It’s the same with ethnic diversity. When I joined the City there were few people from my background doing what I do. But there is a clear overlap between diversity, good business and benefit for the community. By the same token, we’ve been successful by doing things differently and putting responsibility at the heart of what we do.

My challenge to all my fund manager peers is to arbitrage us out of the business if this isn’t serious. We believe that if fund managers integrate ESG, think more holistically about investment, care about the people whose money they invest, and about society, then it’s possible to grow business at exponential rates and win back respect from society.

What should investors know about the forest fire crisis in Indonesia?

Smoke haze, palm oil and investment risk

Indonesian forest after fire

JOSH BREWER
Principal Research Analyst specialising in news research at EIRIS

EACH YEAR, forest fires caused by slash-and-burn land clearance in Indonesia produce vast amounts of smoke, causing a haze that impacts much of Southeast Asia. This year has witnessed a particularly severe haze as dry conditions and the impact of agricultural practices have led to a larger than usual number, and greater intensity, of fires. The fires have devastated rainforests that are home to many endangered species, including the orangutan, leading to the widespread destruction of habitats already under extreme pressure from the expansion of agriculture.

According to data from the Global Fire Emissions Database, emissions from Indonesian fires this year have already passed 1.5bn tons CO_2 equivalent, more than Japanese fossil fuel CO_2 emissions for 2013. Ten people have died as a direct result of the fires and smoke, with as many as half a million people suffering acute respiratory infections from smoke inhalation. The economic cost to Indonesia has been estimated to be as high as $47bn.

An analysis of NASA hotspot data by the NGO Eyes on the Forest showed that around 40% of the fires that took place on Sumatra were on pulp wood plantations that are concessions of multinational companies. It has been reported that many of the other areas where fires took place were on land used for palm oil or bordering palm oil plantations.

The issue of burning is a complex one in the context of Indonesia. There are allegations from NGOs that some oil palm plantations have been responsible for setting fires, or encouraging others to set fires on their borders which then spread into the plantation itself. The companies involved deny this, and several have anti-burning policies in place. It is the case that many fires are started by smallholder farmers to clear land for cultivation, often because they have been moved off their traditional farmland to make way for oil palm plantations.

One of the chief reasons for the severity of the fires this year is the draining of peatland for oil palm plantations. This draining process, coupled with an extended dry season in 2015, meant that when the fires were started they spread quickly to the peatlands. Once peat catches fire it is difficult to put out and releases very large amounts of smoke and CO_2 into the atmosphere.

THE LINKAGE BETWEEN the fires and palm oil production is problematic for investors, given their exposure to the commodity through the significant role that palm oil plays in the production of many consumer goods. Both producers and companies that use palm oil in their products are exposed to reputational risk. To mitigate these risks, investors need to encourage the companies involved in palm oil to develop more sustainable production practices. The Round Table on Sustainable Palm Oil (RSPO) works with stakeholders to certify that palm oil has been produced in a sustainable manner. Both EIRIS and Vigeo use RSPO certification as an indicator when assessing companies that grow palm oil.

However, certification, although useful, is not enough when assessing risk and it is important for investors to be aware of those companies involved in controversial activities. The EIRIS Convention Watch service tracks cases where there are allegations that a company has breached international norms. Currently there are a number of Convention Watch cases for palm oil producers operating in Indonesia. It is important that investors encourage companies that have palm oil in their supply chain to implement sustainable oil palm sourcing policies. Key to this is supply chain transparency as it gives investors a fuller understanding of the levels of related risk.

It also important that palm oil companies commit not to develop high conservation value areas (in particular, peatland sites); ensure that free and informed consent has been obtained from those who own the land; and seek the prevention of rights abuses, such as forced or child labour.

In response to this year's smoke haze disaster the Indonesian government has issued instructions on peat management, including rules to prevent further harmful development of peatlands. Investors have co-signed a letter to President Jokowi Widodo supporting the protection of forests and peatlands. A useful test for companies involved in palm oil production is the extent to which they adhere to these guidelines – including not lobbying for them to be watered down. This is also a useful yardstick for investors to measure company commitment to sustainability.

