INVESTORS, CLIMATE RISK AND FORCEFUL STEWARDSHIP:

AN AGENDA FOR ACTION

preventable surprises

CONTENTS

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Preventable Surprises is a think-do tank which seeks to assist institutional investors align their activities with the real needs of their members/customers. In so doing, we help address daunting systemic challenges such as climate disruption.

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FOREWORD

It has been 53 years since Rachel Carson published "Silent Spring", which in many ways marked the beginning of the modern movement to limit the damage to the earth and its creatures by humans. We find ourselves now at another dangerous crossroads: all signs indicate that the earth's average temperature is likely to rise in the near term by over 2 degrees centigrade, and scientists agree that our burning of fossil fuels is a major contributor to this. The impact to life on this planet from global warming is unclear, but disturbing. All scenarios include species extinctions, more destructive storms, mass dislocation of coastal dwellers, food and water crises, and social and political unrest. Economic disruption and risk are almost certain to ensue. It doesn't have to be that way. We have the technology and talent we need right now to change track, to navigate the transition and thrive in a low carbon world.

The time for action is upon us. It is time to enlist the power of finance to this task. To that end, the past 30 years has seen extraordinary growth in institutional investors - both by numbers and by size. The top 1,000 retirement funds control over US$9 trillion - enough to buy all of Europe's listed companies. These investors, which I call "super fiduciaries", have the muscle to effect change in the companies whose shares and debt they own. They have long time horizons, and their beneficiaries will stretch across future generations. There is no excuse, and every incentive and duty, for institutional investors to pitch in and mitigate the dangerous path we are on. By working together with a vital objective in mind, much can be achieved.

In this spirit, a diverse group of institutional investment specialists, policy advisors, and climate change experts came together in a virtual forum to share insights into what investors need to be doing, what they are doing today, and how to bridge the gap. I was fortunate enough to participate, and am delighted to see a number of clear, achievable, and measurable initiatives as the product of the sessions. During my time in a leadership capacity at the CFA Institute, it became clear how valuable the thoughtful setting of best practice standards and benchmarks is to the investment profession, to boards of institutional investors, and the finance industry. My hope is that "Forceful Stewardship" will add to that body of best practice.

John Rogers
Former President and CEO, CFA Institute,
Former Global President and CEO, Invesco Institutional Division

EXECUTIVE SUMMARY

The Forceful Stewardship initiative meets three needs. First, it makes action to limit climate disruption a responsibility of CEOs, CIOs and trustees/board directors of institutional investors such that it cannot be simply delegated to the ESG (environmental, social, governance) head. It does this by demonstrating that climate change is a systemic risk that is material to investment returns. There is therefore a fiduciary duty to act, and this duty may eventually need to be tested legally. Second, Forceful Stewardship activity, assuming a critical mass of investors adopted it, could have a positive external impact on corporate strategy and GHG emissions within a short timeframe (5-10 years). Third, it is as easy to understand and monitor as divestment. Specifically, "show us your low-carbon business plan" and "tell us if you have voted for this" could become the basis for globally-coordinated citizen investor campaigns.

Forceful Stewardship brings action to avoid climate disruption into the context of everyday investment behaviour without seeking to tell different investors how to invest. The Forceful Stewardship Guidelines are not a one-size-fits-all initiative that firms can adopt in totality overnight. Rather it is a direction of swift travel and a tool for investors who have recognised the importance of investor long-termism and responsibility (e.g. members of Coalition for Inclusive Capitalism, Focusing Capital on the Long Term initiative, Global Investor Coalition on Climate Change [GICC], International Corporate Governance Network [ICGN] and Principles of Responsible Investment [PRI]) to act on their commitments to climate change mitigation.

Forceful Stewardship is based on two key investment observations: 1) Climate change poses a significant and increasing systemic risk to the global economy and thus to the portfolios of diversified investors, in turn threatening the security and financial well-being of their beneficiaries; and 2) Institutional investors have a fiduciary obligation to control this risk and prevent it increasing as much as they reasonably can.

Supporting investment beliefs relate to: the cost/benefit of a rapid transition to a low-carbon economy; the unique role of diversified investors, in particular asset owners and index investors, in reducing/eliminating the conflicts of interest faced by fossil fuel company directors; the importance of a shift in risk management culture; and the value of collaboration between investors and informed non-investment specialists (e.g. scientists).

The Forceful Stewardship Guidelines recommend investors to take the following actions, in addition to any ESG or climate investment integration approach:

1. Declare your intention to vote in favour of prudently formulated shareholder resolutions that will help reduce systemic climate risk while protecting shareholder value in the long-term.
2. Instruct your voting advisers to vote automatically in favour of such resolutions. If current voting agents are unable to support this obligation, find agents who will.
3. Vote in favour of resolutions that call for listed companies to publish robust analyses of their assessments of the physical, policy and economic impacts to their businesses of global warming of 2°C and 4°C respectively.
4. Declare your intention to vote in favour of resolutions that call for listed companies to publish business plans that describe how, without damaging shareholder value:
    i. They can reduce their emissions each year by an appropriate amount for their industry; and/or
    ii. Their business could adapt to a carbon price that rises to $100 per tonne of carbon dioxide by 2030; and/or
    iii. Their business could adapt to regulations aimed at meeting a 2°C warming target and/or restricting atmospheric carbon dioxide to 450 parts per million.
5. Actively consider, on a case-by-case basis, voting against the re-election of the chairman of the board, or against the report and accounts, or initiating a "book and records" lawsuit where there have been persistent and unacceptable practices related to climate risk (e.g. repeated non-disclosure of greenhouse gas emissions, funding of climate denial organisations).
6. For asset owners: require consultants to actively support the above process by including these principles in manager research, screening, selection, and the review process. If current investment consultants are unable to support this approach, find consultants who can.
7. For investment managers: instruct analysts and credit rating research partners to assess business plans and adapt recommendations in accordance with these principles.
8. Redouble efforts to engage with credible and well-informed scientists, regulators and civil society experts.

Our Global Strategy emerges out of multiple one-to-one discussions and an intensive 7-day virtual ThinkTank with over 70 thought leaders and practitioners from different disciplines, stakeholder groups and geographic regions to explore ways in which investors can best address big climate risk.

The strategy leaves enough flexibility for key actors in the community to interpret and participate in Forceful Stewardship as is appropriate to their particular institutional setting, while also setting out clear expectations as to what it means for asset owners, asset managers and allies. The 4 pillars are: 1) Leadership & Communication; 2) Collaboration & Mutual Challenge; 3) Strategic Choices; and 4) Contingency Planning for Success.

The Strategy envisages pilot programmes on: 1) Information intermediaries (who play a key role in defining risk culture); 2) Canada (where there is a large gap between the competence of asset owners on long-term thinking and their weak performance on climate risk); 3) the Netherlands (which has the ability to set a high benchmark for other national investment systems); 4) and the USA (which has many of the biggest investment managers and informational intermediaries and also where investment beliefs and practice are lagging badly).

Preventable Surprises will hold itself accountable for Key Performance Indicators (KPIs) in 3 areas: 1) Activities and process outputs that are directly in our control (eg a quarterly ThinkTank); 2) Are people who matter talking positively about Forceful Stewardship?; and 3) Are people who matter taking action consistent with it?

1 FORCEFUL STEWARDSHIP

– THE REASON FOR BEING

When we were considering whether to launch a new initiative in this crowded space, we gave ourselves three hurdles.

First and foremost, the initiative needed to be framed in a way that moved climate from the in-tray of head of ESG to the in-tray of the CEO/CIO. Heads of ESG are doing the very best they can. But we also know their space to operate is limited. Moreover, as Churchill said, sometimes doing the best you can do is not enough: organisations have to do what is needed.

The fact is that despite all this good work done by ESG teams, "ESG business as usual" is not producing emission reductions fast enough. One major reason is because "ESG business as usual" is essentially about individual companies and the business case for them to reduce emissions. This means that concerns about alpha, even short-term alpha, dominate.

To make this transition – from an ESG to a systemic risk issue – and to make sure we did not duplicate what was already happening, we set ourselves the hurdle of showing that portfolio value was being threatened by the inactivity of investors. Put simply, that climate change is a material economic and investment issue and hence that there is a fiduciary duty to act. Whilst it would be better if the matter did not have to wait to be decided in court, if that is where the debate needs to be settled, then this will not be the first time that paradigm change has happened as a result of legal challenge and resolution.

Second, the initiative had to be able to have positive external impact within a timeframe that is relevant, which means 5 years, or 10 if we are lucky.

For all the talk by investors today about long-termism, the reality is largely unaffected: relative returns and cap weighted benchmarks remain the norm and the lack of stewardship desire (and skills) to challenge core business models which seem to be profitable in the short-term is unchanged. To expect the industry to address these cultural norms and deal with climate change within a decade is unrealistic. Our 'ask' had to be consistent with where investors are today and much more direct.

Third, and despite the detailed financial foundations which would make the case credible amongst investment decision-makers, the initiative also had to be as easy to understand – and as easy to monitor from the outside – as divestment is.

"Show us your low carbon business plan" is something that any concerned member of the public can see is a useful ask to corporations. And "tell us if you have voted for this" – yes or no – is an equally simple framing.

Tapping public support, the way that the divestment movement has shown to be possible, is clearly the best way today for getting around the immunity to change that is so prevalent in the investment industry. For those of us who have been talking about this issue for over a decade, using sensible, evidence based arguments – and in practice, being largely ignored – it is an opportunity to learn about how change happens!

To summarise, the Forceful Stewardship initiative seeks to do a jiu-jitsu move on the financial system as it relates to climate risk. What is widely seen as tokenistic – proxy voting – becomes a vehicle for coalition building and system change. What is widely accepted to be a major weakness in the system today – dispersed ownership – is flipped into a strength.

In contrast to much ESG activity, what we propose – to instruct voting agents to vote in favour of disclosure of low carbon business plans – is something even the smallest of pension funds can do. And what is increasingly understood to be a major cause of market dysfunction – the excessive mediation of decision-making as a result of information intermediaries with incentives and mental models that are poorly aligned with long-term interests of members – becomes a cause of hope. When these investment professionals are forced to wrap their brains around climate damage curves and low carbon business plans, something which has a much bigger social value than "me too" research focused on quarterly numbers inevitably makes the invisible hand of the market an ally.

In this sense, Forceful Stewardship is a logical extension and synthesis of specific initiatives like Aiming for A, Carbon Tracker and 350.org, but located within the broader push for greater investor engagement.

HOW WE FIT IN THE ESG ECOSYSTEM

Forceful Stewardship is what it says on the tin. It is about stewardship, not integration. And it's about being forceful, not tokenistic.

More specifically, Forceful Stewardship is about the role of fiduciary capitalists who have long-term, even inter-generational interests linked to the portfolio as a whole, and not just about company or even sector risk.

So whilst ESG integration strategies for dealing with sector specific carbon risk (e.g. hedging, portfolio decarbonisation, carbon bonds, etc) are all valuable, in our view investors should also either be divesting from all fossil fuels (with clear public statements and not just from coal) or being Forceful Stewards. In fact, since divestment often takes time to complete, even those who are divesting should be Forceful Stewards in the meantime.

The other ESG integration strategies are not a fundamental alternative to this choice. Indeed, should these other strategies and the organisations that promote them, end up – unconsciously and unintentionally – being used to protect investors from either having to divest or being Forceful Stewards, they risk becoming part of the problem.

OUR 7 PRINCIPLES

What does this mean in terms of how we work? We are:

Evidence based: The Case for Forceful Stewardship[1] launched this initiative and we continue to do both high quality, in-depth thought leadership research and more regular "campaign research" as needed to prompt change and facilitate agreement.

Facilitators of "higher level consensus": We seek to help investors find the "sweet spot" between a demanding ask; one which not only gets the support of SRI/ESG investors, but also one which gets wide investor support although be it might seen as tokenistic and causes little real learning, either amongst the corporation or its investors.

We therefore used a range of methods (e.g. on-line dialogues, discussion papers, private briefings) and made full use of our personal experience. This includes a full spectrum of activities from fundamental research to aggressive campaigning and litigation. We understand organisational and system change; how to combine insiders and outsiders, and how to use good cop/bad cop approaches for maximum effect.

1 http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2551478

Non-operational and minimal conflicts of interests: Our business is to influence mental models and propagate new memes. To retain the ability to challenge all parties as needed, we will avoid operational roles. This means a lean operation with a strong volunteer base (interns, directors, advisers) to minimise budgets and hence maintain low conflict of interests.

Challenging but non-judgemental: We are willing to work with people and institutions however early on they are in the process, provided they are willing to commit to stretch objectives. We will, like any good coach, encourage investors to be incrementally more forceful each time – for example, if they cannot vote against management, they could abstain – even whilst in public we hold the hurdle high.

Credibility at senior levels with good access to investors: We field teams which have the right level of expertise for the task, be it engaging with executive and boards, and with traditional or ESG investment professionals.

Strong credibility with a broad range of non-investment stakeholders: We are fully aware of the importance of getting civil society (scientists, media, NGOs, etc) and government to play their part in shifting investor behaviour.

Nimble positioning and a time-limited commitment: We adapt our positions and activities based on how trusted stakeholders react and how the context develops. A considerable emphasis on learning by doing informs our desire for nimble positioning. We see this as a project lasting up to 10 years, with the first 2-3 years being very intensive. After that time, we expect capacity will have been built (within NGOs, professional bodies, and networks of positive mavericks, for example) to continue the process, allowing Preventable Surprises to play a more hands off monitoring role. Our job will be done when the thinking behind Forceful Stewardship becomes mainstream in both concept and action.

WHAT WE HAVE DONE

1. Published 3 academic papers evidencing the scale of the risks.
2. Met with over 30 investment firms at senior executive level. Organisations that have commented on our proposal in their own work include Aviva, Mercer and Schroders.
3. Given several key note speeches at investor conferences.
4. Met with non investment stakeholders who have the potential to raise public demand for Forceful Stewardship.
5. Organised a virtual "ThinkTank", a very intensive week-long dialogue that engaged over 70 thought

leaders and practitioners to explore how investors can best address big climate risk. The ThinkTank brought together "positive maverick" participants from different disciplines, stakeholder groups and geographic regions. The recommendations in this report are heavily based on these discussions and before/after polling shows a significant increase in support for the investment beliefs underpinning the Forceful Stewardship idea.

OUR FOCUS FOR THE NEXT 12-18 MONTHS

1. Encourage investors to become Forceful Stewards as their primary strategy for averting climate disruption and encourage civil society, scientists, NGOs, media and regulators to have this expectation of investors. We will focus on pilot programmes as outlined in the ThinkTank.
2. Help "positive maverick" change agents within investment firms and within collaborative initiatives push their leadership as much as they are able - so that organisations aim higher.
3. Support this shift with research, communications, training and mentoring as much as resources allow and demand is present.

Dr Raj Thamotheram, Founder and CEO, Preventable Surprises
Carolyn Hayman, Order of the British Empire (OBE), Chair, Board of Directors, Preventable Surprises

2
FORCEFUL STEWARDSHIP

– THE INVESTMENT BELIEFS AND THE GUIDELINES

All investment organisations, we believe, should be cognisant of how climate science has been influencing corporate behaviour and government policy for many years. Renewable energy costs are falling, renewable energy production is increasing, green consumer products abound and environmental regulations are blossoming. Furthermore, there are some 40 carbon pricing arrangements around the world.

Nonetheless, the science suggests that the world is currently on track to be, on average, 4°C warmer or more by the end of the century – the effects of which would be catastrophic to many.

We are the first generation to really feel the effects of climate change. We are the last generation that can take action to avoid the worst of its potential impacts. Yet Preventable Surprises believes that many institutional investors are badly prepared for climate change disruption; that they are not set up to mitigate the risks of climate change within their investment practices, and that this may result in a breach of their fiduciary obligations.

Investors are taking action: the Montreal Carbon Pledge was launched in 2014; climate change related investment beliefs are being adopted; the Portfolio Decarbonisation Coalition is gearing up; and investment in green bonds is growing.

But what has been missing to date is a core investor stewardship approach that brings the obligation to manage the risks of climate disruption within the realm of everyday investment behaviour, which - significantly - does not seek to tell different investors how to invest. The Forceful Stewardship Guidelines developed by Preventable Surprises has been designed to fill that gap.

The Guidelines are not a one-size-fits-all initiative that firms can adopt in totality overnight. Rather it is a direction of swift travel. With the Bank of England currently examining whether “the majority of proven coal, oil, and gas reserves may be considered ‘unburnable’ if global temperature increases are to be limited to 2ºC”; with Mercer and others indicating that diversified investors have nothing to lose if economies were to shift to keep warming to under 2ºC; with the G20 asking the Financial Stability Board to “convene a public-private inquiry into the fallout faced by the financial sector as climate rules become much stricter”, and with civil society attention focusing on institutional investor – asking “is this the best that investors can do?” – our collective challenge is to initiate an immediate step change that accelerates the rate of progress as quickly as possible.

Action often requires examination of prior, often unstated, beliefs. Preventable Surprises recommends institutional investors evaluate the assumptions which underlie current investment practices and explore the beliefs below as they develop and clarify their own investment beliefs, which then frame their investment policy. This does not prevent other action, such as stronger exercise of ownership rights, being taken at the same time. Actions reinforce behaviour and beliefs, which in turn affect future actions.

INVESTMENT BELIEFS UNDERPINNING FORCEFUL STEWARDSHIP

Preventable Surprises recommends that investors acknowledge that climate change poses a significant and increasing systemic risk to the global economy and thus to the portfolios of diversified investors, in turn threatening the security and financial well-being of their beneficiaries and members.

We therefore urge asset owners and investment managers to accept that they have a fiduciary obligation to control this risk and prevent it increasing as much as they reasonably can.

At a more detailed level, the following investment beliefs[1] are useful foundations for robust action:

1. We believe we can only generate sufficient investment returns over the long-term in a sustainable and viable world. We understand that the world is currently projected to be on average 4°C warmer or more by the end of the century and that, at best, the current COP21 process might put us on track for 3°C. We acknowledge that increases of this magnitude will cause significant climate disruption, the economic and societal implications of which can neither be fully assessed or addressed by institutional investors.
2. Whilst we are aware of the serious case for setting the ceiling on warming at or perhaps even below

1 Participants were asked to respond on these investment beliefs before the ThinkTank started and mid way through. See Appendix 6

2°C, we believe that the most vital action for institutional investors to take today is to fully engage in system change to support a 2°C ceiling or maximum of 450 ppm of CO_2, and to also be ready for changes in scientific/policy consensus which may come suddenly.

3. We believe that climate related portfolio value at risk for diversified institutional investors is already significant, and may become very significant as early as the 2030s, if not the immediate decades following.
4. We believe that a rapid transition to a low-carbon economy will significantly reduce climate change-induced economic and social risk and that this transition could be structured to be cost-neutral or positive over the long-term for diversified investors.
5. We believe that fossil fuel company directors may face a conflicts of interest in advancing a rapid transition to a low-carbon future. We believe that diversified investors – in particular asset owners and index investors – are uniquely positioned to reduce or perhaps even eliminate these conflicts. This is because investors can adopt investment strategies aligned with interests of fund members that direct these executives to take actions which these executives may personally consider to be responsible in the medium or longer term but may also judge would cause considerable near-term career risk.
6. We believe that investment decisions made by long-term investors acting as stewards, requires a risk management approach with a focus on the recognition, prevention and mitigation of risks which are likely to be systemic and potentially catastrophic. We therefore believe that diversified investors, in particular asset owners and index managers, have a responsibility for leading this shift in investment fiduciary culture.
7. We believe that Forceful Stewardship requires significantly improved collaboration between diversified investors, to both maximize impact and contain costs, and also collaboration between investors and informed non-investment specialists (e.g. scientists) to better inform fiduciary decisions.

THE FORCEFUL STEWARDSHIP GUIDELINES

The Forceful Stewardship Guidelines recommend the following actions which are in addition to any ESG or climate investment integration activity[2]. The actions are mutually reinforcing: The challenge is to initiate an immediate step change wherever there is consensus to act and then accelerate progress as quickly as possible. Equally important, the Forceful Stewardship Guidelines are not a one-size-fits-all initiative that firms can adopt in totality overnight. Rather it is a direction of swift travel and a tool for investors who have recognised the importance of investor long-termism and responsibility (e.g. members of Coalition for Inclusive Capitalism, Focusing Capital on the Long Term initiative, Global Investor Coalition on Climate Change [GICC], International Corporate Governance Network [ICGN] and Principles of Responsible Investment [PRI]) to act on their commitments to climate change mitigation.

2 During the course of the ThinkTank, on average, participants became more supportive of engaging assertively with governments and less supportive of divestment. Levels of support for assertive engagement with companies started high and remained unchanged. See Appendix 7, Q1.

1. Aware of the investment industry's exposure to systemic factors, its overall fiduciary obligations and social purpose (namely to allocate capital effectively and efficiently) and in line with the investment beliefs above, Preventable Surprises recommends that investors declare their intention to vote in favour of prudently formulated shareholder resolutions that they believe will help reduce systemic climate risk while protecting shareholder value in the long-term.

2. Preventable Surprises recommends that investors instruct voting advisers acting on their behalf to vote automatically in favour of such resolutions in line with our view that climate change is a significant economic risk and concomitant risk to shareholder value. If current voting agents are unable to support this obligation, Preventable Surprises recommends investors commit to finding agents who will support this voting approach.

3. In particular, Preventable Surprises recommends that investors vote in favour of resolutions that call for listed companies to publish robust analyses of their assessments of the physical, policy and economic impacts to their businesses as currently structured of global temperature warming of 2°C and 4°C respectively.

4. We also recommend that investors make clear their intention to vote in favour of resolutions that call for listed companies to publish business plans that describe how, without damaging shareholder value:

   i. They can reduce their emissions each year by an appropriate amount for their industry; and/or

   ii. Their business could adapt to a carbon price that rises to $100 per tonne of carbon dioxide by 2030; and/or

   iii. Their business could adapt to regulations aimed at meeting a 2°C warming target and/or of restricting atmospheric carbon dioxide to 450 parts per million.

5. To ensure board member and senior executive accountability, and where the company concerned is engaged in persistent and unacceptable practices related to climate risk (e.g. repeated non-disclosure of its greenhouse gas emissions, funding of climate denialist organisations) Preventable Surprises recommends that investors actively consider, on a case by case basis, voting against re-election of the Chairman of the Board, or the report and accounts, or initiating a "book and records" lawsuit.

6. In the case of asset owners, Preventable Surprises recommends that they require their consultants to actively support the above process by including these principles in manager research, screening, selection, and review process. If current investment consultants are unable to support this approach, we recommend that asset owners find consultants who can.

7. In the case of investment managers, Preventable Surprises recommends that they instruct their analysts and credit rating research partners to assess business plans and adapt recommendations in accordance with these principles.

8. Mindful of the need to remain well informed and understand the investment implications of fast moving policy, science and technology developments, Preventable Surprises asks investors to redouble their efforts to engage with credible and well-informed scientists, regulators and civil society experts.

3
OUR GLOBAL STRATEGY

"Plans are only good intentions unless they immediately degenerate into hard work" – Peter Drucker

Over the past few months, Preventable Surprises has focussed on translating the idea of Forceful Stewardship into a globally-connected strategy for action. If norms are understood as accepted standards of behaviour within a specific community, then this global strategy is explicitly oriented towards changing normative standards within the investment community on what counts as strong climate stewardship.

The strategy is intended to leave enough flexibility for key actors in the community to interpret and participate in Forceful Stewardship as appropriate to their particular institutional setting, while also setting out clear expectations as to what qualifies as Forceful Stewardship behaviour. Each pillar, or standard of behaviour, is essential to ensuring our global agenda is ultimately successful. In this section, we articulate key concepts, and identify typical supportive actions that can be taken by asset owners, asset managers and allies[1].

1 This is an umbrella term for journalists, media platforms, academics, climate scientists, NGOs, policy experts and other individuals or organisations that are not directly involved with investment decision-making, but nonetheless are vital to the ultimate success of the Forceful Stewardship global strategy.

PILLAR 1: LEADERSHIP & COMMUNICATION

"Ultimately, it is possible to create value for customers and build wealth for shareholders, while at the same time enhancing the wellbeing of all other stakeholders. But it is only possible if listed company leadership teams embrace a noble purpose for their business, beyond maximising shareholder wealth during their own tenure as leaders, and they consider all as allies in the pursuit of value uplift over the long-term, rather than adversaries in the pursuit of earnings growth over the short-term. So for me, the highest form of Forceful Stewardship would be to seek to instil these values."

CONCEPT

Exercising leadership on behalf of the Forceful Stewardship agenda can include both top-down and bottom-up approaches. The former includes a demonstrable willingness to put the issue at the heart of investment decision-making and policy-advocacy over the next 12 months, and ratcheting up this process in the years to follow. The latter encompasses the view that Forceful Stewardship investment beliefs need to be integrated into the activities that investors are already doing, whether they choose to label these actions as Forceful Stewardship or not.

ACTIONS

1. **Stand up and be counted:** Publicly commit to being Forceful Stewards at the COP21 meeting, and encourage a critical mass of influential peers to do the same. This kind of bold leadership will

require senior leaders to accept the need for action and to address persistent objectors.

Some investors and investor networks may be daunted by the prospect of engaging policymakers effectively. As one think tank participant put it, "Dealing with policymakers and regulators is like being asked to eat an elephant with a teaspoon." In such cases, think-tank participants suggested focusing on national and regional policy analysis through bodies such as the OECD, APEC and EU, rather than waiting for an international agreement.

A unified and clear policy ask was seen as vital to our globally-connected strategy, specifically that institutional investors are asking for policy supportive of a fiduciary agenda that incorporates no more than 2 degrees of global warming, and minimises dangerous climate change.

2. **Resource and champion Forceful Stewardship:** If Forceful Stewardship activities are not adequately resourced, they are unlikely to succeed. For instance, pursuing an effective engagement strategy will require a sufficient research budget to evaluate target companies, prior to filing shareholder proposals. Research is also needed to ensure Forceful Stewardship shareholder proposals and proxy guidelines fit with national legal norms. Board and senior management need to champion a culture of openness that could allow ESG heads to engage their senior executives on Forceful Stewardship activities.

3. **Ensure careful messaging and communication:** Climate change risk is unlike any we have faced. If we cannot draw good analogies and metaphors to inspire and mobilize, how will we do it? We need good stories and understandable pathways in order to succeed. This will include evaluating the best frame for Forceful Stewardship messages.

   One think tank participant suggested that specifying a 2 degree global warming target has not been effective as it causes side debates and triggers the inner sceptic about the viability of this topic. In other words, it becomes a distraction from taking action. An approach that focuses on limiting the concentration of CO_2 in the atmosphere to 450 ppm (parts per million) has met with greater success, in addition to asking for low carbon compliant business models and plans (while taking care to explain what these would entail in specific industry sectors, given their particular climate change exposure and risk profile).

   Investors can also play a leadership role in using their voice to highlight the numerous examples of visible climate change that have not always been portrayed with adequate urgency in the mainstream media.

PILLAR 2: COLLABORATION AND MUTUAL CHALLENGE

CONCEPT

Collaboration, including healthy mutual challenge, between investors and non-investors is the key to getting progressive action on climate change at the pace needed.

ACTIONS

1. **Borrow from successful campaigns:** Existing investor networks could benefit from reviewing the tactics of previously successful social movements. These range from policy wins in favour of gay marriage rights, the abolition of the slave trade, or ending apartheid in South Africa. We are not suggesting that the characteristics of these past campaigns perfectly mimic the dynamics of a complex issue such as climate change, but rather that they may provide valuable lessons on how to successfully leverage alliances, build global movements and incentivize global culture shifts that otherwise would be considered against one's material interests. Such collaboration and peer-learning can be formal or informal through bi-lateral, multi-stakeholder or on-line formats.

2. **Transcend adversarial approaches:** Currently, many university campuses in Europe and North America are stuck in a stalemate dialogue about the merits of fossil-fuel divestment. The investor community would be well served to think of alternative ways to bring students into progressive work on climate change - such as through Forceful Stewardship partnerships - so there is a principled alternative to pushing divestment that is equally engaging and equally change-oriented.

3. **Avoid duplication:** We don't need yet another climate/investor institution. But equally, we do need a function that can ensure investor led initiatives (such as Aiming for A, ICGN, IGCC, IIGCC, INCR and PRI) are held accountable for delivering change fit for purpose in terms of climate disruption. To foster collaboration and challenge, this new function will need to:

   - Possess strong personal relationships with investment and non-investment specialists, plus strong investment competence;
   - Minimise operational activity and budgets and thus also minimise fears of competition and maximize independence; and
   - Focus action on gaps in the current ecosystem of players (e.g. host quarterly dialogues with broad participation).

"It may be a unfair to judge the future prospects of shareholder engagement based on its track record, but we must learn from those previous experiences and change tack accordingly – engagement comprising cosy chats with investor relations staff, signing the odd letter to a CEO and timid resolutions calling for more disclosure on risks, we already know, hasn't worked."

PILLAR 3: STRATEGIC CHOICES

CONCEPT

Successful global campaigns are usually adept at mobilizing diverse actors around a common call for change, and yet allow these demands for change to be defined and articulated through context-appropriate strategies.

Our common rallying points are the set of investment beliefs that steer our collective future away from more than a 2 degree warming scenario, and a commitment to act on these beliefs.

At Preventable Surprises, we don't expect that a "one-size-fits-all" approach would work for diffusing Forceful Stewardship within the investment ecosystem globally. A menu of strategic actions is provided below. We distinguish these mechanisms into two categories:

1. Priority actions for Forceful Stewardship, and
2. Further strategic considerations.

Investors may choose one, a few or all available mechanisms across these two categories to activate their commitments to Forceful Stewardship.

Nonetheless, to avoid squandering current levels of internal and external political will around climate governance ahead of the COP21 negotiations, we believe investors must make these choices strategically and with a view to maximising the impact of Forceful Stewardship.

"In describing investor responses to climate risk/opportunity, (1) engagement ("Forceful Stewardship"); (2) strategic divestment from the highest-carbon sectors; and (3) asset re-allocation towards renewables and lower carbon sectors are all available. How these different approaches are deployed remains up to asset owners."

PRIORITY ACTIONS FOR INVESTORS

1. **Revise proxy voting guidelines:** Instruct proxy voting agents that climate change is a mainstream investment issue and that their required default is to vote in favour of all resolutions that will:

    i. Increase disclosure of carbon emissions, climate change risks and lobbying spending in regard to emissions regulations and/or

    ii. Promote action to reduce emissions that is value enhancing or does not materially reduce value.

2. **Ask portfolio companies to publish their internal:**

    i. Assessments of the likely warming this century if current trends continue;

    ii. Assessments of the likely damage from this warming to their business sector, and

    iii. Estimates of the pro-rata share of this damage from their own emissions and from emissions from the use of their products, especially for fossil-fuel companies.

3. **Exercise Forceful Stewardship in dialogue and proxy voting** by supporting the publication of business plans that demonstrate how companies will:

    i. Reduce their emissions each year by an appropriate amount for their industry; and/or

    ii. Conduct their business on the assumption that the price of carbon dioxide emissions rises to $100 by 2030 and/or

    iii. Adapt to regulations aimed at meeting a 2°C warming target and/or restricting atmospheric carbon dioxide to 450 parts per million. Implement the above through mainstream commercial relationships, including by via direct requests to companies and by voting in favour of resolutions.

4. **Move Forceful Stewardship through the investor ecosystem:** Asset owners could decide to award investment management mandates only to investment managers that adopt the Forceful Stewardship investment beliefs, and only use investment consultants who can actively support the Forceful Stewardship agenda, and until changes can be made, encourage existing providers to upskill through enhanced monitoring.

    Likewise, fund managers can require sell-side analysts and credit rating agencies to include carbon/climate risks in their analysis and recommendations, and until changes can be made, encourage existing providers to upskill.

FURTHER STRATEGIC CONSIDERATIONS

1. **Engagement and divestment:** Beyond the specific ask around business plans noted above, with regard to a broader set of climate change-related stewardship we are aware that the optimal relationship between divestment and stewardship remains contested.

   Some feel that based on recent experience a strong engagement strategy cannot exist without a complementary divestment strategy. Others feel that if investors, by being more forceful with governments or companies, encourage the latter to shift to renewable energy technologies, this could put more financial pressure on the fossil fuel sector than efforts to directly encourage divestment. The onus here is on advocates of this approach to evidence their adoption of forceful engagement.

   Nonetheless, both engagement and divestment have changed the tenor of conversations on finance and climate change, bringing terms like carbon asset risk, carbon bubble and the like into board rooms and investor beliefs. As one think-tank participant clarified: the job before us is to accelerate this conversation, continue building the coalition of investors concerned with and pressing these issues, translate the science into financial terms, increase pressure on the companies to act, influence decision making of boards, and ultimately achieve meaningful actions on the part of companies.

   Efforts to improve disclosure on lobbying spending are also an important step to making engagement more productive, particularly in markets where corporate capture of policy making is a major factor[2].

2. **Targeting specific sectors:** There is a good case for taking a fully diversified approach by asking all PRI/ICGN members to share responsibility for all sectors. This requires good coordination, but is otherwise practical. Interestingly, there was no consensus amongst ThinkTank participants as to whether demand-side or supply side companies were more crucial, another reason for taking a fully diversified approach.

   One view was that achieving success on the demand side would be key to reducing emissions and building momentum. On the other hand, the long-term capital planning horizons of the supply-side companies risk locking us into a fossil-fuel dependent future.

   A focus on the insurance sector was also suggested, as this is the largest sector by revenue, acutely exposed to climate risk, well-positioned to be part of the solution and a historically under-engaged sector especially in the US context. See Chapter 6 for further discussion.

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2 Data collected by CDP shows 61% of all companies and 77% of the world's 500 largest companies get trade associations to speak for them on climate. Many of these trade associations use the threat of deindustrialisation to argue against effective EU action on climate change, according to the Policy Studies Institute http://www.rtcc.org/2015/03/30/major-companies-use-lobby-groups-to-water-down-eu-climate-policy-study/

3. **Filing shareholder proposals:** It may be that each asset owner is best positioned to take on a different role in shareholder proposals, and we should think about who is best equipped to bring proposals of varying level of "forcefulness" to help build common understanding of climate risk and demonstrate that there is in fact growing investor concern in this area.

   Another consideration is whether a proposal can succeed without the support of the largest shareholders in the companies in question. Shareholder resolutions require shareholder support to be most effective, dialogue is generally more effective when larger shareholders are involved, and even divestment is judged by the size of the commitment and the investor in question. The good news is that each shareholder resolution and dialogue continues a process of education on these issues to management and other shareholders alike.

4. **Litigation:** The ultimate goal for litigation is to change outdated behaviour and processes to reflect new knowledge on portfolio climate risk metrics. Changing behaviour through legal escalation does not necessarily require seeking liability awards or winning cases in court. Public questioning on the legal risk management duties of investment fiduciaries in relation to climate risk helps to focus pension trustee minds on this new category of risk, and helps interested investors make informed enquiries down the investment chain. In addition, biases and personal conflicts that impede fact-based implementation of fiduciary duties could provide the basis for seeking equitable court remedies. Pension member-led litigation against fund trustees who fail to assess and manage material climate risk in accordance with their statutory duties will serve as a sign post to the investment industry that climate change and associated risk metrics should be embedded in their policies, decision making and portfolio monitoring processes.

5. **Hold laggard investors publicly accountable:** In order to drive behavioural change, it is necessary to establish what is irresponsible behaviour by laggard investors. Those investors who continue to actively or passively undermine attempts to construct a carbon secure financial system, through either lobbying or support for the most inefficient high-carbon assets, should be identified and required to publicly justify their position and this not something that existing investor led initiatives are willing to do. As important, leader investors should be widely celebrated and be encouraged to share their learning experience on climate risk with peers

"If we are to be effective in achieving the scale of change needed, trying to keep everyone happy may not be feasible. We need a huge cultural shift within the companies we are seeking to influence, and organisational culture is set from the top down. Targeting senior management, even if it only achieves the generation of negative personal publicity, could be a route to more rapid change and should be considered alongside other strategies."

5. CONTINGENCY PLANNING FOR SUCCESS

CONCEPT

The strategy-development process gave due consideration to risks that could threaten or de-rail the Forceful Stewardship campaign. These risks are not sufficient cause for inaction. Rather, all actors in the Forceful Stewardship effort need to co-develop and support solutions for overcoming barriers for bold action.

ACTIONS

Challenge	Solution
Short-termism The focus of most institutional investors is on today and the next quarter. *"Focussing on climate change today is not going to solve their funding problems this year, so why take climate change into account?"*	**Shift the debate from future to present** *"What we need to do is to help the investment world get past the idea that climate change is not only a long-term risk. It is also a short-term and a medium-term risk."* *"We have to show in a measurable way what extreme weather is doing to many sectors already."*
Risk unaware/Stealth denial *"There is a major risk of aggravating the 'stealth denial' syndrome. Awareness of risk, without a clear sense of commensurate agency, or without a community of people able to hold that truth together safely can do more harm than good."* *"Many investors have not seriously considered different damage curves and the impact sensitivity of different outcomes."*	**Leverage existing investor groups** Make use of existing organisations to educate and inform on climate risks. The management of these risks require scenario analysis embedded within the investment decisions process (as opposed to traditional back-testing, ex ante techniques).

Weak client demand limits meaningful action *"Existing client queries about Forceful Stewardship from asset owners are not seen as mandate threatening for asset managers based on evidence to date."*	**Raise client demand through awareness and engagement** A simple request from a single pension fund to the Scheme Actuary has reportedly triggered significant change at the investment consultancy firm.
Career risk *"If I am a smaller Asset Owner in countries where these mega-funds exist – why should I take career risk/ reputational risk and rock the boat?"* *"The fear of losing a current job can be a more powerful motivator than an opportunity to get a better job"*	**Target self-expressive benefits** *"For some, yes, the pure financial payback and/or risk reduction logic will do wonders, but I think for most we'll need a dose of mission, passion, right side of history, etc…"* *"Simplify and connect both the dangers and solutions to a few things that are valued and held dear."*

4
SHIFTING THE RISK MANAGEMENT CULTURE

THE NEED FOR A NEW RISK MANAGEMENT CULTURE

85% of the participants in the ThinkTank agreed that "fiduciary capitalism requires a fundamentally different risk management strategy to address portfolio-wide systemic risks".

THE CONCEPT OF FIDUCIARY CAPITALISM

Fiduciary capitalism can be defined as a system of investment decisions based on intergenerational equity, in which negative externalities are minimized and positive ones maximized to benefit beneficiaries across time.

"An era of fiduciary capitalism would be one in which long-term-oriented institutional investors shape behaviour in the financial markets and the broader economy. In fiduciary capitalism, the dominant players in capital formation are institutional asset owners; these investors are legally bound to a duty of care and loyalty and must place the needs of their beneficiaries above all other considerations. The main players in this group are pension funds, endowments, foundations, and sovereign wealth funds. Fiduciary capitalism has several attractive traits. The main one is that it encourages long-term thinking. As "universal owners," fiduciaries foster a deeper engagement with companies' management teams and public policymakers on governance and strategy." John Rogers, former CEO of CFA Institute[1].

1 http://blogs.cfainstitute.org/investor/2014/04/28/a-new-era-of-fiduciary-capitalism-lets-hope-so/

RE-FRAMING THE CLIMATE CHALLENGE

There is general agreement that in the absence of rapid action to reduce emissions we are on track for an average temperature increase in excess of 4°C by the end of the century, with extremes being noticeably higher – a view shared by more than 90% of the participants in the ThinkTank.

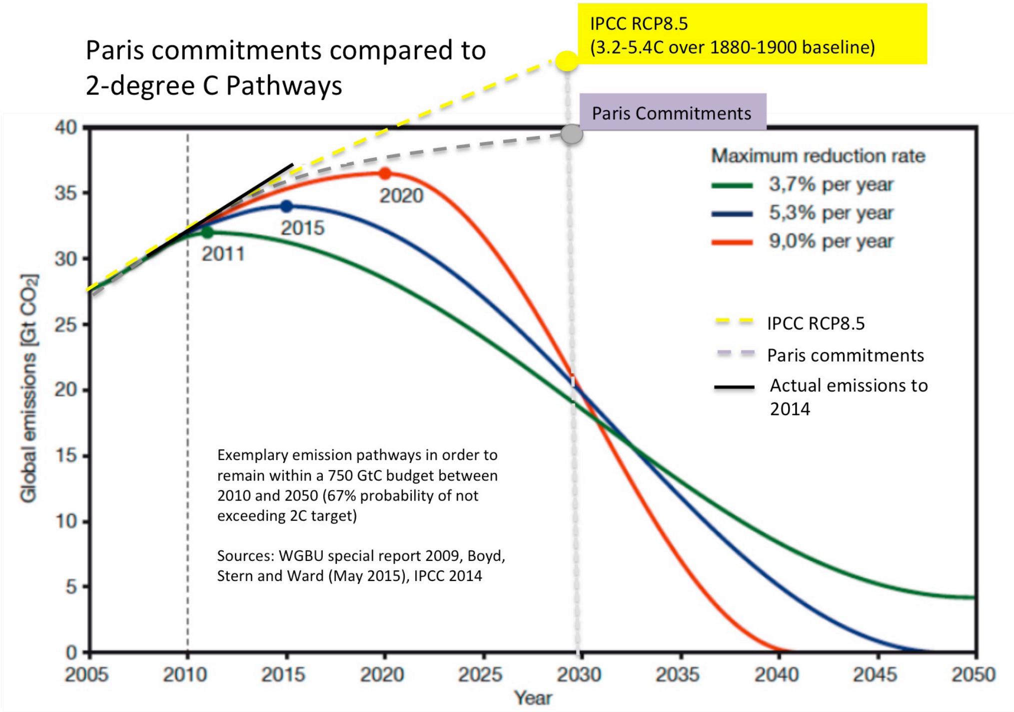
The negative impact on economic activity and investment of this is well described. It is increasingly clear that we will not stay below a 2°C limit using conventional reform processes.

The upside, as the International Energy Agency (IEA) keeps reminding us, is that the transition to a low-carbon world is the greatest investment opportunity the world has ever seen.

If we are seriously intent upon avoiding the worst impacts of climate change and realising the huge opportunities, some form of emergency action is now essential. This perspective is starting to be aired more frequently in authoritative circles. However, it will require risk management techniques fundamentally different from anything currently used in financial markets or even high-risk operating environments. Normative techniques must define the required outcome within acceptable carbon budgets, then set out the path to achieve that objective rather than accepting "politically realistic" approaches which have failed to achieve any sensible outcomes over two decades. This implies substantial regulatory change within which markets will have to operate.

In short, we should not keep talking about the challenge as if it can be resolved with the incremental, or even transformative, change processes so beloved of the management literature in the latter half of the 20th Century. This is different - and completely new approaches are required, particularly from the investment community[2].

2 http://www.alertis.nl/Uploaded_files/Zelf/Dangerous%20climate%20change_Myths%20and%20Reality_August%202014LR.pdf



THE CLIMATE CHALLENGE FROM AN INVESTOR ENGAGEMENT PERSPECTIVE

Traditional investing models focus on company-specific, idiosyncratic risk. Thus, they focus on skill in avoiding company-specific risk (through trading) or mitigating it (through diversification). They have much less to say about systemic risk, typically just accepting it as “the market” or beta. The problem with that is that in the order of 90% of an investor’s return is beta, not alpha, so beta is hugely important. Worse still is the traditional view is that “the market” return and risk are independent variables that investors cannot affect.

The only way to deal with systemic risk is for investors to be owners as well as traders. As owners, investors can help educate companies about those systemic risks and act as the catalyst for adaptive action. Rather than be at the mercy of what systemic risks do to “the market”, such investors can be “future makers”.