Can ESG disclosure in Japan help prevent mass tropical deforestation in Southeast Asia?

Rainforest action

TOM PICKEN
Senior Advisor, Forests & Finance
Rainforest Action Network

JAPANESE CORPORATIONS are in the midst of a shake-up as part of Prime Minister Shinzo Abe's revitalisation strategy. The introduction of Japan's Stewardship Code in 2014 and the Corporate Governance Code this year have ushered in reforms that fundamentally challenge boardroom cultural norms. They are also moving sustainability expectations beyond boilerplate CSR reports to the strategic integration of ESG risk assessment connected to wider business operations.

These developments could, if taken to their full potential, see Japan become a major player in responsible investing. But there is another, more tangible, pay-off on offer: helping stem the loss of Southeast Asia's tropical rainforests and the enormous carbon emissions caused by deforestation. This is because these forests are firmly within corporate Japan's sphere of influence.

Take Sarawak, Malaysia, for example, on the island of Borneo. Only 5% of its forest remains intact and illegal logging is known to be rampant. For nearly two decades, Japan has been the largest buyer of timber products from its forests, including half of all Sarawak's plywood exports.

But it's not simply supply chain demand that gives Japan a major stake in addressing tropical deforestation. Japan's commercial banks also have significant leverage through their loans to timber, pulp and paper and palm oil companies clearing rainforests across Southeast Asia.

A new research study undertaken by Rainforest Action Network (RAN) and Profundo finds that Japan's mega-banks have made more than $10bn in commercial loans since 2010 to major firms producing forest-risk commodities (such as timber, pulp and paper and palm oil). This represented around one-quarter of all recorded loans captured in the study – more than any other country. While not all of that finance can be directly tied to bad forest practices, a great deal can.

Take one major client of Japanese banks: Indofood Agri Resources (Indofood). Our investigations have found evidence that the company is linked to the clearing of primary rainforests without permits, fires causing haze, the violent suppression of communities and alleged child labour abuses. We have written to the company for response but have yet to receive any specific rebuttal of our research or these allegations, despite an agreed review period with the company. Contact with Indofood is ongoing. Sadly, these types of impacts are all too common in the production of tropical forest-risk commodities.

Aid Environment 2015

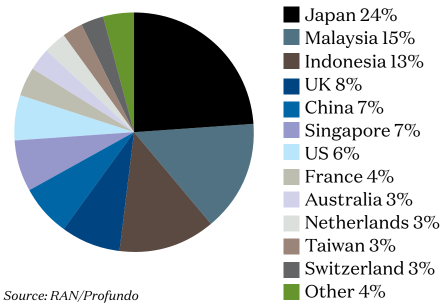
Indofood oil palm plantation

Weak forest governance and law enforcement capacity, combined with high levels of forest-sector corruption, are sadly all too common in many tropical forested countries. This makes actors in international supply chains and the financial sector critical stakeholders if we are to see any improvements in the environmental and social standards of forest-risk commodity production.

THERE ARE SOME REASONS TO BE HOPEFUL. Timber import legislation in key consumer markets is beginning to bite and 'zero-deforestation, zero-exploitation' pledges in other forest-risk commodity supply chains continue to gather pace. ESG disclosure requirements are improving too, most notably through the EU Non-Financial Reporting Directive. Financial institutions in OECD countries have an obligation to "seek to prevent or mitigate adverse impacts" caused by companies to whom they provide financial products or services.

There are also reasons to be concerned. The first set of Corporate Governance Code reports submitted by Japan's mega-banks to the Tokyo Stock Exchange this year ring an alarm. While they contain much detail on efforts to open up boards to greater independence, they omit any assessment of the many ESG risks arising from financial services provided to high-risk sector clients such as those in the tropical forest sector.