Many of the challenges on carbon and climate can be framed in the context of extreme risk management. The easy conclusion to reach is that legislation and regulation will require carbon participants to recognise their externalities economically. This will likely mean that thermal coal and tar sands will be unviable. It also raises the hurdle for all hydro-carbon investment plans, and this needs to be a hard focus of conversation with board directors and senior executives. It also provides a rational basis for putting the spotlight on the activities of unquoted national oil companies. And linked, we desperately need to 'win' the arguments for explicit carbon pricing as soon as possible to ensure that governments make wise decisions.

A CONFLICT BETWEEN SHORT-TERMISM AND LONG-TERMISM

SHOULD WE CHARACTERIZE CLIMATE RISK AS LONG-TERM?

Climate change is an indeterminate term risk. We know it is happening, and that more of it is locked in, no matter how successful we are at toeing the 2°C line.

Planning for uncertainty is always difficult, but there are ways to account for uncertainty in portfolio valuation and value at risk analysis, and science helps us to understand better the parameters to consider. What is fundamental is that most people tend to think of long-term events as unfolding in a linear fashion. In reality, the world is full of nonlinearity. Things happen in fits and starts, much like punctuated equilibrium.

That is one major difficulty in incorporating climate risk into portfolio management and stewardship, but it is not an insurmountable one. The other difficulty is that the scope of the changes that are happening, and which are likely to happen, fall outside the boundaries of our experience.

- Can we simulate what it would be like to lose most of the economic activity for one week in one of the many cities that hug the flat coastlines, much less several weeks?
- What will our economy will look like if California's drought stops being a drought and starts being the status quo?
- What will the migrant problems/conflict map of the world look like with a billion climate refugees?

Managing the unavoidable (and unimaginable) is something that we should not do lightly. With Forceful Stewardship, investors have a choice: to avoid the unmanageable by convincing companies to lower emissions, and not just carbon intensity.

CONFLICTED INCENTIVES ALONG THE INVESTMENT CHAIN

Clearly, politics at play currently represent a barrier to change in respect of mitigating climate risk. But beyond politics, the range of perverse incentives along the whole investment chain also constitute a serious barrier.

First, companies are short term via significantly generous short-term incentives for directors (why should they think of the long term?[3]). Then come asset managers who are not trained to look at non-financial issues and who are also remunerated, in the main, on similarly short-term outlooks.

Next are asset managers' clients, the pension funds and mutual funds who are supposedly long-term but again looking for short-term gains for all kinds of reasons, e.g. funding shortfalls and lack of understanding of ESG issues. The investment consultants who advise pension funds generally do not promote ESG considerations. In fact, some explicitly tell their pension fund clients not to do so.

And finally the individual investor themselves, those that invest in pension funds or mutual funds whose first thought is about fund performance. They either automatically assume that if funds consider climate or other non-financial matters it means they will return less to them - or the individual investors do not know they have the power to influence.

What can be done to overcome this inertia?

First, putting more emphasis on the business and investment opportunities for companies who engage in tackling climate change will certainly help and encourage more action. "Opportunities sell much better than risks", although the limited success of green/SRI investing also cannot be ignored.

Because the effects of climate change are already happening, another strategy is to play into that and make the connections to short-term risks even clearer. The science community is shy about tying short-term impacts like droughts and storms to climate, but has any long-term threat ever mobilized people? When obese, heavy smoking patients have a warning heart attack do their physicians, after they have stabilised, say nothing about the probability of causes simply because they cannot prove that an extra cigarette or a extra kilogramme will "cause" another heart attack? We need to show, in an easy to understand manner, what extreme weather is likely to be doing to many sectors already since these are "teachable moments"[4].

There are some emerging signs of change, and some momentum behind the long-term agenda. In the UK, the Kay Review has created a willingness to consider ways to invest for the longer term. In North

3 http://grist.org/climate-energy/how-our-screwed-up-ceo-pay-system-makes-climate-change-worse/?utm_content=buffer8d52b&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

4 http://her.oxfordjournals.org/content/18/2/156.full

America, the issue is now firmly on the agenda for professional investors with thought leaders like Robert Pozen advocating stewardship action[5].

THE ROLE OF LITIGATION

Litigation can play a significant part in shifting the risk management culture toward the long-term[6]. As the relationship between climate change and the duty of care of investors becomes clearer, one might expect lawsuits to be filed by beneficiaries that charge fiduciaries with negligence in not considering the impact of climate change on investments.

INFLUENCING HOW FIDUCIARIES VIEW THEIR FUTURE RESPONSIBILITIES

On May 18, 2015, the U.S. Supreme Court rendered a unanimous decision that may pave the way for more lawsuits against ERISA plans alleging a breach of fiduciary duty regarding plan fees and choice of investment alternatives.[7]

The principle that fiduciaries must monitor the plan over time is very important. In that case, a breach of fiduciary duty was found where the trustees failed to take action when lower-cost share classes were offered. So the plan paid more than it should have for a fund that was now being offered at a lower expense ratio. The trustees could not rely on the process they used to make the initial investment; they have a duty to continuously monitor the portfolio. Even if the facts of the case itself may limit its application, the principle is critically important. This has clear implications for climate change.

There is another aspect of the Supreme Court case that could be useful for influencing how fiduciaries view their future responsibilities. The decision contains a series of comments about the application of trust law to US private pension fund (ERISA) fiduciaries which are very favourable toward sustainable investment - including consideration of climate change issues[8].

Another avenue for influencing behaviour and changing legal compliance incentives within companies that have not come to terms with climate change could be collaborative investor use of books and records requests.

In the US, the Delaware courts have encouraged shareholders to use books and records requests when potential misconduct is evident. The difference between European company climate change analysis

5 http://www.cfapubs.org/doi/full/10.2469/faj.v71.n5.5
6 ThinkTank participants believed that a legal precedent is necessary to bring about changes in investment behaviour and considered the publicity around the threat of litigation as a influential additional element. See Appendix 7, Q2
7 http://www.reedsmith.com/Unanimous-Supreme-Court-Decision-Paves-Way-for-401k-Plan-Lawsuits-05-26-2015/
8 http://www.reinhartlaw.com/Publications/Documents/art111020%20RIIS.pdf

and disclosures versus US company disclosures might provide the basis for shareholders to seek access to information available to the board when developing reports on company exposure to climate change. Shareholders could properly request access to this information to determine whether SEC climate disclosure requirements have been met[9] and whether company disclosures are complete and accurate.

It might also be appropriate to seek company documents on whether climate denial efforts continue to be funded by fossil fuel and other high impact companies, despite denials and the potential existence of internal documentation affirming the effects of climate change. The Union of Concerned Scientists' report on funding of climate change denial provides important background[10].

However, litigation is only likely to influence behaviour inside companies if it is brought collaboratively by large mainstream investors. Otherwise, it risks being seen as merely special interests pursuing irrelevant political agendas.

BY NO MEANS THE ONLY PART OF THE PUZZLE

The question of whether or not litigation is an answer to imprudent climate risk management should be rephrased: the question to ask is what contribution may test-case litigation (or more lawsuits in the US along the lines of the Peabody case) make to climate risk awareness and action by institutional investors?

Litigation is a blunt instrument, and it is unfortunate that we appear to be at a stage where it is necessary. It is by no means the only part of the puzzle and should serve to reinforce the other pillars of Forceful Stewardship.

In fact, 80% of participants in the ThinkTank agree that "Whether or not the court sets a legal precedent, at the very least the publicity around the threat of litigation might help to bring about the necessary change".

What are the pros and cons of a test case against the trustees of a pension fund for breach of duty to control for climate risk? As most participants agree, there is no significant downside to test litigation: were a test case to face challenges in one jurisdiction, this would only serve to sharpen arguments of prospective plaintiffs in other jurisdictions, and even a defeat in court would not necessarily terminate the cause(s) of action available to future litigants.

Based on the history of US pension member and shareholder class action proceedings over breach

9 The SEC requirements are available at: https://www.sec.gov/rules/interp/2010/33-9106.pdf
10 http://www.ucsusa.org/global-warming/fight-misinformation/climate-deception-dossiers-fossil-fuel-industry-memos#.VcJ2ZflVhBc

of fiduciary duty, there would be nothing particularly novel from a legal perspective in building an analogous case around climate change investment risk. While establishing the necessary duties should be straightforward, the more unique component would be communicating the materiality of climate risk across asset classes, and demonstrating damages. If one believes that the investment implications of climate change are material, and that concerted government action and market responses to address these risks in various jurisdictions will impact on the value of pension investments, then there are good reasons to bring a case. Analysis and actions by leading funds and investment managers make the inaction of laggards appear even more egregious, and strongly suggest that a legal challenge is required.

Different jurisdictions provide important opportunities to test arguments around climate risk and Forceful Stewardship in distinct legal cultures:

- The long history of class actions litigation in the US provides a strong model for large groups of pension members and investor plaintiffs to demand accountability for imprudent and self-interested dealing by fossil fuel company directors, and pension trustees who ignore their fiduciary and statutory duties to act in their members' best financial interests.
- The upside of test litigation in a common law jurisdiction such as Canada would be to put negligent pension trustees on notice that they must meet the legal standard of care requiring them to act in their members' best financial interests. If they believe that actively ignoring climate change risk is in accordance with this duty then the courtroom is the ideal venue to explain why.

Rather than focus on jurisdictional legal differences, it might be more helpful to discuss which types of pension funds would be most appropriate as litigation targets for members whose savings have been imprudently gambled. Some potential targets could include:

- Fossil fuel industry pension funds which have conflicted management-appointed trustees who continue to bet on parts of the fossil fuel industry that appear to be in structural decline.
- Funds whose investment portfolio and public statements indicate their faith in a "burn it all" investment scenario. Some Canadian funds, for example, continue to speak publicly about their strong belief in the longevity of pure-play oil sands companies. This implies a belief on the part of the trustees that energy market transition currently underway in the US and policy responses to climate change will have no impact on the Canadian fossil fuel sector.[11]

One helpful follow-up outcome could be jurisdiction-specific checklists to determine if it is necessary and possible to litigate against your pension fund over climate-risk blindness; jurisdiction-specific guides could be compiled by appointed regional experts. The checklist need not be comprehensive, but could serve as a discussion starter for plaintiff-side class action attorneys/barristers.

11 http://www.nationalobserver.com/2015/05/28/opinion/are-canadian-pension-funds-ready-climate-risk-and-stranded-assets

PASSIVE INVESTMENT MANAGERS

During the surveys conducted with the participants of the ThinkTank, it emerged that 90% of participants agree that "passive managers should introduce and promote funds managed against benchmarks designed to mitigate climate change", and more than 60% believe "they have a higher obligation than active managers to engage with issuers of debt and equity"[12].

The history of corporate governance in the US shows that passive managers have been a great boon to stewardship. Being unable to sell (exit) investors chose stewardship (voice), which is a textbook organizational theory tactic. So, it's no accident that large indexers like Blackrock (which has the largest governance team in the for-profit world), CalPERS, CalSTRS, NYC's pension funds, etc. are leaders in the governance movement and becoming more involved in the sustainability movement. They also know that they will be exposed indefinitely to a broad swath of the real economy, and they therefore take a responsible approach to systemic risks that will affect them in the future.

Effectively, indexers and large pension funds are "universal owners" and always will be[13]. By contrast, active traders often feel they can trade out of trouble in any specific situation so don't take the same approach.

From an investor's point of view, the potential benefit is clear in terms of managing intrinsic risks. However, many institutional investors (especially in Japan) have voiced scepticism from the corporate view, asking "why should companies care about what the passive investors say, if they know you are not going to sell"? If a significant proportion of investors view ESG factors as important decision points (implying it impacts a firm's value), then management and the board should acknowledge shareowner preferences and work to integrate such practices/objectives into its strategy and business operations.

There is no doubt that passive managers are at serious risk of misallocating capital if they do not do real stewardship. But there are also many reasons why passive managers do not bother to be stewards, causing one CIO to talk about the need for compulsory stewardship. [14]

12 See Appendix 7, Q5
13 Jim Hawley and Andy Williams explored this at length in "The Rise of Fiduciary Capitalism"
14 http://www.ft.com/cms/s/0/3917d0d0-e812-11e4-894a-00144feab7de.html#axzz3kC2wbqUi

CTI BLUEPRINT

Carbon Tracker's blueprint[15] advances a risk management process that tests for what could be seen as an 'orderly' energy transition and considers a 'disorderly' one where change is abrupt, thanks to a so-called 'black swan' event that tests business models to the limit, potentially destroying shareholder value in the process.

Its purpose is to get companies to take relevant risk management seriously, and the major fossil fuel companies in particular need a risk assessment approach that encompasses the risks from an energy transition. It also provides a roadmap for investors and also be used by students[16].

CTI's approach entails the following considerations:

15 http://www.carbontracker.org/report/companyblueprint/

16 An interesting idea that emerged during the ThinkTank is that this model could also be used by students to structure a research project since it provides a large number of positive arguments for action around climate risk. Students might also be able to find trustees and corporate/investor board members who are faculty who they could also engage in the learning initiative. This would be a good way to test the persuasive value of a number of the arguments raised in this ThinkTank and do some board level CPD indirectly.

Carbon Tracker Initiative – Fossil Fuel Transition Blueprint

✓ **Does management accept climate science?**
- Full acknowledgment or implied continuous debate?
- Companies should assess how mitigation action should and could occur within their planning timeframe and utilise all relevant information; such as changes in low-carbon technology and the potential for energy efficiency.

✓ **Has management assessed the probability and scale of risks?**
- Here, risk-weighted probability analysis is essential – revealing those probabilities is critical for investors.

✓ **Is the company strategy able to cope with an energy transition?**
- A focus on climate-related regulation is too narrow; companies must consider the combined implications of energy efficiency, technological change, and the robustness of their economic assumptions as well.

✓ **Are company hurdle rates commensurate with the risks faced?**
- An energy transition poses greater risks to fossil fuel companies – hurdle rates should reflect that risk premium and companies should identify those rates so investor can get a sense of the level of risk being taken on.

✓ **Is the board's compensation policy aligned with shareholder value?**
- Compensation performance metrics should de-emphasise any form of volume related metrics and emphasise those that matter most to shareholders.
- Some examples include: Total Shareholder Return (TSR) relative to peers, relative Return on Capital Employed (ROCE), and other metrics that value lower costs.

✓ **Is the company planning process and governance structure fit for purpose?**
- Companies must ensure they follow both a top-down and bottom-up approach to addressing risks.

✓ **Are energy transition risks considered by all relevant committees and business units?**
- Planning and strategy, development and investment groups must be familiar with the company's risk weighted scenario analysis and its implications for project sanction.

✓ **Does the company's risk management approach flow from the board through the investment planning process?**
- Energy transition risks must be properly considered by every committee – not just the public policy committee.
- Boards should ensure that they have the necessary expertise to consider climate-related risks. Nominating committees should consider this when selecting new board members, non executives and executives.

Source: Adapted from Carbon Tracker Initiative – The Blueprint

What is the fundamental reason for the disconnect between what we know needs to happen about climate risk and what is happening today? The answer appears simple to us: agency issues. The risk that ordinary pension fund members/retirement savers face is very different from the risk investment professionals face, and it is clear whose risk counts most.[17]

The investment industry today operates with a risk management culture which is defined by technical specialists and which focuses on metrics such as volatility and tracking error. The dysfunctionality of the supply chain gets worse as the chain gets longer, and sell side/credit-rating agency research and investment consultancies are particularly problematic.

But agency issues are also to be found within pension funds themselves since the technical experts who direct these funds often have the same mental models as Wall Street and are frequently incentivised over periods that are much shorter than the interests of end beneficiaries.

Changing a risk culture that focuses on volatility and tracking error, which is pre-occupied with the short-term to one that focuses on avoiding and mitigating the financial consequences of climate disruption is therefore a project that we believe will require forceful engagement (including litigation).

To get to the new culture of risk that we need for climate and indeed other systemic risk matters, players outside the industry will need to be the catalyst for change. Think-tanks, academics, NGOs and financial media all have play an important role to play. But fundamentally it is going to take the trustees of asset owners and or regulators to act, and ideally both and in collaboration.

17 Raj Thamotheram and Aidan Ward, “Whose risk counts?” in Cambridge Handbook of Institutional Investment and Fiduciary Duty ed James Hawley et al. July 2015

5
OPTIONS FOR CORPORATE RESOLUTIONS

A key question for those who are putting forward resolutions on climate change – and for the foundations who support this work – is how to frame the 'ask'. And linked, but equally important, does the diversity of resolutions already on the table, with potentially more options to come, support or undermine the building of a coalition of investors which is "fit for purpose"?

Should resolutions focus on a 2°C compliant business plan, i.e. consistent with a specific and well-known global carbon budget? Or a business plan consistent with a global carbon price high enough to generate a reallocation of investments towards low-carbon and/or renewables? Or a capital distribution to shareholders in light of the climate change related risks of decreasing profitability and growing potential for stranded assets? Or something specific about execution (e.g. about GHG emissions reductions, executive remuneration incentives, director nominations or lobbying)?

A BRIEF OVERVIEW OF CURRENT SHAREHOLDER ENGAGEMENT AND RESOLUTIONS

There is no doubt that investor engagement has significant potential in terms of managing climate risk.

From a US perspective, Ceres' reports that the Carbon Asset Risk initiative has helped with improved disclosure, operational emissions reductions, and considerations of carbon asset risk[1]. Engagement is not the only cause of the positives changes outlined in the report, but it has played a major role.

However, the lack of standardisation of these new disclosures remains an issue. The Sustainability Accountability Standards Board (SASB) is doing yeoman's work at influencing the SEC on how they define "material", in an effort to standardize these reports and make them more comparable, an essential pre-requisite for investors.

The biggest advance in stewardship activity came in Europe, with this year's BP and Shell shareholder resolutions, the 'Aiming for A' engagement coalition successfully took many institutional investors well beyond their traditional comfort zone on stewardship[2]. Investors who had not co-filed a UK shareholder resolution did so for the first time; investors who had never pre-declared an intention to support a shareholder resolution, including the world's biggest sovereign wealth fund, the Norwegian Pension Fund, did so for the first time; and 98% of shareholders voted for the resolutions, although board support for the resolution is clearly a factor. Nevertheless, this means practically every significant institutional investor in the world has now voted for a shareholder resolution asserting shareholder direction of a company on climate change and specifically asking fossil fuel companies to explain their strategy for thriving in a low carbon scenario. This is a critically important precedent: those investors should want this same level of disclosure of risk management from other fossil fuel companies, in particular the direct peers of these major O&G players. And clients and others stakeholders should be uncompromisingly tough with any investor that adopts an inconsistent approach without a strong public justification.

In Australia, the regulatory context, however, appears less supportive: a recent legal decision supported the board's refusal to place shareholder proposals on the agenda because shareholders cannot direct how the company is managed, which is the exclusive duty of the board.

In Asia, outside of Japan, there are very few shareholder proposals, if any on ESG and climate-related issues, partly due to the prevalence of controlling shareholders, and partly due to the cultural preference for private meetings and the lower tolerance for confrontational public communications. There is a further challenge of almost no 'on the ground' engagement capacity in Asia - despite the region's significant contribution to global economic growth. However, whilst climate change is not yet an active concern of investors, the issue of water is. Parts of Asia are at constant risking of flooding whilst other parts are very dry: e.g. Beijing has a water scarcity challenge as severe as Saudi Arabia[3]. The fact is that water is needed for the generation of power from fossil fuel. Coal will remain the main energy source in China and India for some time. Focusing on the energy / water nexus as an alternative to climate change could have traction outset of the developed world. Moreover, investors can be expected to soon catch up with the public opinion – the Chinese are more in favour of action on climate change than any other nation in the world today[4].

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1 http://www.ceres.org/resources/reports/carbon-asset-risk-a-review-of-progress-and-opportunities/view

2 The same pattern has since been used with Statoil, this work led by AP funds.

3 https://www.chinadialogue.net/article/show/single/en/6319-Beijing-water-shortage-worse-than-the-Middle-East

4 https://yougov.co.uk/news/2015/06/07/Global-survey-Chinese-most-favour-action-climate-c/

A major consideration for the Forceful Stewardship initiative is whether it can succeed without the support of the largest shareholders in the companies in question. Shareholder resolutions require shareholder support to be most effective, dialogue is generally more effective when larger shareholders are involved, and even divestment is judged by the size of the commitment and investor in question. Thus the role of proxy advisory services is also critical, which is why many shareholder advocates are actively working on increasing support from these firms.

Each shareholder resolution and dialogue continues a process of education on these issues to management and other shareholders alike. Engagement and divestment have changed the tenor of conversations on finance and climate change, bringing terms like carbon asset risk, carbon bubble and the like into board rooms and investor beliefs. The job before us is to accelerate this conversation, continue building the coalition of investors concerned with and pressing these issues, translate the science into financial terms, increase pressure on the companies to act, influence decision making of boards, and ultimately achieve meaningful actions on the part of companies.

The whole resolution process is built to support multi-year campaigns, so not doing well one year does not necessarily mean the resolution needs to be changed. It may mean that more groundwork supporting it needs to be done. These are voting processes so they are really like political campaigns. The political campaign needs to spread between institutional investors. Institutional investors need to be asking their counterparts why they don't want companies to analyse the low carbon transition risk thoroughly. This level of dialogue is a critical channel for securing more votes and/or better understanding what is needed to get those votes.

ENGAGING CITIZEN INVESTORS

An area of largely untapped potential relates to "citizen investors," a term popularized by Stephen Davis, Jon Lukomnik and David Pitt-Watson in their 2006 book, "The New Capitalists". They argue that in today's world, ordinary citizens, through their savings and investments, largely own the major public companies of the world. The corollary is that those corporations should act in the interests of citizens, and that citizen investors, if awakened to the potential, could have major impact on corporate agendas.

In term of strategy, combining traditional civic mobilisation with "internet activism" offers considerable potential. In the Netherlands, for example, more than 10,000 members have lobbied ABP to divest from fossil fuels[5], supported by a twitter campaign and opinion pieces in leading newspapers by university academics members of the fund.

5 http://www.theguardian.com/environment/2015/mar/18/more-than-10000-people-call-on-dutch-pension-fund-to-divest-from-fossil-fuels

Individual pension, superannuation and mutual fund members are now able to lobby their fund on key AGM climate resolutions, be part of coordinated action directed at corporate annual meetings and subsequently be independently informed on how their fund voted by using the 'Vote Your Pension' platform[6] launched by the Asset Owners Disclosure Project (AODP). With a database comprising more than a thousand international pension and retirement funds 'Vote Your Pension' has the potential to become a powerful tool in the hands of NGO based campaigners and individual fund members seeking asset owners take an active engagement stance on climate and carbon investment and risk issues. The new platform also provides for institutional investors to take a further step in transparency and "pre-declare" in advance their voting positions on resolutions before annual meetings, a technique successfully used by the UK Aiming For 'A' coalition to build momentum around the recent climate risk resolutions at BP and Shell and the US Tri-State Coalition For Responsible Investment and ICCR with their Exxon and Chevron GHG target resolutions.

ShareAction is a charity that promotes Responsible Investment. ShareAction monitors and engages with the investment system on both the systemic risk associated with poor governance around responsible investment and on the specific risks associated with issues such as the regulatory and competitive implications for business of climate change. As well as educating and influencing the investment community itself ShareAction has had success engaging 'citizen savers' in the debate.

Although many people are concerned about unsustainable business behaviour, most do not make the connection between their savings (including a pension that may be hidden behind layers of intermediaries) and the issues they care about. Nor do they perceive these issues as a risk to their financial future. ShareAction taps into this latent interest to good effect by coaching savers to engage with their investments. ShareAction has created and supported teams of interested savers to interact with pension trustees about a range of ESG issues. This involves an implicit challenge around trustees' conception of their fiduciary duties. The power of social media has been harnessed to allow larger groups to communicate with their funds and ask questions about investment approaches. In addition, individuals have been trained to attend company AGMs and ask well-researched questions about activities that are ultimately financed with their money. Carried out in a thoughtful and measured way, this mobilisation of the saver (end beneficiary) creates a dialogue that the investment community cannot ignore.

Push Your Parents fosters discussions on climate change between young people and their parents in order to get parents to push their pension funds to be Forceful Stewards of the companies they invest in. The campaign aims to bridge the gap between generations on climate change as well as between pension funds' engagement policies and the interests of their customers and their children. PYP started in the UK and now has a chapter in Italy[7].

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6 https://www.voteyourpension.org/

7 www.pushyourparents.org

Although number of votes is not the only measure of the success of a resolution – causing a public debate, education etc can also be very useful - when challenging the business model, management simply will not take steps that challenge BAU assumptions unless the discontent in the shareholder body is significant. It may not take over 50%, but it will certainly require something approaching a substantial minority, including major long-term investors. The fact that Exxon agreed to analyse a 2°C scenario, and then dismissed it as unlikely in a single line[8] suggests an unwillingness to go that far without more shareholder push.

Whilst there will never be one text that fits every situation perfectly – the text for resolutions which precede engagement may need to be different from resolutions that follow engagement, there will be cultural and regulatory drivers etc. – there is a strong case for deeper dialogue between those who wish to focus on the same company. This may result in decisions to change language, phase resolutions, target additional companies or simply greater coordination despite no changes in strategy.

Even if we think that contentious tactics, tempered radicalism, and dialogue are complementary, international cooperation on this issue could mean negotiating between these approaches or prioritizing them along a timeline. A focus on resolutions may mean that markets without a strong activist tradition of this vein may not identify with the campaign. This is ok, if the consensus is that there is more to gain by focusing on US, Canada, Australia and the UK.

Whatever strategy is deployed in relation to companies, and especially if resolutions are going to be filed, it is important that the organizations doing so allocate sufficient resources to do the factual research on the target companies prior to filing proposals. Failure to do so not only undermines the likelihood of success in defending the proposal, it also can undermine the credibility of shareholder and activist efforts in this area. Additional research, so that investors thoroughly know the companies you are filing proposals at, can allow more forceful approaches – for instance, a more company-specific proposal.

Multiple resolutions can be helpful. As a general proposition, the climate problem is becoming so large, that multiple proposals at large companies simply makes sense. For instance, addressing the impacts of climate change related catastrophic weather occurrences on facilities and operations is an entirely different discussion from reducing greenhouse gases. In the US, if two resolutions are too close in their requests, the latter one filed may be excluded as duplicative. So, coordinated efforts that recognize this

8 http://cdn.exxonmobil.com/~/media/global/files/other/2014/report---energy-and-carbon---managing-the-risks.pdf

"first-in" priority can be constructive. Efforts to push the envelope in the kinds of resolutions being offered always takes more effort, more legal combat and more front end development work (and has more risk of exclusion by SEC) than deploying the standardized model proposals that have made it through the SEC gauntlet. But it may be important in the wider process, for example to get US mutual funds to vote on US O&G companies in a way which better holds them to account. Most supported the Aiming for A resolutions at BP, Shell and Statoil, so the position of not supporting similar resolutions in the US might not be tenable.

In the US, it is worth highlighting the work done by Ceres in tracking shareholder resolutions[9] filed by its investor network participants on sustainability-related issues that companies are facing, focusing on climate change, energy, water scarcity, and sustainability reporting.. Many of the investors are members of Ceres' Investor Network on Climate Risk (INCR).

A) 2 DEGREE (CARBON BUDGET) COMPLIANT BUSINESS PLAN

Illustrative wording: *"Please give us a report which shows how your firm would thrive in a world which had agreed to be bound to a 2 degree carbon budget (burning no more than 1 trillion). Please include information on how you would align incentives, capex, public policy positions and board governance with this plan."*

NGOs/investors supporting this approach today: None so far. A Preventable Surprises recommendation for Forceful Stewardship resolutions (see "Recommendations for action").

B) CARBON PRICE RESILIENT BUSINESS PLAN

Illustrative wording: *"Please give us a report which shows how your firm would thrive in a world which had agreed to a carbon price of [$100] per tonne from 2030 onward. Please include information on how you would align incentives, capex, public policy positions and board governance with this plan."*

NGOs/investors supporting this approach today: The WWF project on aviation, supported by CalPERS could be said to be a first step in this direction[10].

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9 http://www.ceres.org/investor-network/resolutions

10 http://cgeg.sipa.columbia.edu/sites/default/files/cgeg/Bob%20Litterman%20-%20Aviation%20is%20the%20key%20to%20reducing%20climate%20emissions.pdf

C) LOW-CARBON COMPLIANT BUSINESS PLAN

Illustrative wording: *"Please give us a business plan which shows how your firm would thrive in a low-carbon world. Please include information on how you would align incentives, capex, public policy positions and board governance with this plan. A low-carbon world is one which had agreed to be bound to a 2 degree carbon budget (burning no more than 1 trillion tonnes CO2) or one agreeing to carbon prices of $100 from 2030 onward, whichever of these scenarios is most strategically disruptive and onerous for your business."*

Accompanying material might also refer to the risk of economic/technological stranding but this would probably not be in the resolution as such because there is no consensus figure for demand reduction.

NGOs/investors supporting this approach today: None so far[11].

D) CAPITAL DISTRIBUTION TO SHAREHOLDERS

Illustrative wording: *"In light of the growing potential for stranded assets and decreasing profitability associated with capital expenditures on high cost, unconventional projects, please commit to increasing the amount authorized for capital distributions to shareholders through dividends or share buy backs."*

NGOs/investors supporting this approach today: As You Sow coalition.

Existing resolution: Chevron, 2015, vote: 3.2%[12]
The SEC supported Exxon in rejecting this resolution at its 2015 AGM[13]

E) CLIMATE CHANGE RELATED DISCLOSURES INCLUDING BUSINESS RESILIENCE TO LOW-CARBON ENERGY TRANSITION

Illustrative wording: *"Please include in ongoing routine annual reporting further information about: ongoing operational emissions management; asset portfolio resilience to the IEA's scenarios; low-carbon energy research and development (R&D) and investment strategies; relevant strategic key performance indicators (KPIs) and executive incentives; and public policy positions relating to climate change."*

NGOs/investors supporting this approach today: The Aiming for A coalition.

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11 ThinkTank participants on average seemed to have high confidence in the positive impact of forceful stewardship on low carbon business plans. There was also a high degree of confidence of the impact on corporate political lobbying. There was less confidence expressed about the impact on biodiversity or water consumption. See Appendix 7, Q4

12 http://action.shareaction.org/page/-/InvestorBriefingChevronShareholderResolutionMay2015.pdf?nocdn=1

13 http://insideclimatenews.org/news/25032015/exxon-shareholder-climate-vote-blocked-chevrons-approved-sec

Existing resolutions: BP, 2015, vote: 98.3%[14]
Shell, 2015, vote: 98.9%
Statoil, 2015, vote: 99.9%

It is a misunderstanding to characterize the BP and Shell Resolutions as only about disclosure. The disclosure standards are so demanding that they require action. The resolution asks the companies to disclose their asset portfolio resilience against IEA scenarios including the 2 degrees scenario - that requires consideration of what a 2 degrees portfolio of assets looks like. It asks for disclosure on political lobbying on climate change - that requires a review of whether political lobbying is fit for disclosure. One can be sceptical of disclosure resolutions but smart ones on strategic issues actually have much wider implications for companies if passed. Witness BP and Shell moving soon after the resolutions to call for talks with the UNFCCC on implementing carbon pricing effectively.

F) ADOPT TIME-BOUND QUANTITATIVE GHG REDUCTION TARGETS

Illustrative wording: *"Please adopt quantitative goals for reducing total greenhouse gas emissions from the Company's products and operations and report to shareholders by DD/MM/YYYY, on plans to achieve these goals".*

NGOs/investors supporting this approach today: The Tri-State Coalition for Responsible Investment.

Existing resolutions: Exxon[15], 2015 vote: 9.6%, 2014 vote: 22%
Chevron, 2015 vote: 8.2%

G) BUSINESS PLAN ADDRESSING RISKS OF STRANDED ASSETS

Illustrative wording: *"Please prepare a report, by MM/YYYY, on the Company's strategy to address the risk of stranded assets presented by global climate change and associated demand reductions, including analysis of long and short-term financial and operational risks to the company."*

NGOs/investors supporting this approach today: Carbon Assets Risks Initiative, As you sow.

Existing resolutions: Anadarko, 2015, vote: 29.1%
Hess Corporation[16], 2015, vote: 23.4%

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14 http://www.bp.com/en/global/corporate/investors/annual-general-meeting/notice-of-meeting/shareholder-resolution.html
15 http://www.sec.gov/Archives/edgar/data/34088/000119312515128602/d855824ddef14a.htm#toc855824_23
16 http://www.asyousow.org/wp-content/uploads/2014/12/anadarko-2015-carbon-bubble.pdf

Energen Corp, 2015, vote: 25.7%
Consol Energy, 2015, vote: 11.2%

H) EXECUTIVE INCENTIVES ALIGNED WITH CARBON REDUCTION

Illustrative wording: *"Please include metrics for reduction of company's carbon output as one of the annual performance metrics for senior executives' compensation."*

NGOs/investors supporting this approach today: As You Sow coalition.

Existing resolutions: Dominion Resources[17], 2015, vote: 4.9%
Ameren Corporation, 2015, vote: 8%
Entergy Corporation, 2015, vote: 6.6%

I) REPORT ON (CLIMATE RELATED) LOBBYING

Illustrative wording: *"Please disclose the company policy and procedures governing lobbying, associated payments (in each case including the amount of the payment and the recipient) and a description of the decision making process and oversight by management and the Board for making these payments."*

NGOs/investors supporting this approach today: The As You Sow coalition, supported by Walden Asset Management.

Existing resolutions: Pinnacle West[18], 2015, vote: 30.8%

J) NOMINATION OF (POTENTIALLY NON-BOARD ENDORSED) DIRECTOR

Illustrative wording: *"Please nominate XXX for election to the board of directors."*

Accompanying material stresses the climate risk angle of the nomination, potentially as a non-board endorsed director.
NGOs/investors supporting this approach today: Nomination of Ian Dunlop to the board of

17 http://www.asyousow.org/wp-content/uploads/2014/12/dominion-2015-climate-change.pdf
18 http://www.asyousow.org/wp-content/uploads/2014/12/pinnacle-west-2015-capital-lobbying.pdf

directors of BHP in 2013 and 2014[19] [20]supported by LG Super[21].

Existing resolutions: BHP Billiton[22], 2014, vote: 2.2%
Chevron, 2015, vote: 20%
Exxon, 2015, vote: 21%

K) DISCLOSURES ON GHG EMISSIONS FINANCING (FOR BANKS)

Illustrative wording: *"Please gives us a report each year on the assessment of the quantum of greenhouse gas emissions that the Company is responsible for financing."*

NGOs/investors supporting this approach today: ACCR (Australasian Centre for Corporate Responsibility)[23] in Australia, Ceres[24]

Existing resolutions: ANZ[25], 2014, vote: 3.1%

RECOMMENDATIONS FOR ACTION

1. Corporate engagement

We invite investors to become as forceful and as systemic as possible.

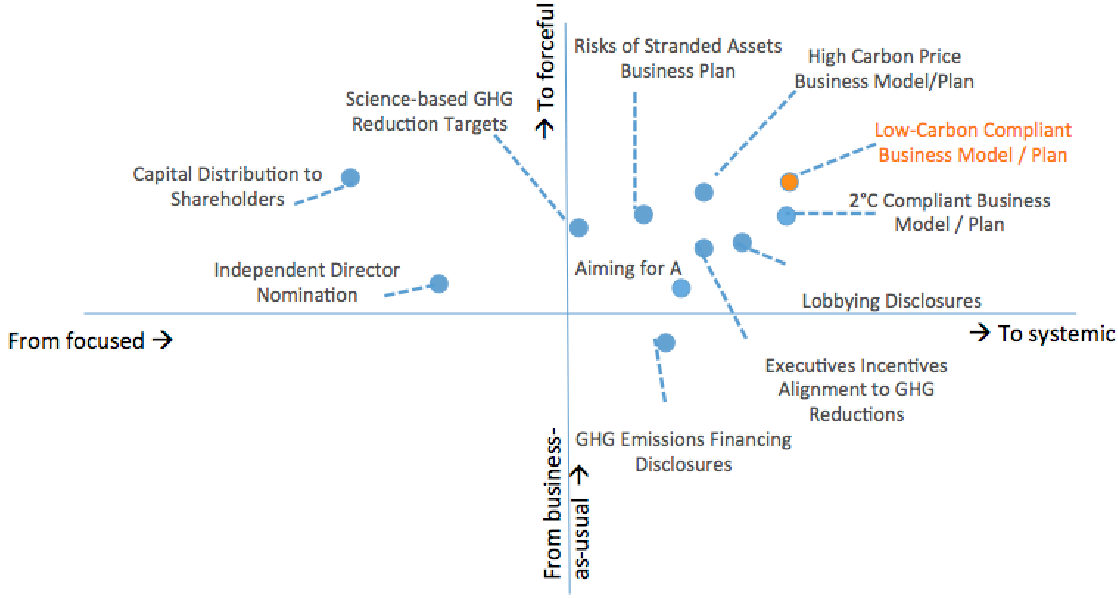
ThinkTank participants on average considered the low-carbon compliant business plan resolution as both most systemic and one of the most forceful.

The following chart attempts to position these various resolutions in term of forcefulness and systemic focus. Participants were asked to position each type of shareholder resolution according to their forcefulness and focus. The graph hereafter shows the aggregated results.

19 http://www.theguardian.com/business/2013/oct/17/coal-executive-turned-climate-change-activist-fights-for-seat-on-bhp-board
20 http://www.iandunlop.net/
21 http://www.lgsuper.com.au/documents/sustainability/LGS%20Proxy%20Voting%20Report_Dec%202014_Web.pdf
22 http://www.bhpbilliton.com/~/media/bhp/documents/investors/shareholderinfo/2013/bhpbillitonnoticeofmeetinglimited2013.pdf?la=en
23 http://www.accr.org.au/bigbankreport
24 http://www.ceres.org/investor-network/resolutions/bank-of-america-ghg-assessment-2014
25 http://www.accr.org.au/anz

Forceful Stewardship Resolutions

These resolutions are located to reflect the average of where participants placed them. Based on answers from 15 participants.



Participants on average considered the low-carbon compliant business plan resolution as both most systemic and one of the most forceful.

As with physical training, the aim is to gain confidence about being forceful in a way which delivers the real world outcome that is needed. Recognising that for some asset owners, there is a key role to play even for abstain votes in situations where there is a need for the spirit of supporting the resolution, we have ordered these actions by order of forcefulness:.

5 shades of forcefulness
1. Co-file resolution
2. Vote for business plan and pre-declare
3. Vote for business plan and report as quickly as possible
4. Abstain on business plan resolution if management recommend voting against and explain why
5. [Vote with management against business plan resolution]

2. Influencing the SEC

We invite investors to support or continue to support the efforts of Ceres[26], Carbon Tracker and the Sustainability Accountability Standards Board (SASB) to lobby and influence the SEC on how they define "material", in an effort to standardize these reports and make them more comparable, an essential pre-requisite for investors. Noting that the existing disclosure guidance on climate has seldom been enforced, additional pressure from investors on the SEC can create a guidance, but what will persuade the SEC to put big issues on the disclosure agenda as a regulatory matter is enacting disclosure requirements into law. For instance, despite fierce pressure on the SEC to require disclosure of political contributions, the outcome is still unclear.

A coordinated effort by investors to align their "asks" of the SEC is very important. Here are 4 specific "asks" that investors could make of the SEC:

1. Host a public roundtable on climate disclosure to raise the expertise within the SEC of this topic, and also foster wider market discussion. This was an explicit commitment in the 2010 guidance on climate risk disclosure[27] but it has not yet happened.
2. Monitor of the impact of the guidance and improve reporting by issuing more comment letters to companies with inadequate disclosure of material climate risks. I have seen some of these letters and they are useful.
3. Create a new guidance or rule on carbon asset risk disclosure, building on the work of Carbon Tracker, Ceres, SASB and CDP, to create disclosure metrics. (The 2010 document actually spoke of the possibility of additional guidance or rule–making on climate risk disclosure.)
4. Create a federal interagency working group focused on climate risks and opportunities to businesses. Part of the problem today is that the SEC Investor Advisory Committee is divided politically[28] and in any case, their advice is non--binding. So concerned investors might either want to engage with the Committee itself and ask it to raise its game, or – more likely – ask the SEC to create a group which had the appropriate expertise and is "fit for purpose" in terms of managing "big climate risk".

26 http://www.ceres.org/files/confidential/investor-sec-letter-inadequate-carbon-asset-risk-disclosure-by-oil-and-gas-companies
27 page 27, section "V. Conclusion", https://www.sec.gov/rules/interp/2010/33-9106.pdf
28 https://www.sec.gov/spotlight/investor-advisory-committee-2012.shtml

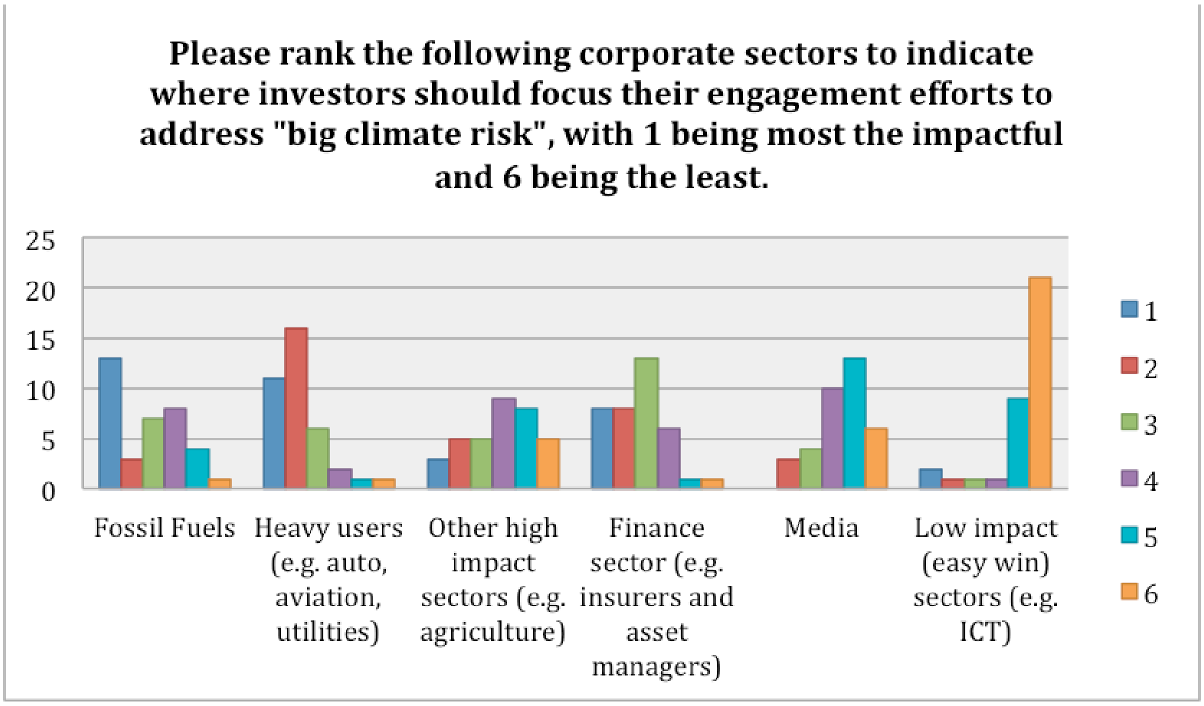
6
SECTOR PRIORITIES:

WHERE SHOULD FORCEFUL STEWARDS FOCUS?

Forceful Stewardship encourages investors to push for new business plans that align with low carbon policies, and to vote for constructive, value-enhancing proposals for changes to the way capital is allocated. The goal is to reduce carbon footprints and encourage innovation in more efficient energy generation.

The question remains, however, where should investors focus their stewardship efforts to address climate risk? ThinkTank participants ranked the fossil fuel sector and heavy users approximately the same when one combines 1st and 2nd votes (see figure 1). But significant numbers of participants also saw value in engaging with finance and insurance, agriculture and industrial livestock production, water-intensive industries and the media. The sector that participants had least energy to engage with was low impact industries i.e. those that are already relatively low-carbon, even if these were the firms who were most easily able to produce low carbon business plans.