Proportion of commercial loans, 2010–14 by bank country of origin, to 50 selected pulp and paper, palm oil and timber producers



Source: RAN/Profundo

This suggests that Japanese banks either don't understand ESG issues or they intend neither to comply nor to explain in respect of the sustainability provisions and principles contained within the code. This should not just worry the responsible investment community, but may signal a trend toward superficial compliance with the wider governance reform agenda.

One immediate solution would be for the Financial Services Agency to provide more prescriptive guidance on the types of ESG risks companies in Japan should consider material. There is a strong case to begin with the range of environmental and social impacts caused by tropical deforestation, in respect of the unique role that some of Japan's largest corporations play in this urgent global problem.

Companies have until 2018 to implement the Dodd-Frank CEO/worker pay ratio reporting, but articles already show where the biggest controversies could lie

Mind the pay gap

PAUL HODGSON

> "Clearly there is a large amount of unpreparedness for 2018 and, at the same time, the potential negative fallout from the disclosure is substantial not just among shareholders but other stakeholders such as employees, clients and customers"

THE US 'DODD-FRANK' post-financial crisis legislation has been under fire from corporations and their attack dogs since it came into being. But no part of the regulation – more formally known as the Wall Street Reform and Consumer Protection Act – has come under as much sustained flak as the requirement to publish the CEO/worker pay ratio.

Too expensive, too difficult to calculate, shareholders don't want it, left-wing propaganda, political posturing masquerading as shareholder protection, no business need ... The criticisms are endless. It has, I am guessing, inspired more comment letters to the SEC, which is tasked with implementing Dodd-Frank's various regulations, than any other regulation in its history. Not only that, but shortly after Dodd-Frank passed, Republican politicians introduced legislation H.R. 414, sponsored by Representative Bill Huizenga, and S. 1722, sponsored by Senator Mike Rounds, to repeal the ratio rule before it was even out.

Since the SEC finally implemented the rule on 5 August, we have been bombarded with estimates of pay ratios, commentary, op-eds, continued fierce campaigning, opinion surveys and readiness assessments.

Before I go further, let me state my position on this disclosure rule. I am not convinced that it is going to provide an enormously valuable tool to shareholders in assessing a company's governance. It's a 'nice-to-have' not a 'necessity'. But, as a journalist, I'm salivating at the prospect of 2018, the year that companies must first disclose the ratio.

First, let's look at what the pay ratio means. Companies must disclose – with or without an accompanying narrative – the ratio between the CEO's total pay and the pay of the median employee. In calculating the pay of the median employee, the SEC has given companies a considerable amount of leeway; even allowing for statistical sampling. More importantly, all employees must be counted, including non-US, part-time and temporary workers. Only workers in countries where privacy laws prevent pay data from being used in this way are excluded.