Figure 1 – Ranking of corporate sectors best suited to Forceful Stewardship on "big climate risk"



In analysing possible target sectors for Forceful Stewardship, the following factors are useful guideposts:

- The impact that successful change would have on the pace of the transition to a low carbon economy.
- The degree to which there is opportunity as well as risk to the sector from climate change.
- The ability of investors to change industry dynamics above and beyond, or in parallel with public policy influences.

A. HEAVY USERS

Utilities (e.g. electricity generation and transmission, natural gas, water and wastewater), transportation (e.g. automotive manufacturing, commercial aviation, shipping), and materials (e.g. steel, cement production, mining) are among the most prolific producers of fossil fuel emissions, and account for a large share of human released carbon emissions.

Within this group, utilities are by far the most carbon intensive class of companies. Thus, Ceres has extended the focus of their carbon asset risk work to include utilities[1]. Engagement with utilities should focus on the obviously high-carbon coal and natural gas burning electric utilities, but also on water utilities. The water sector takes a lot of energy, making water utilities quite carbon intensive.

As more industry carbon metrics become publicly available, investors will have more information on which to make demands for reduced carbon intensity and more energy efficient business operations by the most energy intensive sectors of the economy.

B. ENERGY SECTOR

The energy sector as a whole is a more complex category for engagement, as carbon intensity varies across company types. Fossil fuels do not emit GHGs until they are burned, making accounting and attribution of emissions at the company level more challenging for investors. Up to the present, this ambiguity has enabled companies to avoid sustained scrutiny on cradle-to-gate emissions auditing and other sustainability ratings.

Nevertheless, within the energy sector, the fossil fuel-burning energy companies risks options and regulatory measures that are draconian. Whilst, the ask of utilities and other companies that are heavy users of fossil-based energy to diversify away from fossil fuels does not necessarily entail a major change of business model. For oil companies and coal companies, it does.

Given the falling cost of solar and wind power amidst increasing costs to fossil fuel generated electricity[2], the fossil fuel industry must now answer the following questions from investors:

- Have they run scenario planning on demand collapse for their products?
- Do they have assets (e.g. retail distribution systems) which can be adapted to lower-carbon transportation systems?
- Do their financial strategies recognise the value to shareholders of long-term policies of downsizing the most carbon-intensive business operations and returning money to shareholders or re-investing in lower-carbon opportunities?
- What capacity do they have to transition away from fossil fuel production into the supply industries such as wind, solar etc.?
- Are they able to make carbon capture and storage work in a relevant timeframe?

1 http://www.ceres.org/files/investor-files/car-factsheet
2 http://www.bloomberg.com/news/articles/2015-08-31/solar-wind-power-costs-drop-as-fossil-fuels-increase-iea-says

The risks implied by their answers will be dependent on company perceptions of the timescale for climate policy action and the impacts of catastrophic climate change on asset values.

Long capital planning horizons in the oil and gas industries may lock-in a fossil-fuel dependent future as the industry blocks political action to mitigate emissions from burning their products. In spite of high project start-up costs for oil sands, deep offshore, or the Arctic, once operational these projects provide steady cash flow and cannot easily be wound-down. Once built, new projects may produce – in the case of the oil sands – for many decades. For this reason it is critical that Forceful Stewards influences how the industry invests its capital over coming years. Spending decisions now will influence the energy mix for decades to come and must be addressed.

C. FINANCE / INSURANCE

Based on its financial clout and significant exposure to climate risk in its business, the insurance sector should be a key target for engagement:

- It is the largest sector in the world by revenue, and hence is a significant portion of investor portfolios.
- Based on its size alone, the sector is acutely exposed to climate risk, both physical risk to their underwriting business, and a variety of climate risks to their investment portfolios (insurers globally manage ~$25 trillion in assets). Thus both sides of its balance sheet are at risk.
- The sector has potential to be expert messengers on climate risk with policymakers and through the provision of innovative insurance products that encourage climate friendly behaviour. The industry is currently failing in this regard and should be pushed to do more.
- Insurers are often to be found in “thought leadership” groups like Focusing Capital on the Long Term (AXA, Aviva) and the Principles of Sustainable Insurance[3], but what these groups do in practice to mitigate climate disruption is far from clear.
- Industry leaders, including Joachim Faber (Allianz) and Henri de Castries (AXA) have made strong statements about the threats posed by climate change to their business models. At Climate Finance Day 2015 in Paris, Castries told the audience that for insurers to ignore climate risk would be like playing Russian roulette with 5 bullets in the cartridge. This, presumably, should be linked to major changes in stewardship behaviour.
- In the US, Canada, and Australia, among other markets, the sector is extremely under-engaged, and lags behind other sectors in taking climate change seriously. High profile companies take part

3 http://www.unepfi.org/psi/

in "voluntary" initiatives about climate at the same time as providing messaging in public which show little connection to these voluntary initiatives. Here, for example, are two comments from Dominic Casserly, CEO, at the Willis Group. It should be recognized that this is a general pattern for the sector, and not linked to particular companies:

"We know that stronger companies make stronger communities, providing society with better resilience in an increasingly risky world. Bringing together the worlds of capital, science and policy is the only way we can address the disaster risk that is playing a bigger part in human life than ever before."[4]

"Another new risk area, one that is getting much more focus, is the impact of extreme weather, climate change. And there actually is data. Some of it's controversial, but there is data. So you can start to model the sorts of risks that people could be facing, particularly if they have a diversified portfolio. For example, for someone on the East Coast of the United States, there is a lot of modeling of the types of risks they may face, which does enable you to start to develop products and ways of risk mitigation that companies can adopt. But underpinning all of this is, how stable is the risk? And is there data?" [5]

These factors suggest that successful engagement by investors focused on the top 10 global insurers would have a large impact on moving towards solutions to the climate problem.

D. FINANCE / BANKS

Investors, as clients of major investment banks and providers of debt and equity financing to them, could exert influence through targeting capital allocation towards lower-carbon investments. Energy infrastructure expenditure, for example is estimated at $45 trillion by 2030. A meaningful portion of this spending will be driven by emerging markets seeking to access capital. The emissions trajectory of emerging market energy systems therefore depends on how investors choose to allocate funds.

One approach is for investors to ask that investment banks apply 2°C carbon budgets in their portfolio lending evaluations. Projects whose emissions profile would exceed the 2°C emissions budget should not get funded. Financing should be re-directed away form these projects towards lower-carbon energy projects. Activating this approach would require an inventory of the global energy project pipeline, project-level financing profiles and emissions profiling. In the transition process to more aggressive emissions screening, banks and other systemically important capital market players could increase risk weighting to high-carbon energy financing. Banks' Bank for International Settlements (BIS) T1 ratios

4 http://www.edp24.co.uk/business/willis_group_spearheads_climate_change_summit_1_3665743
5 http://www.mckinsey.com/Insights/Leading_in_the_21st_century/Willis_Group_on_the_changing_risk_landscape?cid=ceointerview-eml-alt-mip-mck-oth-1509

could be calibrated to penalise them for financing carbon negative energy projects[6]. The same could also be applied to Insurance companies solvency ratios.

D. AUTOMOTIVE INDUSTRY

The automotive industry sits at the political and technological heart of the dominant high-emissions global economic development model. KPMG attributes 14% of human-produced GHG emissions to road transportation[7]. Based on consumer demand for low-emissions vehicles, and ongoing political struggles over auto emissions regulation, the sector should be fully aware of the need for a 2-degree compliant business plans, making it a logical target for Forceful Stewardship.

In selecting potential target companies, the work done by non-profit NGO InfluenceMap reveals the extent to which automotive companies influence global and national climate change policy[8]. Figure 2 presents a ranking of the world's largest nine automotive companies. A score of 55% or more represents positive engagement with climate change legislation while a score of approximately 40% or below represents active opposition[9].

Figure 2 – Influence of global automotive companies on climate policy (Source: http://www.influencemap.org/)

Company	InfluenceMap Score	CDP Performance Band	EU Fleet Emissions (gm/km), 2014	US EPA CAFE (mpg), 2014
Honda	**57%**	A-	134	28
Nissan	**54%**	A	115	27
Toyota	**50%**	A	113	25
GM	**44%**	A	130	23
BMW	**43%**	A	132	26
Hyundai	**42%**	B	130	Fined by EPA for overstating mileage
VW	**40%**	A	126	27
Daimler	**40%**	A	132	23
Ford	**39%**	D	122	23

Note: The CDP Performance Bands for the automakers are presented for reference, as are EU Fleet Emission figures (from Transport Environment) and US CAFE figures (from the EPA). It should be noted that the CDP system does **not** score for corporate lobbying or interactions with legislation. InfluenceMap scores are dynamic and change

6 http://sustainablefinancelab.nl/files/2015/04/Working-paper-15-april.pdf
7 https://www.kpmg.com/US/en/IssuesAndInsights/ArticlesPublications/Documents/transformation-automotive-industry.pdf
8 http://www.influencemap.org/page/About-Us
9 It is important to note that the InfluenceMap score of a company is impacted by the relationships it has with third party "influencing" entities like trade associations (e.g. European Automobile Manufacturers Association), which in all cases drag down the score.

InfluenceMaps' analysis illustrates a correlation between the degree of actual lobbying by the world's largest automotive companies and their respective fleet GHG emission metrics as measured by EU and US EPA CAFE standards[10].

Investors should use public communication and the implementation of the Forceful Stewardship Guidelines to send automotive companies the signal that they are tracking company interactions with climate regulations. There are already mainstream opinion-shapers who are challenging the sector to reduce its lobbying and get on with transformation[11]. Investors could help ensure this message was heard in the boardroom and C-Suite.

E. WATER DEPENDENT INDUSTRIES AND THE WATER-ENERGY-CLIMATE NEXUS

Water is an essential input to many of the world's largest industries. As a result, it could become the most important physical commodity-based asset class[12]. Focusing on water, which is one manifestation of the climate change challenge, is therefore a useful means to bypass the stickiness of the climate debate in the investment community.

Calls to action for Forceful Stewardship type around water resources have been made, but thus far investor and company responses have been limited[13]. What makes water a compelling engagement issue is that it touches on both demand and supply constraints on business growth. On the one hand there are draughts, water shortages, flooding, pollution issues (demand-chain) and on the other hand, water management through the supply change is extremely carbon intensive. In the fossil fuel sector, large quantities of water are needed in production, power generation, and remediation of extraction and power production facilities. The water sector is significant interest to investors who are focused on commodities and alpha, which itself is creating a popular backlash[14].

In terms of regional focus for Forceful Stewardship around water, Asia is of particular interest. Beijing has a similar water scarcity profile as Saudi Arabia[15], and several participants in the ThinkTank who knew the emerging markets felt it was easier to gain traction in an energy/water nexus framing of the issue than with a more general focus on climate change. By considering the interconnected issues of water and food security for large corporations and national population as proxies for climate change

10 http://www.influencemap.org/page/The-Automotive-Sector-Climate-Influence-and-Regulatory-Readiness
11 http://olafstorbeck.blogstrasse2.de/?p=1862
12 http://www.ipe.com/long-term-matters-its-the-water-stupid/43515.fullarticle
13 http://www.ceres.org/issues/water/water-and-esg-risk/water-and-esg-risk-investor-integration
14 https://www.popularresistance.org/wall-street-mega-banks-are-buying-up-the-worlds-water/
15 https://maplecroft.com/about/news/water_stress_index.html

risk, it is easier for investors to engage on drought (western US/China/Brazil), floods (Texas/UK) and contaminated food. Interestingly, this also accords with advice from behavioural psychologists about how to engage those who are sceptical[16].

F. AGRICULTURE AND INDUSTRIAL LIVESTOCK PRODUCTION

The "Big Climate Risk" framework for Forceful Stewardship also creates space for investors to address the range of risks associated with increasing capital expenditure on industrial livestock and agricultural, and to look at opportunities for profitable substitution of current business models.

The suggestion by industry advocates that global meat and dairy consumption will continue to increase at current rates is unrealistic if climate goals are to be achieved. Industrial meat and dairy production require a multiple of the land and water when compared with plant-based diets and have massively more embedded CO2. The FAO estimates livestock's contribution to climate change at 14.5% of total emissions.

Industrial meat production is particularly problematic, producing considerable volumes of wastes that are usually too concentrated to be utilised locally and create downstream pollution problems. By contrast, non-animal products generally have an acceptable footprint in themselves and there is on going work to mitigate impacts. Manufacturer demand for certified supply is going some way on this, though there are systemic questions around industrial monocultures and many certification schemes have gaps.

New businesses include Beyond Meat (part Bill Gates backed), Hampton Creek (part Li Ka Sheng backed), Impossible Foods (VC backed), and Modern Meadow[17].

How to address emissions challenges arising from industrial agriculture and livestock production raises many issues aside from the industry's contributions to climate change risk. But what is clear is that it is not possible tackle climate change without a reduction in meat and dairy consumption.

What can Forceful Stewards do?

1. Ask industrial meat producers what level of consumption they believe is consistent with a 2°C world, and how their business model reflects these constraints.
2. Ask investment managers why they are backing growth in the most meat and dairy producing assets.

16 http://www.climateoutreach.org.uk/communicating-uncertainty/
17 http://www.economist.com/news/technology-quarterly/21645497-tech-startups-are-moving-food-business-make-sustainable-versions-meat

G. MEDIA

The media already has a huge influence on climate policy perception by citizens of all countries. The role of the media is critical, and especially so in countries where political context is not supportive (e.g. Australia, Canada and USA).

If mainstream media in OECD countries reported on climate risk and the low carbon energy transition as part of their corporate and financial reporting, this would enhance investor scrutiny on this class of risk(s) and associated opportunities.

Based on limited current media coverage, the implications of different climate change scenarios on asset values is unlikely to be on the radar of most institutional investors. In this context, investors would benefit from detailed, actionable media communication tools, in addition to existing global economic metrics linked with climate risk (i.e. GDP at risk from climate change). More granular and sector-based discussion of business risks in the mass media would help to support the implementation of Forceful Stewardship in key sectors of the economy.

Media companies that can be shown to have biased coverage of climate issues should be an obvious focus for investor engagement[18]. While some of the largest climate risk sceptic news media, such as News Corp have powerful minority owners, others, such as Postmedia[19] in Canada, are more widely held and could become the target of investor stewardship efforts.

Censoring by governments, in Australia[20] and Canada[21] in particular, of climate science, and mainstream media complicity in this process[22], mean that analysis on climate related investment risk has been marginalised[23]. Particularly because government scientists and the media are being subject to bureaucratic restrictions and editorial pressures, respectively, it is especially unacceptable for investors, and their ESG rating agencies, to exacerbate the problem by not adequately analysing these issues for their clients[24].

TARGETED SECTORAL ENGAGEMENT VS. MORE HOLISTIC APPROACHES

Climate change is a systemic challenge, which requires Forceful Stewards to adopt sector specific

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18 http://www.huffingtonpost.com/2012/09/25/news-corp-climate-change-coverage_n_1912896.html
19 http://www.vancouverobserver.com/news/postmedia-prezi-reveals-intimate-relationship-oil-industry-lays-de-souza
20 http://climate.org/topics/international-action/climate-censorship.html
21 https://cjfe.org/blog/muzzled-scientists-challenges-reporting-climate-change-canada
22 http://www.cbc.ca/news/canada/british-columbia/cartoonist-says-enbridge-spoof-pulled-under-pressure-1.1267162
23 https://cjfe.org/blog/muzzled-scientists-challenges-reporting-climate-change-canada
24 http://www.crikey.com.au/2012/09/24/the-murdoch-paradox-bias-in-climate-reporting/

strategies. What emerged during the ThinkTank was that there are (equally) strong arguments for focusing on the sectors that supply energy, those who are heavy users and also "enabling sectors" (e.g. insurance and media).

This leads to the conclusion that investors may wish to take responsibility for different sectors and that a key role for an organisation like UN PRI might be to coordinate this approach so that, collectively, investors end up with a diversified stewardship strategy.

As described at the start, factors that should be considered when choosing a sector include:

- The impact that success would have on the pace of change towards a low carbon economy.
- The degree to which there is opportunity as well as risk to the targeted sector.
- The ability of investors and the target companies to influence industry-wide dynamics above and beyond existing government policy.

In addition, Forceful Stewardship priorities will depend on specific markets, opportunities and the respective investor coalitions assembled on target issues. For example, UK investors typically have less exposure to and relationships with the auto sector than say peers in France and Germany.

Moreover, investors may wish to consider how sectors interact so as to find points of intervention which are maximally leveraged. The Water / Food / Energy nexus, for example, offers a thematic narrative which may be more motivating than simply a compliance style role.

In all cases, and given the importance of popular engagement, especially in countries where climate scepticism is deep rooted, we recommend that investors consider how they can engage the media to develop a narrative which makes sense to the wider public too.

The fundamental message, however, is likely to be similar: if businesses and their investors do not decide now on how to manage big climate risk, everyone will be "future takers". Whilst there is no escaping the costs of transition, we still have the possibility of being "future makers".

The success of engagement can often depend on micro-factors not visible externally. For example, tensions within corporate boards can determine outcomes of a long-term engagement process. However, persistence, thoroughness, and focus are essential whatever the target outcome.

The successful implementation of diversified Forceful Stewardship requires holistic support from investment bodies, forward-thinking industry-specific companies, academics/consultants and government. ESG specialists and organisation will have a large role to play in this process.

7
WHY INFORMATION INTERMEDIARIES MATTER

Investment consultants, proxy voting agencies, sell-side analysts and credit rating agencies and professional training/standard setting bodies together wield significant influence over investment decisions. Their shared mental models on risk shape the industry risk culture (see Chapter 4, "Shifting the risk management culture") and their collective influence is poorly understood. We therefore analyse these organisations together because they provide an educational platform from which better risk-related decisions can be taken.

Whilst there are individual professionals in all these organisations who are well informed about climate change and are trying to better advise clients – sometimes even as part of their formal job role – information intermediaries have, generally speaking, been slow to integrate climate risk into their decisions and recommendations.

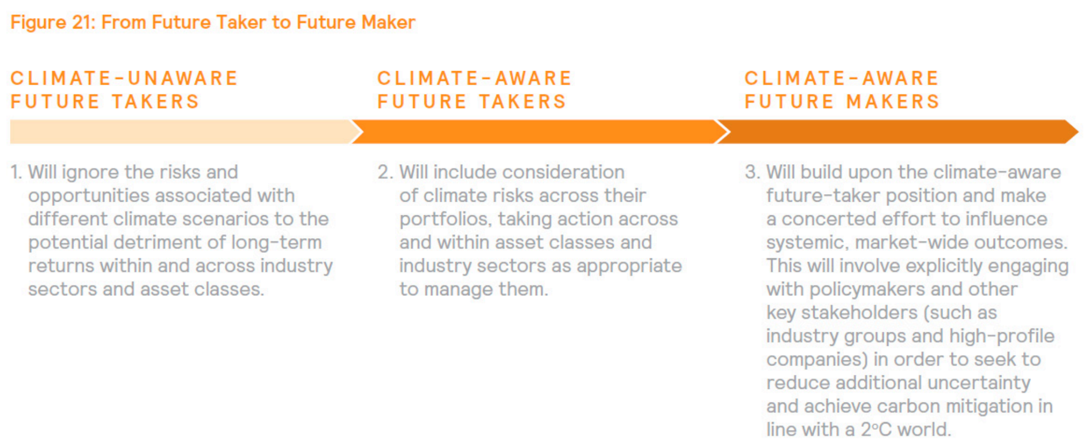
We now look at the key intermediaries in turn because what they can do and their constraints they face, are quite specific. We will conclude with crosscutting comments.

INVESTMENT CONSULTANTS

INVESTMENT CONSULTANTS (ICS) HAVE A MAJOR OPPORTUNITY TO BRING INVESTORS UP TO SPEED.

A vast majority of both ThinkTank participants judge that investors should be climate aware "future makers"[1], a sentiment also expressed by the audience at the London launch of Mercer's latest report. The reality, as indicated by the recent experience with US Coal[2] and validated by participants, is that almost all investors are at best "climate-aware future takers" and that many seem to "unaware future takers".

Figure 1: From Future Take to Future Maker (from Mercer Report, 2015)



Survey data also suggests respondents see "hard client demand from asset owners in the form of clear RFP's and monitoring thereof" as being very important[3]. World trends make it inevitable that ICs will sooner than later face an important business opportunity. Just as many did not expect the divestment movement to drive demand for portfolio decarbonisation, so there will be a demand for more systemic risk management thinking in the next phase. Figure 2 shows how participants ranked the following

1 Responding our survey question "In its latest climate report, Mercer defines three categories of investors. Which category should institutional investors aim for?" 83% responded 'Investors should be "future makers"', 13% responded 'Investors should be "future takers"', and 4% responded 'There is no special issue here – markets are efficient and at the time it becomes an issue, it will be priced in'.

2 http://www.ipe.com/analysis/long-term-matters/long-term-matters-learning-from-coal/10009542.fullarticle

3 For the question "The results of the first survey suggested a vast majority of both participants and experts want to be "future makers". The reality is that investors are at best aware future takers and that many (most) may be unaware future takers. Please rank the following strategies according to their likelihood of having the biggest impact, with 1 being the most impactful and 6 being the least." Hard client demand from asset owners in the form of clear RFP's and monitoring thereof was ranked 1st by 16 respondents, 2nd by 6, 3rd by 5, 4th by 5, 5th by 3, and 6th by 2.

players on their likely ability to help investors get up-to-speed on climate change issues, with 1 being the best suited and 6 being the least.

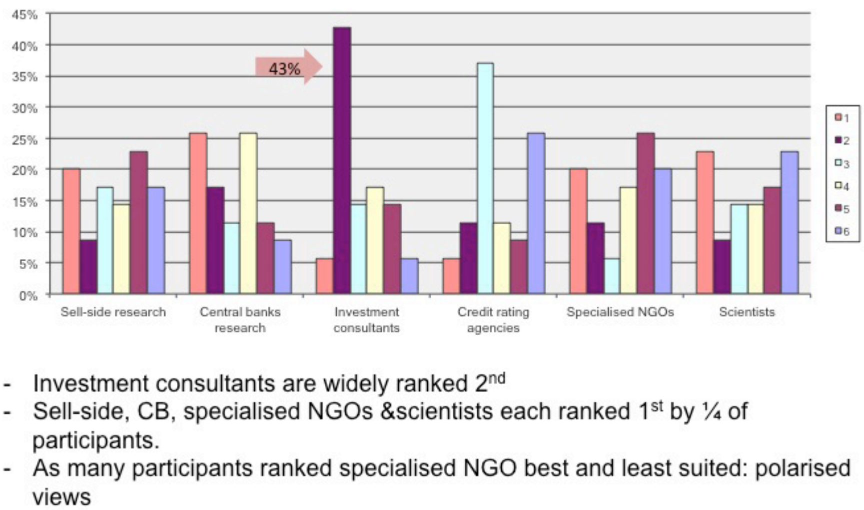


Figure 2: Research providers ranked on ability to assist investors on climate issues

During the course of the dialogue, and also in private meetings that Preventable Surprises has had with senior investment decision-makers, it became clear that investment professionals have insufficient understanding of the implications of climate damage curves and the non-linearity of climate change. ICs were widely ranked the second most suited professional group to help investors get up-to-speed on these issues. Interestingly, scientists were ranked as the most trustworthy. This leaves consultants with an opportunity to integrate scientific judgements into their advice, or risk being displaced, e.g. by business strategists who may be able to form partnerships with scientists more easily and who have decision-making tools e.g. scenario building, which are well suited to the challenge.

REPUTATIONAL CAPITAL IS AT RISK IF CONSULTANTS DO NOT GROW INTO A NEW ROLE.

ICs operate at a critical interface in the investment ecosystem. They are uniquely positioned to drive innovation within the financial community. On the flip side, they are at serious risk of "group think". For example, an experienced pension fund executive (and former IC) has said that some 50 individual ICs collectively define the views of the pension industry in the UK[4]. If ICs are to guide their main clients (i.e. asset owners, AOs) towards a low carbon economy, their relationship with AOs requires significant change.

4 Personal communication, 19th February 2014 and see also http://pensionsgovernanceindex.com/resources/RPGI_Oct+2013_Final.pdf

ICs have been criticised for depicting an overly optimistic future, undermining the systemic risks associated with global warming[5]. The Smith School of Enterprise and Environment (SSEE) at the University of Oxford report that rather then accelerating the uptake of green investment practices, ICs generally hinder them. According to the report[6], "the expansion of green investment is hindered by both demand and supply factors in the investment consultancy industry, and the power balance between ICs and AOs may largely be to blame. AOs are, by and large, not sufficiently engaged with issues surrounding and connected to sustainability, environment-related risk, and social responsibility; and confusion over whether fiduciary duty compels and/or allows AOs to even act and/or transact on these issues continues to suppress demand. For their part, ICs seem not to be pressing as proactively as they could do to address these issues. In the long-term, this passivity might be seriously harmful to ICs reputation, whether involving litigation or not."

Sharing our sentiment, the report anticipates "that ICs could face a jolting devaluation of their reputational capital if they fail to help AO clients plan for and cope with a long-term future that arrives 'sooner than expected'".

EARLY SIGNS OF PROGRESS BUT CHALLENGES ARE DEEP ROOTED.

There are encouraging signs of change in some investment consultants (see table 1). For change to be faster and deeper, asset owner clients will need to send clearer demand signals to consultants.

Table 1: What some investment consultants are doing on climate risk

Investment Consultant	Main Conclusions
MERCER	1. "Climate change will have a broad-ranging impact on economies and financial markets over the coming decades". 2. Traditional approaches to modelling strategic asset allocation fail to take account of climate change risk. 3. Given the unclear climate policy environment and uncertainty around the full economic consequences of climate change, historic precedent is not an effective indicator of future performance. 4. "Climate change increases the uncertainty and event risk that could have an impact on the realised returns for risky assets across the scenarios, with higher risk resulting from inefficient policy".

5 http://www.ft.com/cms/s/0/d40f21d0-ce43-11e4-86fc-00144feab7de.html#axzz3kUnLhvi6
6 http://www.smithschool.ox.ac.uk/research-programmes/stranded-assets/Investment Consultants and Green Investment.pdf

TOWERS WATSON	1. Resource scarcity and global temperature change (both intrinsically linked to climate change) ranked first and third most likely to have a high impact on global economic growth and asset returns if they occurred. 2. Economies more exposed to the direct effects of climate change and the increasing internalisation of externalities, are likely to suffer in relative terms. 3. The higher investment rates required may create capital shortages in some economies, driving up long-term interest rates, but in general higher investment is good for long-term growth.
CAMBRIDGE ASSOCIATES'	1. The biggest endowment consultant to announce they would support universities and other institutions interested in divesting from fossil fuels. 2. "The potential price risks from stranded assets should not be ignored, but quantifying their present value and the time frame in which assets may (or may not) become stranded is problematic and requires multiple longer-term assumptions". 3. "Regardless of any policy decisions, the consideration of divestment request can be a catalyst for investors to begin a careful evaluation of the growing opportunity set of more environmentally sustainable investment strategies".

The Mercer report "Investing in a time of climate change"[7] is a particularly positive indicator of change. The report, which appears to have been pushed out to front-line Mercer consultants as intellectual property that all mainstream consultants can endorse and support, helps raise awareness of the downside risks and opportunities as well as supports portfolio activity to help investors adapt to climate change.

Perhaps the biggest challenge the industry collectively faces is short-termism. Highlighted in the Mercer report is data from the World Economic Forum which shows that 6 of the 10 biggest risks taking a ten year horizon are related to climate change. In contrast with an 18 month horizon, geopolitical risks dominate.

7 http://www.mercer.com/insights/focus/invest-in-climate-change-study-2015.html

Figure 3: Risks of Highest Concern by Time Period (Mercer 2015, WEF's Global Risks Report 2015)

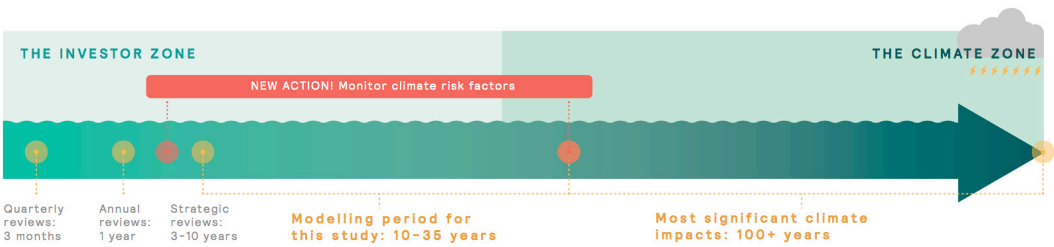
Rank	Next 18 months	Rank	10-year horizon
1	Inter-state conflict with regional consequences	1	Water crises
2	State collapse or crisis	2	Failure of climate change adaption
3	High structural un- or underemployment	3	Profound social instability
4	Failure of national governance	4	Food crises
5	Large-scale terrorist attacks	5	Extreme weather events
6	Large-scale cyber attacks	6	High structural un- or underemployment
7	Profound social instability	7	Large-scale cyber attacks
8	Rapid and massive spread of infectious diseases	8	State collapse or crisis
9	Extreme weather events	9	Major biodiversity loss and ecosystem collapse
10	Fiscal crises in key economies	10	Failure of national governance

Legend
Economic · Environmental · Geopolitical · Societal · Technological

Source: World Economic Forum, *Global Risks 2015;* Mercer, *Investing in a Time of Climate Change – 2015 Study*
Note: Respondents were asked to provide the five risks of highest concern globally

A key finding of the Mercer report is that investors need to lengthen their time horizon and develop a better balance when considering short-term, mid-term and long-term horizons.

Figure 4: The Timeline Challenge (Mercer)



HOW CAN INVESTMENT CONSULTANTS AMPLIFY FORCEFUL STEWARDSHIP EFFORTS?

In order to be proactive about preserving and enhancing their own reputational capital, ICs need to develop a fundamentally different approach to dealing with systemic risks, whether or not they are specifically asked to consider these issues by their clients. Of course, if clients are focused only on quarterly or even 1 or 3 year numbers and on fee minimisation, this does not make the task easy. It is feasible that a few clients, even if they know about the risk of potential litigation, may nevertheless choose to instruct ICs to ignore important issues (see Appendix 3 for further details of litigational risk). But there needs to be a paradigm change in the default position of ICs which today effectively blames the client for not asking.

What ICs could do to encourage forceful stewardship is:

1. Evaluate how fund managers assess climate risk, their investment beliefs and strategies, and specifically their voting policy on issues related to corporate low carbon business plans resolutions.
2. Educate clients about how they can best manage the systemic risks associated with climate disruption. Consultants will, understandably, wish to offer innovative investment products at premium pricing. Whilst these products may indeed be good sources for "alpha", the reality – from Preventable Surprises perspective – is that what is needed is collective action to preserve the "climate beta"[8]. Thus, ICs need to be much more focused on collaborative and forceful stewardship than they are today.

Preventable Surprises recommends that investment consultants and the corporations that own these consultancies:

- Make a board level decision on how their firm can best support a transition to a low carbon world, or how their consultancy business model operates as we head towards a 4 degree world post 2050 (see Chapter 4).
- Create a senior executive taskforce (including the heads of the business divisions most affected as well as heads of HR, manager research, compliance, as well as ESG) to proactively manage the culture change that is needed to make climate risk a core competence of front-line consultants over next 12 months. What is clear is that what ICs have tried over several years – a mix of top-down thought leadership combined with encouraging bottom-up good practice, supported by ESG specialists – is having at best an incremental impact with front-line consultants. The challenge

8 Climate beta is defined as "the elasticity of climate damages with respect to changes in aggregate consumption. Source: Dietz, S., Gollier, C., & Kessler, L. (2015). "The Climate Beta".

is particularly clear in markets like the USA, Canada and Australia where climate scepticism is common amongst elites. This is not as impossible as some might consider. The culture challenge is, in fact, similar to that faced by global organisations who operate in national contexts where gender discrimination or bribery and corruption are considered acceptable.

- Take a proactive stance with regards to assets they manage as fiduciaries[9], including public reporting to set an agenda and show unconvinced clients that the firm really does believe in what it says. This is an area where ICs could move quickly without needing any client approval. It does, of course, depend on the investment beliefs and priorities of the leadership and because of this, it is probably the single best indicator of the real tone from the top.

PROXY VOTING ADVISERS

VOTING ADVISORS ARE WELL POSITIONED TO SUPPORT FORCEFUL STEWARDSHIP RESOLUTIONS.

Shareholder resolutions are not the only way for investors to engage with companies but because of the conflicts of interests and other reasons for weak stewardship[10], resolutions do provide a measure of accountability that is essential if we are to change track. Of the ThinkTank participants, 71% ranked engaging assertively with companies to change their core business strategies to align with 2°C as important. Resolutions – ideally board approved but if not, contested resolutions with boards recommending a vote against – will be a key part of the change strategy.

The vast majority of investors do not have in-house resources to analyse all AGM resolutions independently. Voting advisers are particularly important for large investors and index funds. Even when an investor has an ESG team, voting agencies are important providers of "first point of call" recommendations.

Given their influence on voting decisions, proxy advisors are well positioned to support forceful stewardship resolutions. As has been learnt with executive pay, however, the intent and the quality of analysis by voting advisers is key. And in the case of the BP and Shell resolutions, what emerged were important differences in the depth of advice provided, as described below.

Only Glass Lewis provided a detailed analysis explaining the rationale behind voting 'yes'.

9 According to the IPE Investment Solutions Survey (July 2015), Mercer run fiduciary assets of €95bn, Towers Watson €62bn and Aon Hewitt €50.7bn.

10 http://www.ft.com/cms/s/0/9ec5594c-6f8f-11e1-b368-00144feab49a.html

Encouragingly, Glass Lewis also recognised the latest Intergovernmental Panel on Climate Change report, as well as several relevant articles in the financial press.

The quality of analysis by ISS and Manifest was less substantive. Neither mentioned scientific rational. Instead, emphasis was placed on the BP Board's support for the initiative, and how supporting the resolution would be good for the BP brand.

Table 2: Comparison of recommendations from voting advisers

Proxy Voting Agency	Key points
GLASS LEWIS	1. Though we support this disclosure and believe that it is an important aspect of a company's accountability to shareholders, when there is no evidence of egregious or illegal conduct that might suggest poor oversight or management of environmental issues that may threaten shareholder value, Glass Lewis believes that management and reporting of environmental issues associated with business operations are generally best left to management and the directors who can be held accountable for failure to address relevant risks on these issues when they face re-election. 2. Given the nature and scope of the Company's operations, it could be subjected to significant risks both with respect to climate change and the regulatory implications or investor pressures that come as a result of climate change. 3. "Many of the companies that have been the target of these campaigns disagree; the Company has stated that that the concept of unburnable carbon "overstates the potential financial impact on the value of oil explorers" and Exxon stated that it was "confident" that none of its assets are in danger of being stranded".

ISS	1. "Shareholder proposals on climate change are very rate in the UK." 2. "Unusually, BP is recommending support, which suggests that it does not believe the information requested by the filers will be particularly onerous or costly to assemble." 3. "In the absence of any obvious concerns, and taking into account the Board's favourable recommendation, shareholder support for this resolution is warranted."
MANIFEST	1. "Shareholder proposals on climate change are very rate in the UK." 2. "Unusually, BP is recommending support, which suggests that it does not believe the information requested by the filers will be particularly onerous or costly to assemble." 3. "In the absence of any obvious concerns, and taking into account the Board's favourable recommendation, shareholder support for this resolution is warranted."
PIRC	1. "This is a supportive but stretching resolution which aims to support BP in meeting growing energy demand with a diverse mix of energy sources." 2. "The disclosures proposed by the resolution will support BP's positioning as a global energy leader in a lower-carbon future." 3. "Support is recommended."

Another form of climate related resolutions relates to board candidates who are "climate competent". The might include high profile dissident candidates like Ian Dunlop, a former senior fossil fuel executive who stood for the board of BHP Billiton[11]. Or perhaps more likely, candidates who stand with the implicit support of major investors. To date, CalPERS, Norges Bank Investment Management, New York State Common Retirement Fund, TIAA CREF and T Rowe Price have indicated support for this strategy. This coalition has won the right to nominate board directors to the company ballot (otherwise known as "proxy access") with victories at over 60 major companies (e.g. Chevron) this year, and lost at about 30 others albeit with very small margins in many cases (e.g. at Exxon, the vote was 49.4% in favour). Investors running candidates for boards is likely to be a rare event, but having the ability to do so does concentrate C suite minds well.

11 http://www.theguardian.com/sustainable-business/2014/nov/18/one-mans-fight-join--board-australias-largest-mining-company-bhp-billiton

Given the critical importance of voting advisers to a resolutions based strategy, and as the number of climate related resolutions increase, it will clearly be critical for independent academics and other stakeholders to extend and deepen this type of comparative analysis in the coming years.

ADDRESSING THE CONCERNS OF VOTING ADVISERS

Voting advisers have come under pressure from some corporations and politicians for having "excess influence". The goal of this pressure would seem to be to reduce the challenge from voting advisers[12]. But even without this pressure, these agencies are understandably concerned about being hijacked by special interest groups. One agency, for example, is said to have dropped questions about climate risk from its annual survey, reportedly due to a lack of interest from clients.

If agencies choose to see voting on low carbon business plans to mitigate climate disruption as just another NGO campaign which needs to be managed or at best, seen through a "values" lens, this will be a grave error. In the long run, investors will pay the price and voting advisers will suffer reputational costs.

Concerned investors therefore need to persuade voting advisers that managing climate risk is a core business issue for investors and corporations alike, and that this applies to the short-term as well. Investors will need to satisfy themselves that the leadership of these agencies has engaged in serious analysis of climate science, carbon damage curves and socio-political trends.

Specifically, investors and other concerned stakeholders will need to encourage voting advisers to go beyond a governance only perspective and consider 'sustainability' not as a bolt-on agenda but rather as core strategy. In the meantime, investors should view voting advisers as a data supplier like any other. It still requires diligence and critical thought like any other research to ensure that investors align voting activity, and the voting advisers they chose, with investment beliefs.

In addition, transparency of voting must be addressed. Without full transparency on how proxies are voted, it will be hard for asset owners and concerned stakeholders to challenge voting decisions, especially if the manager has an established practice of policy on voting with management, as is the case with several major US mutual fund managers. Regulators have a critical role to play here. And voluntary voting disclosure initiatives – reflecting client and stakeholder demand – can also be successful if there are real carrots and sticks.

12 http://www.ft.com/cms/s/0/75c136b4-e168-11e2-b796-00144feabdc0.html

SPECIFIC RECOMMENDATIONS REGARDING VOTING ADVISERS

Preventable Surprises encourages concerned investors to engage with their voting advisers to explore how these advisers integrate analysis of climate damage functions into their analysis of relevant resolutions and specifically whether they operate the same framework of analysis for SRI mandate clients as well as mainstream clients. The case for changing assumptions (about climate risk) because because of the nature of the client is a good indicator that the adviser has not understood the materiality of the risk and is still treating it as a matter of "values".

Of course a client may actively instruct an adviser to ignore climate risk – thereby probably increasing their risk of litigation – but this should not affect the default position.

Aware of the investment industry's exposure to systemic factors, its overall fiduciary obligations and social purpose (namely to allocate capital effectively and efficiently), Preventable Surprises encourages investors to declare their intention to vote in favour of prudently formulated shareholder resolutions that they believe will help reduce systemic climate risk while protecting shareholder value in the long-term.

We recommend that investors instruct voting advisers acting on their behalf to vote automatically in favour of such resolutions in line with their view that climate change is a significant economic risk and concomitant risk to shareholder value. If current voting agents are unable to support this obligation, Preventable Surprises recommends investors commit to finding voting advisers who will support this voting approach.

In particular, Preventable Surprises recommends that investors vote in favour of resolutions that call for listed companies to publish robust analyses of their assessments of the physical, policy and economic impacts to their businesses as currently structured of global temperature warming of 2°C and 4°C respectively.

We also recommend that investors make clear their intention to vote in favour of resolutions that call for listed companies to publish business plans that describe how, without damaging shareholder value:

- They can reduce their emissions each year by an appropriate amount for their industry; and/or
- Their business could adapt to a carbon price that rises to $100 per tonne of carbon dioxide by 2030; and/or
- Their business could adapt to regulations aimed at meeting a 2° warming target and/or of restricting atmospheric carbon dioxide to 450 parts per million.

Finally, to ensure board member/senior executive accountability, and where the company concerned is engaged in persistent and unacceptable practices related to climate risk (e.g. repeated non-disclosure of its greenhouse gas emissions, funding of climate denialist organisations), Preventable Surprises recommends that investors actively consider, on a case by case basis, voting against re-election of the Chairman of the Board, or the report and accounts, or initiating a "book and records" request and if that is not successful, a lawsuit.

SELL SIDE AND CREDIT RATING AGENCY RESEARCH

A major influence over investment (and C-suite) sentiment that largely ignores the risk of climate disruption.

"Persuading sell side analysts to research and analyse the impact of climate change in their sell side notes would help fund managers understand the associated risks." [13]

Investment bank ("sell side") and credit rating agency research continues to have significant influence on investment managers ("buy side") and corporate decision-makers but this influence is not well acknowledged. A key source of information in financial markets is the sell-side. It is sell-side analysts who read annual reports, regulatory releases and conduct primary research. The sell-side produces the majority of the information set (e.g. the consensus earnings estimates) on which investment decisions are made. Sell side research can also have a huge impact with executives and board directors who often view the research notes on their companies as "independent" commentaries. A similar case can be made for credit rating analysts and indeed, there is much cross over of information now between equity and fixed income investors.

However, currently there are significant biases and structural flaws within both sell-side and credit rating research which contribute to short-termism and a lack of focus on sustainability across financial markets. Firstly, there are biases related to the funding model. In the case of sell side research, funding is largely linked to trading revenues, encouraging a bias towards short-term ideas (and more "buys" than "sells"). Additionally, although sell-side commentary is meant to be independent of corporate influence (and not linked to investment banking business), in practice it is usually the case that sell-side analysts are dependent on good working relationships with their more powerful investment bank colleagues who in turn rely on good working relationships with corporates. To generalize, investment banking activity still covers roughly half the cost of a sell-side research department within an investment bank. While there are legal protections for independence, such as Chinese walls, analysts privately report on-going implied pressure to write positive research to help investment banking business. Perhaps an even stronger cause of positive bias is the desire of sell-side analysts to have a strong relationship with company. Having good relationships with investor relations is critical for a sell-side analyst given the importance of access. And

13 Quote from an experienced investment management professional during the ThinkTank.

being "frozen out" is near to career suicide. In the case of credit research, the conflicts of interests are related to who pays the fee. The combined result of all of these factors is that analysts have weak incentives to look at long-term and sustainability issues, particularly if these are critical of the companies involved.

Some sell side and credit research teams have separate departments looking at ESG and climate issues but, to generalise, these findings are not routinely incorporated into mainstream company and sector notes. Thus there is a disconnect and the staff who are actually are most responsible for making investment decisions are still not factoring in climate change risks.

This is reflected in survey results which show participants were unconvinced about the ability of the sell side to deliver what is needed (see Figure 2). In fact, participants were fully divided as to whether sell side was the most or the least suited to help! This is telling given that the sell side is the best resourced of the different research providers.

The silver lining to this cloud is that both types of research providers (sell side and credit research) are very sensitive to what the buy side really want (i.e. are willing to pay for). And given that there is a strong economic case for action, and given so many major buy side firms have signed up to UN Principles of Responsible Investment, there is potential here to trigger system change.

Put simply, to encourage different capital allocation decisions to be made, both within companies and by investors, we need to build a different information set upon which to base these decisions.

Preventable Surprises recommends using both "bad cop" and "good cop" strategies to change the incentives for analysts which guide their behaviour. It will be important to remember that those who are good at one approach are almost certainly likely to be critical towards and not effective at the other. Our collective challenge requires us to do both well.