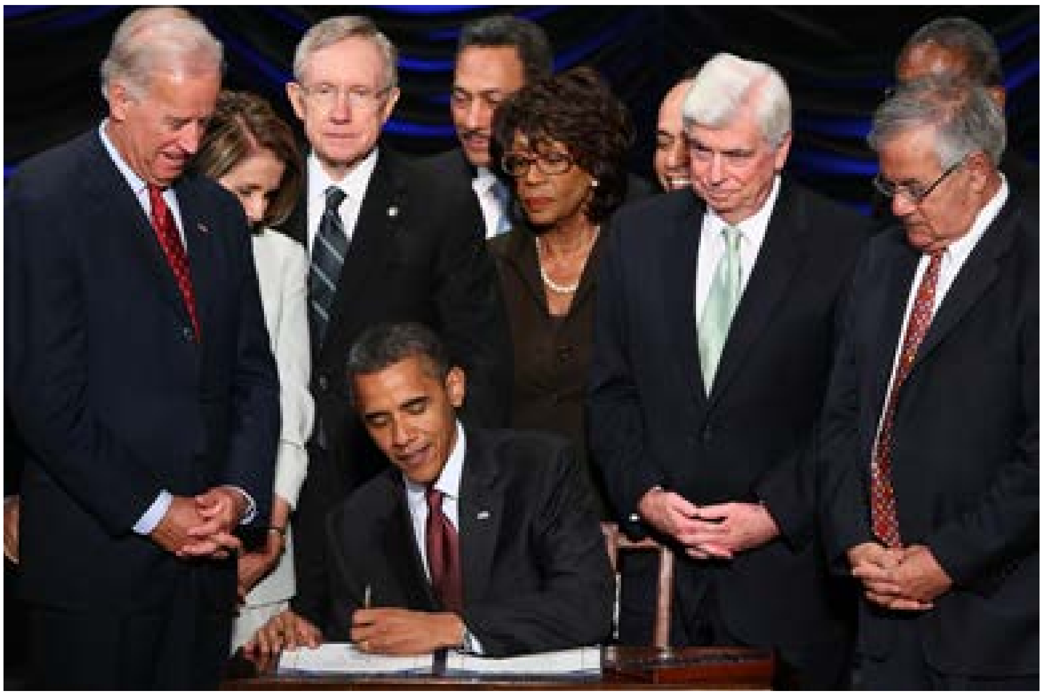
Critics of the rule point to the expense involved in calculating this figure. Even the SEC itself estimated that in the first year it could cost \$1.3bn, with annual costs in the future a potential \$520m. Of course, that figure is divided up among a very large number of companies.

Critics also point to the lack of shareholder support for the rule, noting that shareholder resolutions asking companies to disclose a pay ratio voluntarily have received very little support. On the one hand, since the rule was inevitable, there likely seemed little point in forcing companies to introduce something early that would happen anyway. On the other hand, some companies, like Noble Energy, began disclosing a CEO/worker pay ratio in 2014, without any kind of pressure from shareholders.

Tim Bartl of the Center On Executive Compensation – a vocal opponent of the ratio – recently wrote that, of the 131 companies that responded to a 2013 survey, none felt "there was any business purpose to calculating the ratio".

Supporting the ratio, Heather Slavkin Corzo, director of the Office of Investment at the union AFL-CIO, called estimates that it would take 1,000 staff hours per company to calculate median employee pay "nonsense" and said that companies should already have this information on their books. While I don't believe that firms with workers in multiple countries would have this information in one place, I doubt that it would take anywhere near 1,000 hours to compile it. Corzo also noted that, despite the accusations of political motivation behind the introduction of the rule, it would not of itself reduce CEO pay or raise workers' pay, but rather place another statistic in the hands of shareholders.

Steve Seelig, from compensation consultant Towers Watson, took a completely different standpoint, alleging that the real challenge of the ratio will not be communications with outside stakeholders, but rather with employees, at least half of whom will know that the other half is earning more: "Companies that get this communication effort right will find they actually have strengthened their relationship with the workforce, with better productivity and reduced turnover as likely outcomes," Seelig wrote. Seelig also noted a recent survey by Towers Watson that found fewer than half of corporate respondents felt that their companies had already identified the necessary data to calculate the pay ratio. Even fewer, just two-fifths, have made preparations for reactions to the ratio among their own employees.



US President Barack Obama signs the Dodd-Frank Act

Clearly there is a large amount of unpreparedness for 2018 and, at the same time, the potential negative fallout from the disclosure is substantial not just among shareholders but other stakeholders such as employees, clients and customers.

As soon as the rule was finalised, a number of organisations put out calculations of the ratio based on public data on CEO pay and internal data on employee pay. Job site Glassdoor used total CEO pay figures from SEC filings, while median total worker pay was based on Glassdoor salary reports, limiting calculations to companies with at least 30 salary reports. Salary reports are self-reported pay figures from employees who are subscribers to the site. Four companies had a ratio of more than 1,000%: TV channel Discovery Communications, restaurant chain Chipotle, retail chemist CVS Health and Walmart. These high ratios resulted from a couple of circumstances. The first was caused by CEOs who were extremely highly paid, like David Zaslav at Discovery and Steve Ells at Chipotle. The high ratios at CVS and Walmart were likely due to low-paid retail employees. Indeed, Glassdoor's list of the top 15 highest ratios is very heavily dominated by retail companies.