In terms of getting the sell-side involved, a good place to start would be to look at the business case for heavy users switching to low-carbon models (e.g. Wal-Mart's move into solar energy). This is often beneficial to the bottom line and it is much easier to ask analysts to focus on energy efficiency/costs than to write reports which may be perceived by, bank colleagues or corporate clients, as attacking fossil fuel companies.

A complementary "good cop" strategy would be to encourage all investors who are in "clubs" focused on long-termism to acknowledge the critical importance of integrating action on climate disruption into their core mission.

Table 3: Some of the "clubs" for long term investors

- Council for Clean Capitalism
- Focusing Capital on the Long Term co-founded by McKinsey & Co and CPPIB

- Coalition for Inclusive Capitalism
- The G20/OECD Network on Institutional Investors and Long-term Investment,
- Long Term Investors Club
- Towers Watson's "Thinking Ahead Group 2.0"

In contrast, but just as important, "bad cop" strategies mean intentionally "rattling the cage" for both sell and buy side in a serious manner. A ranking/rating system could be very effective if it is credible and defensible. But this cannot be developed overnight. A more immediate strategy is to expose significant failures of sell side research as they happen (e.g. US coal). Such projects could play an important educational role.

Preventable Surprises therefore thought it important to extend the work done by Carbon Tracker Initiative[14] to look at what sell side and credit rating analysts recommended and how the buy side responded[15]. With access only to publically available information, we are fully aware these can only be provisional conclusions but we hope this triggers the kind of in-depth research that can deliver more definitive answers[16].

What is encouraging is that a few analysts did raise concerns about the sector. One was Deutsche Bank which went public with its bearish views in October 2011 in a report entitled "Natural Gas and Renewables: The Coal to Gas and Renewables Switch is on!"[17]. Other analysts did raise the alarm, albeit much later. Goldman Sachs, for example, published a note in January 2015.[18] Aside from these exceptions, most analysts seemed to have been optimistic about US coal throughout this period.

Questions that concerned investors could ask analysts covering fossil fuels and other sectors with high climate/carbon impact include:

- How have events with US coal changed your views on long-term risk for a) the fossil fuel sector and b) other high impact/sensitivity sectors? In what way?
- How do you integrate carbon/climate risk into your thinking, models and recommendations?

Credit rating agencies should take climate risk into account in their analyses, as this will impact on investor decisions about which bonds they should hold and/or how to price in the risk.

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14 http://www.carbontracker.org/report/the-us-coal-crash/
15 http://www.ipe.com/analysis/long-term-matters/long-term-matters-learning-from-coal/10009542.fullarticle
16 See "Discussion Paper 1: Was US coal another "preventable surprise"? (Preventable Surprises, forthcoming)
17 https://www.db.com/cr/de/docs/NaturalGasAndRenewables-Oct_2011_Update.pdf
18 http://www.eenews.net/assets/2015/02/13/document_cw_01.pdf

Some credit rating agencies have published research papers on climate change risk, ranging from carbon exposure, and stranded asset risk to the impact of extreme climatic events on corporate credit[19]. The challenge, even in those firms where it has happened and even more so in firms that are lagging, is to connect this work with the front line credit analysis. Thus, Preventable Surprises urges credit rating agencies to move swiftly to:

- Identify which parts of their existing corporate ratings methodology make explicit or implicit reference to climate risk;
- Map these references to their own or credible third party macro analysis;
- Develop a methodology for ensuring this link to corporate ratings happens routinely and report on cases where there are changes in ratings.

PROFESSIONAL TRAINING BODIES

Financial educational bodies have a huge influence on how information intermediaries think. Once extra-financial risks have been fully mainstreamed into the training curricula, as is slowly happening, many of the challenges described in this report will have been overcome. Some encouraging projects, from professional organisations include:

- The Future of Finance initiative of the CFA Institute;
- The Resource and Environment Board of the Institute and Faculty of Actuaries.
- Climate Change and Sustainability Committee of the Canadian Institute of Actuaries
- ICAEW's "Audit Futures".

There is considerable space to widen this approach and some obvious candidates include: the Certified Financial Planner (CFP) Board of Standards; Global Association of Risk Professionals (GARP) and the Professional Risk Managers Association (PRMA). Similarly, the accreditation bodies for MBA and finance programs are key influencers and according to one (US) participant: "Sadly, the accreditation agency in charge of MBA programs doesn't even have a requirement that ethics be taught."

These networks could all aim to be a bigger part of the solution, even the ones who are leading the field. For example, the CFA Institute's Future of Finance has yet to take up the issue of climate disruption as a

19 S&P has, for example, undertaken impressive analysis of sovereign bond risk

systemic issue. And actuarial initiatives, which tend to focus on investment integration, could expand to include stewardship.

Preventable Surprise sees professional continuous professional development (CPD) as one critical area which will enable experienced professionals who trained before climate change was understood to be a material risk factor to ensure they are as competent in this field as they are on other core risk issues. We therefore recommend that individuals and organisations that are concerned about climate change and who are already part of these networks review how these initiatives could be a bigger part of the solution and form affinity networks to make this happen, and are ready to assist as needed.

CONCLUSIONS

This overview of information intermediaries highlights how much influence they have. It shows how their mental models are mutually reinforcing and mostly in a way which is part of the problem.

Many information intermediaries understand this and have appointed ESG specialists. But it is not enough to have niche ESG teams. What is needed is change in mainstream risk thinking and practice.

In most cases, what is also missing is a clear board-level decision on investment beliefs and in particular, decisions about how to use the range of climate damage functions, and a time frame for when this will happen by. For example, the investment consultant leaders have been talking about climate risk since 2007[20].

There are some notable signs of change but there is still a lot more to do. And whilst the focus in this chapter has been on intermediaries, it is important to note that their collective focus on “alpha” (rather than “climate beta”) will be best challenged by clients. The good news is that this can happen quickly. Preventable Surprises understands that one UK pension scheme asked their Scheme Actuary to consider how their Responsible Investment policy (especially with respect to environmental issues) might be reflected in their actuarial valuation. This simple and single request has triggered a significant change process and is a good example of how joining up the dots in the information intermediary chain can be triggered[21].

20 See slide 6: https://preventablesurprises.com/wp-content/uploads/2015/06/Talking-Long-Walking-Short_Exposure.pdf

21 ThinkTank participants considered hard client demand from asset owners (i.e. clear RFP’s and effective monitoring) to be the best way to make progress towards investors as “future makers”. But there was also recognition that other strategies - litigation risk, pressure from public opinion and civil society/reputational risk, and regulatory changes – could also work. The strategy which participants felt was likely to be least effective was demand from retail investors. See Appendix 7, Q3.

8
CANADA: AN OPPORTUNITY FOR ACTION

INTRODUCTION

Canadian institutional investors have an international reputation for good governance and long-term thinking, which makes their absence from the discussion about climate change risk all the more puzzling. Yet there is a subtle but profoundly unsupportive national context that begins to explain this (see "The Context and the Challenge" below).

There are, however, three important reasons to be hopeful about the situation in Canada:

1. Sub-national governments are taking the lead on climate policy and action. British Columbia was amongst first jurisdictions to put a carbon tax in place. Quebec's cap and trade system is linked with California, and Ontario is developing a cap and trade system. In addition, the recent change in government in Alberta, the heart of the fossil fuel industry, suggests that a bold change in direction may be possible elsewhere too.[1] Certainly, the Canadian public cares about climate change; a recent survey by the Angus Reid Institute found that 63% of Canadians say the country's response to climate change is "too weak"[2]. Indeed, last year Ontario, the most populous province by far, successfully phased out coal due to intense public pressure; this has been called "the single largest

1 The economic stimulus of a transition of Alberta's energy system towards lower carbon is significant and has been discussed for over a decade. See https://www.pembina.org/reports/greeningthegrid-report.pdf

2 http://angusreid.org/majority-of-canadians-call-for-more-robust-efforts-to-curb-climate-change-2/

GHG reduction measure in North America"[3]. The challenge for NGOs now is to innovate and find ways to drive policy action on a low-carbon transition in the most effective way possible.

2. Changing demand profiles in the largest markets for Canadian fossil fuels – the United States and China – mean that the time is ripe for a re-evaluation of energy policy at the national and provincial level. The likelihood of reduced demand for Canadian oil sands in export markets, and increasing cost-competitiveness of renewable energy, mean that Canadian fossil fuel companies must adjust their business models even in the absence of assertive climate policy action at home.

3. The recent success of the BP and Shell climate risk assessment shareholder resolutions and the anticipated implementation of Alberta's climate change and low-carbon energy transition policies provide an ideal opportunity for Canadian investors and concerned stakeholders to test the Forceful Stewardship Guidelines.

A Canadian approach could usefully comprise the following 6 focus areas:

1. Positive Investment Opportunities: Part of the challenge is that Canadian investors, corporations, and politicians do not have a consensus vision on how their economy might thrive in a low-carbon world.[4] More specifically, but relatedly, Canadian investors do not have a sense of what the attractive investment opportunities in such a future might be and to be personal, which CEOs are Canada's "Elon Musks" in the making.[5]

2. Oil Sands companies: Building on the success of Aiming for A resolutions, investors could focus on the major oil sands companies with resolutions related to "low carbon business plans".[6]

3. Lobbying by Oil & Gas companies: Investors could ask the major oil and gas companies to either cease any lobbying efforts aimed at delaying the introduction of measures to reduce Canadian GHG emissions or fully disclose all lobbying activities.[7]

4. Canadian Banks: Investors could engage with the banks on their low carbon business plan and lending portfolio and also their stewardship role given their importance as investment managers.

5. Public Awareness: Civil society/NGOs could redouble their efforts to engage the public as citizen investors concerned with the issue of climate change, and build public support for the Forceful

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3 Ontario Power Authority [OPA], 2013a In Ontario's phase-out report cited in: https://www.iisd.org/publications/end-of-coal-ontario-coal-phase-out.

4 Academics have suggested templates for low-carbon prosperity, but these have yet to be integrated into investment plans. See "Acting on Climate Change: solutions from Canadian scholars" (2015): http://biology.mcgill.ca/unesco/EN_Fullreport.pdf

5 Interestingly, Elon Musk went to University in Canada at Queens and was working on Bay Street for Scotia Bank before he went to Silicon Valley. http://motherboard.vice.com/read/elon-musk-burning-fossil-fuels-is-the-dumbest-experiment-in-history-by-far

6 See CTI Blueprint: http://www.carbontracker.org/report/companyblueprint/

7 This would include lobbying of regional (eg http://www.vancouverobserver.com/news/alberta-oil-and-gas-millions-fuel-bc-liberal-machine) and national governments.

Stewardship Guidelines among banks and institutional investors.

6. Litigation: Civil society could initiate litigation against a Canada pension fund for failing to fulfil its fiduciary duty by not assessing and addressing climate change as a systemic risk to member savings.

Although discussing public awareness and litigation does not fit easily within the Canadian context, it is clear that without assertive action on these fronts, the other substantive work will move slowly.

THE CONTEXT AND THE CHALLENGE

A FEDERAL LAGGARD WITH REGIONAL LEADERS

Canada is considered a global laggard on climate change and is expected to miss – by a wide margin – its current target of reducing overall emissions by 17% by 2020 relative to 2005. Environment Canada's Emissions Trends 2014 report shows that without additional measures, by 2020 Canada will only have reduced its emissions by 1.2% below 2005 levels[8]. Prime Minister Stephen Harper supports a "sector by sector approach" but has failed to regulate greenhouse gas emission in the oil and gas sector. As a result, Canada has seen increasing emissions from that sector, which has now surpassed transportation as the largest emitting sector.

Further, Canada's submitted Intended Nationally Determined Contributions (INDC) has been assessed as being "inadequate" by the Carbon Action Tracker Consortium, a research coalition[9]. It includes a target to reduce overall emissions by 30% below 2005 levels by 2030. Meeting these goals will require additional measures, particularly for emissions reductions in the oil sands, which under the current policy regime are expected to increase.

Despite the federal government's lack of commitment to a meaningful plan to reduce Canada's emissions, there are promising signs at the sub-national level:

- The carbon tax in British Columbia (BC) has been successful in reducing emissions while the economy continues to grow.[10]
- Alberta recently elected a New Democratic Party government, which is undertaking a public consultation to inform its strategy development in time for COP21 in Paris[11], providing the

8 http://ec.gc.ca/ges-ghg/E0533893-A985-4640-B3A2-008D8083D17D/ETR_E%202014.pdf
9 http://climateactiontracker.org/countries/canada.html
10 http://blogs.worldbank.org/climatechange/british-columbia-s-carbon-tax-shift-environmental-and-economic-success.
11 http://alberta.ca/release.cfm?xID=38411C197F972-D7D6-7CC8-6882AF9F5A4D74F3

opportunity for a significant shift in climate policy.

- Ontario has phased out coal, set ambitious emissions reduction targets,[12] and is following Quebec in establishing a cap and trade system in cooperation with several US states.
- The municipality of Vancouver is developing a strategy to be 100% renewable by 2050[13].

Whether there is a change in government later this year or simply a reduction in the majority of the current government, it thus appears likely that there will be a more supportive policy context, regionally if not nationally.

THE PARADOX OF CANADIAN INVESTOR LEADERSHIP ON CLIMATE

Canadian pension funds have a reputation of being some of the best-run in the world, with strong governance[14] and an active commitment to long-term investing[15]. Yet, Canada is absent from the group of global funds taking a strong leadership role on climate change. Canadian funds are amongst the most carbon intensive globally, and to address portfolio climate risk would therefore require a paradigm shift on the part of fund leaders.

For example, using the Asset Owner Disclosure Project (AODP) scoring system, the highest rating that any Canadian pension funds gets is “BBB” (there are 2) and 34% scored “X” (i.e. no effort to recognise or address climate risk). In contrast, Australia has 2 funds that scored “AAA”, with only 10% scoring “X”. The Netherlands also boasts 2 funds scoring “AAA”, with 11% scoring “X”.

More practically, no major Canadian fund co-filed or pre-declared on Aiming for A resolutions.[16] And amongst commercial financial institutions, the discourse is explicitly bullish about more fossil fuels.[17]

What could explain this apparent paradox between a commitment to long-termism and good governance and a lack of focus on climate risk? Here are some hypotheses:

- Corporate Canada is anxious about accepting climate science. With fossil fuel companies accounting for about 24% of the total value of the S&P/TSX60 index and extractive industries, and forestry also

12 37 per cent below 1990 levels by 2030, and 80% by 2050. http://news.ontario.ca/ene/en/2015/05/ontario-first-province-in-canada-to-set-2030-greenhouse-gas-pollution-reduction-target.html

13 http://vancouver.ca/green-vancouver/renewable-city.aspx

14 http://www.economist.com/node/21548970

15 A good example of this is the Focusing Capital on Long Term project, one of the two co-founders is Canada’s Mark Wiseman (CPPIB).

16 http://www.lapfforum.org/LNews/FullListings-Institutional-Supporters-Resolution25-BPAGM-As-at-14thApril2015.pdf

17 For example, the comments from the CEO of Scotiabank: http://www.bnn.ca/News/2015/4/9/Scotiabank-CEO-makes-public-push-for-more-pipelines.aspx

significant sectors, the scepticism/denialism is understandable but that will not reverse science.[18]

- Canada's 5 large chartered banks and the Royal Bank of Canada are heavily involved in domestic and international fossil fuel project lending and also provide significant equity and debt financing to the sector.[19]
- The Federal Government has a poor record on establishing and implementing climate change policy measures to reduce emissions, particularly in the oil and gas sector, where emissions continue to rise. And investors, who are in practice more short-term than they may like to admit, assume that this approach will continue for the time being,
- Federal and provincial regulators have not yet identified climate risk (whether related to lack of mitigation or adaption) as a systemic risk.
- As in most countries, there is a close relationship among corporate, political, and investment decision-makers, particularly in the make-up of corporate boards, including pension funds.
- In contrast to some other markets (e.g. UK, USA) the Canadian SRI retail market does not generally provide a particularly powerful challenge to institutional investors on the issue of climate change. Partly this is because Canadian SRI investors investing in Canada use a benchmark that is heavily weighted towards fossil fuel and mining companies[20]. With the exception of one or two firms[21], most Canadian SRI investors have not been particularly assertive on this issue.

The result of these conflicts of interest and self-censorship is that only five Canadian investors signed a letter to Federal Finance Minister in May 2015 to "urge" Canada to back clear emission reduction targets[22]. In parallel, the lack of disclosure over any changes in investment and active ownership practices indicates that Canadian institutional investors are not taking climate risk seriously.

Regulators appear to be absent as well. Neither the Bank of Canada nor the Office of the Superintendent of Financial Institutions (OSFI) has identified climate change as a systemic risk, despite vocal warnings from former Bank of Canada Governor Mark Carney in his role as the Governor of the Bank of England.

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18 Canada's Carbon Liabilities: The Implications of Stranded Fossil Fuel Assets for Financial Markets and Pension Fundshttps://www.policyalternatives.ca/sites/default/files/uploads/publications/National%20Office,%20BC%20Office/2013/03/Canadas%20Carbon%20Liabilities.pdf

19 https://en.wikipedia.org/wiki/Big_Five_(banks)

20 Preventable Surprises understands there are nascent efforts to deliver fossil free investment products.

21 The clear market leader is NEI which has, for example, successfully engaged companies to adopt and publicly disclose on a shadow price for carbon and to publicly support the implementation of a price on carbon. NEI also engages policy makers to express investor support for smart climate policy, engaging other investors into the mix (such as the current effort, in collaboration with SHARE, aimed at the Alberta government that has attracted over 100 signatories and $2.5 trillion in AUM). Today NEI is engaging energy companies on diversification for the energy transition, through greatly increased R&D and focused innovation strategies.

22 http://www.aimco.alberta.ca/DesktopModules/AIMCoNews/Documents/Climate%20Change%20Canadian%20Outreach%20Letter%20FINAL.pdf

CANADIAN CIVIL SOCIETY/NGOS HAVE NOT ADEQUATELY CHALLENGED INVESTORS

NGOs have not yet mobilised citizen investors, as has happened in the Netherlands and UK. To generalise, Canadian foundations are not actively supporting efforts to engage the Canadian investment world. Where public education has already happened, it has been in partnership with ESG/SRI providers and even though these are "best in class" organisations, this does not create public demand for Forceful Stewardship.

There does not seem to be any overwhelming reason why this situation could not substantially evolve. Indeed, if we want disruptive business model change in the fossil fuel industry, there are good reasons for expecting NGOs and concerned foundations to collaborate on this and model this change themselves.

THE PRIORITIES

All of the priorities referred to below would require some level of local support in Canada, likely supported by local NGOs that have a strategic objective to influence Canadian pension savers and other investors to address climate risk. Securing local interest in fleshing out these priorities and developing a strategy would be a key first step. In essence, this local resource would play the organisational and facilitation role that Climate Change Investor Networks play in other regions.

POSITIVE INVESTMENT OPPORTUNITIES

Part of the challenge is that Canadian investors, corporations, and political elites do not have a vision of how their economy might thrive in a low-carbon world. More specifically, but relatedly, Canadian investors do not have a sense of what the attractive investment opportunities in such a future might be.

What could be done?

- Initially, some type of assessment of current perceived barriers (aside from the obvious lack of federal policy support) to green investment would be required. Valuable input could be gained from Canadian organisations focused on accelerating the growth of the green economy (e.g. Clean Energy Canada, Toronto Atmospheric Fund, Analytica Advisors, etc.).
- One approach would be to commission a study – this approach could contribute to significant changes, as evidenced by the successful coal phase-out in Ontario. Another approach would be to develop a Canadian Low-Carbon Investment Pathway (CLIP) akin to the IEA's Tracking Clean

Energy Progress report.[23] Without getting bogged down in details of accurate investment flow assessment, the CLIP could identify, at a high level and with periodic updates, the following:

1. Existing barriers to green investment;
2. Efforts required and/or being made to remove barriers (may be related to the other priorities in this section); and
3. An overall assessment of how current investment flows are tracking relative to what is required for a low carbon economy.

- This is not meant to replicate existing global initiatives such as the Low Carbon Investment Registry[24], but rather to provide a perspective on green investment flows in Canada (barriers and opportunities).

OIL SANDS COMPANIES

Building on the success of Aiming for A resolutions, investors could focus on the major pure play oil sands companies with resolutions related to "low carbon business plans".

What could be done?

- A local NGO with deep expertise in oil sands (e.g. Pembina) could be approached to asses which oil sands companies pose significant risks to investors (through a combination of size, leverage ratios and insufficient attention to Big Climate Risk). This information could be combined with information available from other sources (e.g. the Carbon Tracker Initiative).

LOBBYING BY OIL & GAS COMPANIES

Investors could ask the major oil and gas companies to either cease any lobbying efforts aimed at delaying the introduction of measures to reduce Canadian GHG emissions or fully disclose this work to the public.

What could be done?

- An inventory of lobbying efforts and practices exist is needed and organisations such as SHARE and NEI Investments would be well suited to lead on this. That might lead to a "Books and Records" request at target companies.

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23 http://www.iea.org/etp/tracking2015/

24 http://globalinvestorcoalition.org/low-carbon-investment-registry/

CANADIAN BANKS

Investors could engage with Canada's 5 largest chartered banks to demand the development of "low carbon business plans" and more information on the banks' respective stewardship activities in relation to climate risk, given their structural importance to the national economy.

What could be done?

- This is likely the most sensitive priority, and likely would warrant discussions at the CEO level of the large Canadian banks and the largest pension funds. A starting point would be to request informal guidance from senior individuals at the banks on how best to approach this topic.

PUBLIC ENGAGEMENT WITH INVESTORS

Civil society/NGOs could redouble their efforts to engage citizen investors on the issue of climate change, and build public support for the Forceful Stewardship Guidelines.

What could be done?

- A working group, supported by the Toronto Atmospheric Fund (TAF), has established the "C21 Initiative" focused on helping Canadian savers call on their pension funds to address and mitigate climate risk[25]. They and other local NGOs (e.g. Sacred Spaces[26]) who are able to engage the Canadian public could be approached for ideas and collaboration. Some Canadian campus divestment campaigns appear to be open to strategies for change over and above divestment, and they may find the Forceful Stewardship message useful[27].