Pay data site Payscale also came up with a list of the top 100 ratios based on data from research firm Equilar and its own substantial database of 54 million pay rates. Payscale excludes stock compensation – the reason its ratios are much lower even for the same company – because that more closely matched the pay details it collects in its own database. In fact, calculations of CEO pay will include stock compensation, so ratios are likely to be much higher. The difference in methodology also explains why only two companies are found in both Payscale's and Glassdoor's top 15 lists – CVS and Walt Disney. Payscale's list is also more industry diverse, with finance, heavy industry and entertainment all represented. CVS tops this list, but the ratio calculated is much lower – 422:1 compared to Glassdoor's 1,192:1. Indeed, the top five highest ratios are only 200:1 and more.

Bloomberg also came up with a highest ratio list. It estimated average worker pay by identifying businesses' reported salaries and benefits expenses, and dividing that by the total number of workers. Of course, an average pay figure can be very different from the median. The resulting list is different again from both Payscale's and Glassdoor's, and is topped by McDonald's with a 644:1 ratio.

What this demonstrates is that calculating the ratio is very difficult if you don't have accurate or complete data. In contrast, corporations do have this data. Though the eventual figures are unlikely to match those calculated by these outlets, some of the companies highlighted will undoubtedly be included among the highest ratios – restaurant chains, retail companies, companies with highly-paid CEOs. Low worker pay and high CEO pay is an explosive combination and easily explains corporate resistance to this latest disclosure.

Ratio of CEO pay to worker pay among S&P 500 companies

Employer	Rank	2014 CEO	CEO total pay	Median worker total pay	Ratio of CEO pay to worker pay	Overall company rating
Discovery Comm.	1	David M Zaslav	155,077,912	80,000	1,951	3.8
Chipotle	2	Steve Ellis	28,924,270	19,000	1,522	3.4
CVS Health	3	Larry J Merlo	32,350,733	27,139	1,192	2.7
Walmart	4	C Douglas McMillon	25,592,938	22,591	1,133	3.0
Target	5	Brian C Cornell	28,164,024	30,000	939	3.2
CBS Corp	6	Leslie Moonves	57,175,645	66,365	862	3.5
Bed Bath & Beyond	7	Steven H Tamares	19,116,040	26,047	734	2.9
Macy's	8	Terry J Lundgren	16,497,220	22,800	724	3.0
Gap	9	Glenn Murphy	16,064,312	22,800	705	3.6
Starbucks	10	Howard D Schultz	21,466,454	32,080	669	3.8

Source: Glassdoor. www.glassdoor.com/research/ceo-pay-ratio/

Living sustainably. Waste not, want not in the …

ESG Café

ANETA ATANASOVA
PAUL VERNEY
DANIEL BROOKSBANK
VIBEKA MAIR

Packaging waste is a very human output. And its management has climbed higher and higher on the political agenda in recent years. The World Bank estimates that by 2100, taking into account predicted population growth, cities will be producing three times as much waste as they do today. That's a big, smelly, awkward problem. The amount of rubbish humans produce is becoming unsustainable in the long term, and fast changes in our business-as-usual attitude are needed. As policy-makers and businesses look at how best to deal with the planetary rubbish pile we create, two innovative businesses are tackling the issue from an alternative perspective using a preventative form of environmentalism or 'pre-cycling' to create zero waste in the first place.

Shop: Original Unverpackt, Berlin

ORIGINAL UNVERPACKT ('Original Unpackaged) is a supermarket with a mission in the Kreuzberg district of Berlin, Germany. It offers shoppers a new package-free shopping experience. It is the project of Sara Wolf and Milena Glimbovski who spent two years developing the concept before seeking crowdfunding for it on Social Impact Finance. Their idea proved so popular they doubled their original crowdfunding target.

It is a simple principle: customers go to the shop bringing their own containers. These get weighed and labelled before being filled with different food items dispensed from large gravity bins. At the till, the weight of the containers is subtracted to determine the weight of the groceries. To make it even more convenient, the label is designed to endure a few washes – next time you use it you can skip the weigh-in.

The shops stock is not frugal, however. It includes fresh fruit and vegetables, beans and cereals, shampoo, toothpaste and alcohol; all sold without unnecessary packaging. Its founders believe shoppers can find everything they need without being offered countless brands for each item. One product is enough, according to Sara and Milena, as long as it is the right one.
www.original-underpackt.de

Eat: SILO, Brighton

BRIGHTON'S SILO is a restaurant, bakery, coffee house, brewery … and a 'pre-industrial food system which generates no waste'! Launched in October 2014 as the UK's first zero-waste restaurant, it's the brainchild of Douglas McMaster. Its philosophy, he says, is to innovate in the food industry while showing respect for the environment, food production and nourishment. The ingredients used are simple, nothing is over-processed, air miles are cut as much as possible. SILO uses local organic farms and has the environment in mind at every stage of the supply chain.

No waste is created unnecessarily: all leftover food is composted in an aerobic digester, and the compost later offered back to growers and producers; bills are electronic, and deliveries to the restaurant are made using reusable containers. Food is prepared as much as possible on site: the team mills its own flour, rolls its oats, and makes its own butter and almond milk. SILO also buys its animals whole and has a nose-to-tail ideology: no part of the animal is ever wasted. Wine bottles travel back and forth to the local vineyards for refilling. The beer has an even lower carbon footprint: it is brewed in the basement!

McMaster has also successfully raised £40,000 through a crowd funding platform to invest in a new rooftop solar system.
www.silobrighton.com

Invest: The Closed Loop Fund

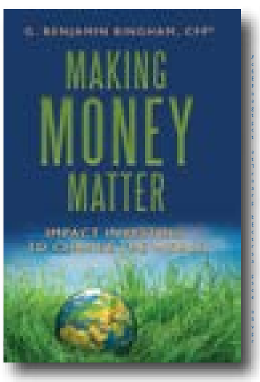
The Closed Loop Fund, a US-based social impact fund, is investing $100m to help combat the comparatively low recycling rates in the US. A consortium of investors (including Walmart, Coca-Cola and Goldman Sachs) is offering zero-interest loans to municipalities, and below-market loans to companies, to develop recycling infrastructure and related schemes.

The fund employs the language of the 'circular economy', the idea that sustainability can be more readily achieved in economies that produce products, components and materials designed, selected and used in such a way that they maintain their utility and value, and are not simply discarded to landfill after one use.

The fund's laudable aims (to be achieved by 2025) include the elimination of more than 50m tonnes of greenhouse gas, and the diversion of more than 20m tonnes of waste from landfills.

Some have questioned the level of commitment of the project, given that the loan (it will be paid back) represents just 0.0016% of the consortium's annual profits. Interestingly, however, the ethical issue the fund does confront is that of corporate responsibility for the environmental waste that businesses create, and potentially points to a need for more rigorous and progressive 'extended producer responsibility'.

Read: Book review



G Benjamin Bingham
Making Money Matter
Impact Investing to Change the World

Prospecta Press

Benjamin Bingham's book is a bold argument for changing the way we view money. It is steeped in spirituality and philosophy, which may put some readers off, but Bingham has a seasoned background in finance and business, and uses this insight to put forward a confident thesis. The book tracks Bingham's colourful life; but this is not a self-serving biography. Rather, Bingham – founder and CEO of 3Sisters Sustainable Management – uses his experience to vividly demonstrate why investing for impact, rather than solely profit, should be the way forward. A key positive of the book is it illustrates practically how an investor can approach 'Making Money Matter' by engaging with social impact investment.

Alongside this, Bingham's powerful storytelling – ranging from a grandfather who discovered the ruins of Machu Picchu in 1911 to a stint in a seminary in Germany – makes for an enjoyable tale.

At the end of the book, there is an impressive guide to the sustainability and social impact investment industry, including websites of key players, sustainable MBA programmes and a comprehensive list of recyclable commodities. It's accessible and simple, breaking down the problems of the complex world of finance in a clear fashion.
Hardcover ISBN 978-1-63226-023-9
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Vibeka Mair

Cycle, then re-cycle: Tim van der Weide

If you're ever in Amsterdam looking for a great cup of coffee and a bit of bike chat, take a spin over to Meesterknecht, the bike shop-cum-café that's co-owned by former PGGM responsible investment advisor Tim van der Weide.

Meesterknecht translates as 'foreman' but really refers to 'super-domestiques' – strong riders in their own right who selflessly support the star riders in their team.

The café even features 'Gangmaker' coffee, the name referring to the motorised bicycle sometimes used to pace cycling events. In the cycling-mad Netherlands, the venue has even been featured on Dutch National TV.

With spacious premises in the heart of Amsterdam, the venue has a selection of top road bikes, clothing and accessories. "Whether building your dream bike, servicing your ride or just making you a good coffee, the humble team at Meesterknecht is ready to equip you for your next success on the road; no matter how big or small."

Everybody knows that Amsterdam is one of the world's most bike-friendly cities. But few now recall that in the 1950s it was a hub of road and track racing – and it is this spirit that the shop is looking to evoke.

It's a focal point where cyclists can meet up and enjoy a coffee and a post-ride pastry (nutrition plan allowing...!) before maybe settling down to watch a pro race on TV: "We welcome everyone to stop by, and when it is not too busy we love to have a chat and hear about your cycling adventures."
Daniel Brooksbank

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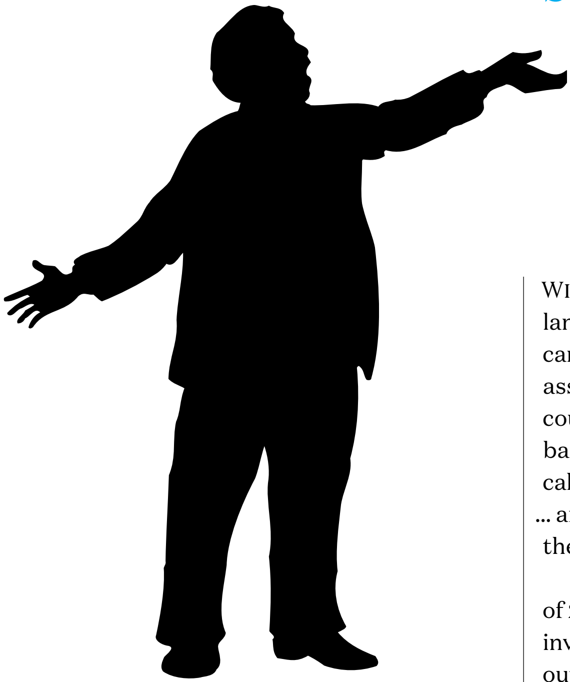
The challenger

Laggard trustees are in the last chance saloon before legal action on climate change



The case for the prosecution

JULIAN POULTER
Founder and Chief Executive Officer of the Asset Owners Disclosure Project

"Roll forward a few different climate and carbon scenarios and they all lead to one place: permanent carbon-related value destruction and the greatest series of lawsuits the corporate world has ever seen"

WITH COP21 ARRIVING and oil and coal prices languishing, it is no surprise that climate campaigners have started to point to the likely associated losses in investment portfolios. Of course there have been sector and commodity based losses before. And doubtless, CIOs are calling cyclical losses before a massive rebound ... and of course we don't want to exit just before the rebound now do we?

After all, remember 2009 when the panic of 2008 had begun to recede and a range of investors stayed out of the market and missed out on at least part of one of the great bull runs in history. Besides, Shell and co keep pointing out the never-ending demand for energy and their products. So let's just ride out the campaigners' noise and all will be OK in the end, right?

With the COP 2015 agreement set to allow 3°C or so of warming and not one share price likely to be badly affected, it is easy to sympathise with the trustees of the laggard pension funds who will continue to back the cyclical argument and perpetual high carbon demand.

But roll forward a few different climate and carbon scenarios and they all lead to one place: permanent carbon-related value destruction and the greatest series of lawsuits the corporate world has ever seen.

WHILE IT IS POSSIBLE that the oil and coal companies themselves will face some legal action for questionable tactics over many years, in defending their eventual demise their executives will appear in court to remind everyone that their determination to keep exploring and burning was reasonable. Their defence lawyers will argue that 'focus' is actually one of Harvard academic Michael Porter's three areas of competitive strategy, and so if emitting or digging for carbon is part of that then why are we all in court? Much as it pains me to admit, they are completely right in this regard.

Likewise, their fund manager and adviser cohorts in the investment supply chain will all point to mandate structures, client demands for the usual asset allocation models and default proxy policies: "Not me sir, no, not my fault".

Again, painful though it is ... they're probably right.

However, at the back of the courthouse queues will be a long line of trustees of laggard funds and possibly their fund executives accompanied by a vast range of industry expert witnesses all ready to wave the finger and point out that if anyone was actually accountable for the carbon mess then the asset owner trustees were the culprits.

At a time when Mark Carney has laid down the first 'sub-clime' commandment warning – "A wholesale reassessment of prospects, especially if it were to occur suddenly, could potentially destabilise markets" – trustees have already lost the support of the kind of people who would normally appear for the defence.

It's an open and shut case. Consider the prosecution's questioning: "Mr trustee, you had blind faith in short-term managers to manage a long-term systemic risk? You couldn't persuade your managers to accept longer-term risk incentives? You failed to hedge against the uncertainty of climate risk? You allocated no risk premium? You thought your low carbon hedge might hinder short-term returns? You knew that sub-prime discredited MPT, VaR, extrapolation models, traditional SAA? You did no serious portfolio stress testing? You didn't like rocking the boat by voting against powerful boards? You failed to disclose to your members the potential calamity? You didn't want to act without other funds acting first? You didn't think that sudden policy, innovation or other drivers would strand your assets so quickly? Sorry ... did you say you weren't sure about climate science?" (cue laughter in the court-room).

IT IS REALLY EXTRAORDINARY that even when the writing is on the wall a vast percentage of trustees are still framing climate change as 'just another risk'. COP21 might not change that perception entirely in the short term but, while their peer leaders sleep comfortably, laggard trustees would do well to realise that 2009 was a lifetime ago in the investment world. The 2008 crisis was mired in complexity that allowed many culprits to escape accountability. Similarly, governments managed to persuade their taxpayers that TARPS and half a decade of money printing was a worthwhile sacrifice despite nearly a decade of stunted GDP growth outside China. The carbon crash will not allow the same great escape.

At this rate, Governor Carney will likely get his sudden realisation and market destabilisation. By warning finance, he's done his bit.

Now trustees must do theirs. Reducing their climate and carbon exposure is not always an easy journey but the leaders have shown it can be done without sacrifice. The alternative for trustees of laggard funds is grim indeed.

MILLENNIAL IMPACT

The data from PRI's consumer survey on retail investors and how they view ESG issues shows some interesting findings when broken down by age range.

For example, when asked whether they know all of some of the companies in their pension portfolio, in South Africa, 63% of 18-34 year olds say that they know all of the companies in their pension funds. This drops to 38% in the 45-54 year old age range.

In Australia, 57% of 18-24 year olds and 67% of 25-34 year olds said they know all the companies in their pension fund. This drops to 23% in the 45-54 age range.

In France, 60% of 18-24 year olds know all of the companies in their portfolio. This drops to 22% in the 45-54 age range.

These findings demonstrate a higher level of engagement on the part of millennials than that of older generations.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