LITIGATION

Civil society could initiate litigation against a Canada pension fund for failing to fulfil its fiduciary duty by not assessing and addressing climate change as a systemic risk.

What could be done?

25 http://taf.ca/follow-the-leaders-de-carb-your-money/
26 http://greeningsacredspaces.net/what-we-do/
27 http://www.toronto350.org/divest

- Local law firms specializing in environmental law (e.g. West Coast Environmental Law [WCEL][28]) could collaborate with existing initiatives[29] to assess the potential merits of litigation of a pension fund. WCEL has written about the role of professionals in climate change mitigation and adaptation[30]. Consideration could be given to challenging professionals (e.g. insurance or pension actuaries) on their role in assessing and managing climate risk.

IMPLICATIONS AND CONCLUSIONS

To play this catalyst role, Preventable Surprises needs to cultivate champions/ambassadors in each of the 6 different stakeholder groups identified above – individuals who are trusted and credible in their local markets, but who are willing to open doors and, in private at least, support Preventable Surprises' work and the Forceful Stewardship Guidelines.

Given the cultural constraints on open debate described above, Preventable Surprises may need to work with its supporters and advocates bilaterally for some time before it is possible to create a fully multi-stakeholder advisory group. Regardless of how it works, such a group will play a critical role in defining exactly what Preventable Surprises needs to do (and not do) at any given stage in a multi-year initiative.

28 http://wcel.org/

29 Such as the Climate and Pensions Legal Initiative in the UK: http://www.clientearth.org/news/latest-news/pension-funds-must-confront-climate-risk-2838

30 http://www.wcel.org/sites/default/files/publications/Professionals%20and%20Climate%20Change_0.pdf

9
THE DUTCH COULD SET THE BAR FOR GLOBAL INVESTORS

"The Netherlands as a country has a rich history of understanding the complex interrelationship between the environment, its economy and the wellbeing of its citizens. Being for a large part located below sea level, bordering the sea, the Dutch have always and successfully worked together to make and keep the land dry and save. Also the importance of social cohesion is long recognized in what is one of the most densely populated countries of the world. The Dutch have developed a character of cooperation, and accompanying institutions ranging from several platforms for regular discussion amongst potential adversaries like employers and employees to international institutions for peace and justice like the International Court of Justice and the International Criminal Court. This so-called 'poldermodel' is also proving its worth in the sustainability transition. In 2013 more than 40 organisations agreed on a national accord on energy to which all major Dutch banks cooperate to remove obstacles in finance for investments in renewable energy and energy efficiency."

"Input from the Netherlands to the UNEP Inquiry into the Design of a Sustainable Financial System", Sustainable Financial Lab, forthcoming.

For the first time in history, a judge has legally required a state (the Netherlands, that is) to do more to protect the public from climate disruption. That decision came about because of 900 committed citizens working together with a small but professional NGO, the Urgenda Foundation. The landmark ruling required the Dutch government to cut its emissions by at least 25% within five years. This is a significant increase from the earlier target.[1]

1 http://www.theguardian.com/environment/2015/jun/24/dutch-government-ordered-cut-carbon-emissions-landmark-ruling

This is just one of many reasons for thinking that Dutch civil society and even some organs of the state are naturally more in alignment with Forceful Stewardship type thinking than peers in most other parts of the world. Indeed the two major Dutch pension funds – ABP and PGGM – are also in many ways positively predisposed (see below).

Several other indicators were also mentioned during the ThinkTank discussion, leading to the proposal that the Netherlands could be a unique pilot for Forceful Stewardship because it could set the global bar at the highest level today.

REASONS TO BE HOPEFUL

1. **The role of the media**

   In 2007, a documentary called The Clusterbomb Feeling implicated Dutch pension funds in financing cluster munitions. This documentary generated considerable public outcry among Dutch citizens leading most major Dutch pension funds to disinvest from cluster munitions producers and also kicking off the work to mainstream ESG (until that point Dutch funds who engaged in pilot funds).[2]

   One of the lessons from this campaign is that Dutch pension fund trustees are very sensitive to the expectations of society and any backlash against their institutions and their own reputation in a way that probably is not the case in many other countries. Also of note is the fact that the media are good at tapping into a popular and normative mind-set which says that Dutch investors should align with Dutch government decisions and Dutch cultural norms. In the above case, the Netherlands is part of the Convention on Cluster Munitions, an international treaty signed by more than 100 countries which bans the use, stockpiling and transfer of these weapons.[3]

   The media could thus play an important role in the push for Forceful Stewardship given the cross party political consensus on climate action in the Netherlands. The challenge will be to make systemic change newsworthy.

2. **Dutch NGOs are active on climate change issues**

   The Netherlands boasts professional and relatively well-resourced NGOs, some of which are also quite large (e.g. Friends of the Earth, Greenpeace, Oxfam); others are specialised (e.g. Het Groene Brein, VBDO and Urgenda), and they might all be persuaded to support Forceful Stewardship approaches.

2 http://www.sustainalytics.com/sites/default/files/Cluster_Munitions_Public_Policy_and_Investor_Risk-Sustainalytics.pdf
3 http://www.sustainalytics.com/node/56

One challenge in this regard is that NGOs may have learnt the wrong lesson from earlier experiences. Having tried very hard to push investors to force companies to stop investing in, for example, the Arctic or shale – demands which some investors successfully rebuffed as “attempts to get them to micromanage” companies and which the companies ignored even when investors transmitted the request – many NGOs now believe the answer rests in divestment campaigns.

Certainly, as 350.org has shown, this also taps into public sentiment (see #3 below). The challenge will thus be to convince NGOs of the value of forceful yet systemic strategies which investors will find hard to resist, and equip them to engage at such level with investors and policymakers.

3. Public are vocal in wanting action

More than 10,000 people, including employees of the fund itself, have called on ABP, the fifth largest pension fund in the world (with AUM of $360bn), to divest from oil, coal, and gas. Linked to the above two points, the petition was handed over to the executives in a high profile event. The campaign is part of a fast-growing movement launched by the campaign group 350.org that is putting pressure on institutions around the world to remove their investments from fossil fuels and probably represents the movement’s biggest victory, alongside the decision by the Norges Bank.[4]

4. Dutch funds are starting to care what about what their members think

Across the world, the pension fund industry is known for its weak communication strategies with members. The situation in the Netherlands is less bad than in many other countries with 28% of the 50 largest pension funds surveying their members on ESG topics, albeit quite often in a rather general way[5]. Some Dutch pension funds have adopted sophisticated strategies for communicating with their members on more traditional (financial) topics - eg ABP has used “neuromarketing”, testing responses to communications with volunteers having brain scans, to find out how best to motivate members[6] – and there is the potential to join the dots.

5. Regulators and legislators are more supportive than many

During the annual congress for pension funds in 2014, Joanne Kellermann, the outgoing director

4 http://www.theguardian.com/environment/2015/mar/18/more-than-10000-people-call-on-dutch-pension-fund-to-divest-from-fossil-fuels

5 http://www.vbdo.nl/files/report/VBDOBenchmarkResponsibleInvestment2014.pdf

6 http://www.ipe.com/countries/netherlands/abp-draws-on-neuromarketing-to-revolutionise-member-communications/10004300.fullarticle

of De Nederlandsche Bank (DNB), the Dutch central bank which is the regulator for pension funds, said that pension funds should ask participants to get more involved in the ethical aspects of their schemes' investment decisions[7]. More recently, at the request of parliamentarians in the Upper House, the DNB was asked to give its view about the risk to pension funds from their exposure to fossil fuels[8]. And Preventable Surprises understand that the Ministry of External Affairs is prepared to finance an investigation into the feasibility of a Green Deal or Convenant for pension funds and insurance companies on greening their portfolios. The scope of the investigation is said to be progressing albeit slowly.

6. Dutch companies can lead change in their sectors

The Netherland boasts world-class companies in airlines (Air France-KLM), chemicals (AzkoNobel, DSM) consumer goods (Philipps, Unilever), energy (Shell), finance (ING) and technology (KPN). Dutch corporate culture is also unusually sympathetic to sustainability concerns and many of these companies have strong climate related commitments. There is a real possibility that these corporations could, supported by Dutch and other major investors, lead their respective sectors into contingency planning for a low carbon world. However, as their shareholder base is widely dispersed, engagement by foreign investors will also be needed to move the needle (see "Be more assertive domestically".)

7. Dutch investors are bigger and better respected than most and are already moving on this issue

The average Dutch pension fund is six times larger than the average British pension fund, which means they can bring significant influence to bear on matters they and their members care deeply about, such as climate change. Size also allows targeting of effort – industry consolidation is taking place rapidly and the two largest Dutch funds ABP (EUR 309bn) and PFZW (EUR 155bn) account for the majority of pension assets.[9] Many asset managers, such as MN Services and RobecoSAM, are also very committed to being responsible investors. The Netherlands also boast some mega fund managers eg NN (formerly known as ING) which has EUR184bn[10] and Aegon which has £542 bn AUM[11] who could well be persuaded to contribute to a Dutch initiative which was widely supported.

Dutch funds are widely considered to be amongst the best governed and most successful in the world. Many already use sophisticated decision-making tools relating to risk management and

7 http://www.ipe.com/countries/netherlands/dnb-director-calls-on-dutch-schemes-to-consult-participants-on-esg/10003114.article
8 http://www.tweedekamer.nl/downloads/document?id=4c88eae2-a529-4edf-a5ec-57b0e5620ede&title=Het%20bericht%20%E2%80%9CPensioenfonds%20moet%20uit%20olie%20en%20gas%E2%80%9D.pdf
9 http://www.ipe.com/ipe-top-400-apg-retains-top-spot-among-dutch-asset-managers/10002474.fullarticle
10 https://www.nn-group.com/Media/Article/NN-Group-posts-strong-2Q15-results.htm
11 https://www.aegon.co.uk/about-aegon.html

scenario planning (which is something of a Dutch speciality). So if they move, it will set a wider precedent, not least with funds that consider themselves 'top tier' peers (eg Canadian and Australian. Furthermore, Dutch funds and individual professionals are significant players within important networks. ABP and PGGM are members of 'Focusing Capital on Long Term', APG and PGGM are members of IIGCC, ICGN is chaired by Erik Breen from Triodos Investment Management[12] and VBDO's Executive Director, Giuseppe van der Helm, is also chair of Eurosif. The Sustainable Finance Lab, led by economist Herman Wijffels, is actively building networks with pension funds which could make it an ideal partner.

8. Dutch funds are moving on climate risk

Dutch funds are undertaking fundamental research about climate change and revisiting investment beliefs and strategy on the back of this. APG/ ABP, for example, appears to have conducted an in-depth exercise across asset classes to establish the long-term energy and climate outlook and the risks changes will pose to its energy investments[13].

Dutch funds are also taking action on climate risk. The Dutch Development Bank (FMO), partially owned by the Dutch government, has announced that it will not directly finance any projects on coal-based power generation and/or coal mining and has also set as its objective for 2020 to double its impact and halve its footprint[14].

APG and ABP have been measuring and reporting the carbon footprint of their equities portfolio for the second year in a row. PFZW has also made a commitment to halve its carbon footprint by 2020 saying it wants to bring about a "change in mentality over the pension sector's approach to carbon emission management"[15]. The ASN Bank seeks to be climate neutral with all its investments in 2030.

Both APG AND PFZW are actively considering positive sustainability investment strategies. ABP has invested EUR 14bn in solutions to sustainable development challenges and APG made a commitment to double its renewable energy investments by 2017 over 2014. PFZW has made a commitment to quadruple its impact by 2020 measured as investing in solutions (EUR 4bn in 2015).

One major source of strength is that there are large teams at Dutch asset owners and asset managers who are experienced at engagement and unusually open to collaboration with non investors and non Dutch investors. It is reported that at least one of the big Dutch pension funds has asked Shell

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12 https://www.icgn.org/users/preerikbreen
13 https://www.abp.nl/images/VVB_verslag_ENG_04_tcm160-175441.pdf - p16/17
14 "Input from the Netherlands to the UNEP Inquiry into the Design of a Sustainable Financial System", Sustainable Financial Lab, forthcoming.
15 http://www.ipe.com/news/esg/pfzw-demands-change-in-mentality-over-carbon-emissions-approach/10008285.fullarticle

to produce a business plan consistent with 450 ppm. APG pre-declared on the BP vote and PFZW declared on the day of the vote.

All the above points towards one conclusion – the Dutch context is possibly the best in the world today for pushing the Forceful Stewardship idea.

HOW COULD THE DUTCH FUNDS BE A BIGGER PART OF THE SOLUTION?

What would Preventable Surprises like to see going forward?

1. **Grow the green**

   As with investors elsewhere, Dutch investors will be happier looking for positive investment strategies. This is, indeed, very important, since if the large asset owners make clear their genuine desire to re-allocate assets – and given the size of these funds – this could shift the investment supply chain globally. Obvious candidates include real estate, private equity, infrastructure and green bonds.

2. **Acknowledge that growing the green also means shrinking the brown**

   Again, as with investors elsewhere, Dutch investors will be anxious not to be seen to be anti fossil fuels, given the size and influence of oil and gas industry in the Netherlands. What these investors will need to be persuaded of is that:

   a. The systemic risk to their diversified portfolio is such that a rapid energy transition is the only solution;

   b. That divestment addresses sector risk but not systemic risk;

   c. Only Forceful Stewardship meets the challenge, and

   d. DNB is fully involved, informed and supportive.

3. **Be more assertive domestically**

   When Shell mis-stated its reserves, Dutch funds were reluctant to act, preferring to deal with the situation in a low-key manner. International investors played an important role in raising the profile. Equally, until NGOs raised the issue of cluster bombs, Dutch funds did not see there was a problem. Eumedion, the Dutch investor collaboration, now focuses on environmental and social issues in addition to the corporate governance focus that used to be its sole focus, in part because of stakeholder pressure.

All this highlights the benefit of working cross silos – different stakeholders and countries. Indeed, the ThinkTank brought home the value of different stakeholders (e.g. scientists, campaigners, economists) being involved in investment discussions. Thus Preventable Surprises recommends Dutch investors experiment with working with a) informed local non investment stakeholders who might be able to engage Dutch companies in complementary ways to investors; b) major international investors who ideally need to support the local stewardship priorities, or at least indicate to management in an explicit manner that they are not opposed; and c) external investment specialists who are experienced at engagement and who have a positive maverick orientation. The outcome could be a creative and assertive strategy which is fit for purpose in terms of managing big climate risk.

If this does not happen, there is risk that Dutch investors will – when events trigger widespread public concern – feel forced to give the public what they want, whether they call it decarbonisation or divestment. This will manage reputations and may even manage their sector risk – but it will not manage systemic risk.

4. **Be more assertive internationally**

One of the legitimate concerns that big Dutch funds have is that if they do use their full power to 'force' change at Dutch companies, those companies might suffer first mover disadvantage in the global market as peers in other countries continue to operate without constraints.

In parallel, only a very small portion of their portfolio is actually invested in Dutch companies given the small size of the Dutch capital market and the large size of the pension fund portfolios. Hence the greatest impact of Dutch funds may in fact be on the international stage since, as described above, Dutch investors are party to many peer networks and should leverage their global influence even more.

The solution to both the above factors is for Dutch investors, working alongside Dutch companies and international investors, to shift selected global norms and focus on the most leveraged ways to do this.

One approach is to focus on regulators that have significant influence. The SEC is a clear case in point because it is still the most important regulator for companies listed in the US and also those who are not. There are some clear priorities relating to the SEC's weak approach to disclosure of carbon/climate risk and political contributions.

Another approach is to focus on the sectors where Dutch companies have a leadership position and ensure their global peers face similar investor expectations, working with local investors in the countries concern. Dutch investors could then very usefully share their experience of how investors can be proactive in the face of dispersed ownership.

AN AGENDA FOR ACTION

Preventable Surprises believe that Dutch institutional investors are in a good position to show substantive leadership on climate risk scenario planning.

The following plan of action came from two of the participants with some minor editing by Preventable Surprises:

1. **The plan:** We need to fill out a route map that anyone and everyone can understand, that puts short-term and other "incremental" changes in context. Otherwise the tendency will either be to frenetically rush at short-term opportunities which will create a sense of emotional well being or to put off change since there is no sense of urgency.
2. **The prep:** We need to work hard to educate, empower and motivate pension fund members to get involved - it needs to be as easy as calling for divestment but a lot more effective, and it needs to be rewarding.
3. **The alliance building:** Discussion, buy-in and hence ownership from the local representatives/thought leaders to the whole concept. That then gives a base for development of the project that is not external to the country and its intrinsic institutional investors and community/capital/political/business/social networks. The Dutch are experienced in developing so called Green Deal convenants that include an agreement between private organizations, stakeholders and governments to work on a lower carbon footprint and in many ways, what Dutch (and global) citizens need is a 21st century equivalent.
4. **The landscape:** We need a systemic map of who influences whom and this needs to be real, including politicians, government departments, asset managers, supervisors, intermediaries, oil majors, media, religious organisations, NGOs etc.
5. **The business case:** We need to make a clear financial case for change (which in Forceful Stewardship language is the VAR) and perhaps also reclaim the price of carbon, properly pricing climate risk into portfolios.
6. **The tools:** Social media technology is on our side, both in terms of the platforms that will get the word out and make it easy to act but also in terms of a vision of future where disruptive new businesses claim the ground.
7. **The tactics:** We need to get tough and targeted.
8. **The bigger picture:** We need to keep the bigger picture in mind. The goal of this pilot is to show other countries, which may be less blessed in terms of their resources, what might be possible. It is useful to remember that there has already been some knock-on effects in Belgium where last December, a group of 11 Belgians, including a few TV personalities triggered a similar lawsuit to

that made by Urgenda with more than 12,000 people signed on as co-plaintiffs[16].

A FINAL THOUGHT

Urgenda Foundation's legal campaign took two and a half years to get to its first hearing in April[17], before finally getting the verdict – that the Dutch government should be doing more - that it was looking for in June 2015[18]. This gives us hope that things can change, and will change - we just need to implement Forceful Stewardship. Because as the US anthropologist, Margaret Mean, said: "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has."

16 http://www.environmentguru.com/pages/elements/view.aspx?id=2028218
17 http://www.theguardian.com/environment/2015/jun/24/dutch-government-ordered-cut-carbon-emissions-landmark-ruling
18 http://www.urgenda.nl/en/climate-case/

10
THE UNITED STATES:

COLLABORATION AND DIVERSITY CAN BREAK THROUGH BARRIERS

The United States, at least on climate policy, is perceived as very polarized; and in some ways it is. Politically, there is little question that the debate is polarized. Public opinion polls illustrate varying views[1] and a partisan divide[2], but at least some also show that a majority of Americans believe that climate change is happening and are worried about it[3]. About three fourths of Americans believe that there should be public funding to support renewable energy and regulate CO2 as a pollutant, and 63% believe that there should be strict limits set on carbon pollution from coal-fired power plants. A clear majority of Americans want their governments to play either a 'leadership role in setting ambitious targets' or take a 'moderate approach' to the negotiations. That said, the US does come near the bottom with only 44% wanting leadership action (compare, for example, 60% in China) and Americans are also the most likely to want no involvement in an international climate change agreement at 17%[4]. Perhaps unsurprisingly, the US has not yet ratified the Kyoto Protocol, and there is no indication that this will happen anytime soon. Meanwhile, the policy environment is continues to be strongly influenced by corporate lobbying and indirect lobbying by third party advocacy groups that inhibit action on climate[5].

Addressing climate-related risks and opportunities is a similarly visionary quest for investors. There is a fairly robust stream of information from investment banks and sell-side analysts detailing climate risks

1 http://environment.yale.edu/poe/v2014/
2 http://www.pewinternet.org/2015/07/01/chapter-2-climate-change-and-energy-issues/
3 https://www.georgetown.edu/news/georgetown-poll-climate-change-action.html
4 https://yougov.co.uk/news/2015/06/07/Global-survey-Chinese-most-favour-action-climate-c/
5 http://www.ucsusa.org/center-for-science-and-democracy/tricks-of-the-trade.html#.VexeoEZEIYc

and opportunities. Bank of America-Merrill Lynch, Morgan Stanley, and Citigroup have all weighed in on the types and breadth of climate risks; from regulation and litigation to physical and reputational risks, as well as opportunities to invest in low- or zero-carbon companies. engaging on climate change and/or filing climate-related shareholder proposals for over a two decades[6]. Of the 433 shareholder proposals filed in the 2015 proxy season, 27% (117) were on environmental issues. From those 117 proposals, 76 addressed carbon accounting, energy production, emissions disclosure or targets, and climate/carbon risk management. But this activity is just one pole in a bipolar world; there is still a sizeable group—probably a substantial majority—of investors who do not see climate change as a important risk and may or may not see its opportunities[7].

If we are to mobilize action to address climate risks using the tools of investment, investment managers, asset owners and influential intermediaries all need to act. Some already have: SRI and sustainable investment asset managers have long been active on urging companies to disclose and manage climate risks and set quantifiable and meaningful targets for emissions reduction. Asset owners such as CalPERS and CalSTRS have issued statements of investment beliefs and investment policies addressing many types of ESG risk, including climate change[8]. CalPERS recently announced that it will require all of its managers to identify and articulate how they integrate environmental, social and governance issues into investment processes. The pension funds of New York state and New York City called on the SEC to compel enhanced disclosure of climate related risks of fossil fuel companies. Ceres organized over 350 businesses and investors to voice their support for the Environmental Protection Agency's Clean Power Plan for existing power plants and encouraging the state's "timely finalization" of state implementation plans to meet the new standards[9]. Mercer, a leading investment consultancy, has modeled climate impacts on investments and published reports[10] [11] on their findings. Their reports also include the kinds of actions that asset owners and investment managers can take to mitigate climate risks and capitalize on opportunities. Some of the key messages from their 2015 report are:

- There is a case for immediate investor action; regardless of which scenario we are following.
- "A 2°C scenario does not have negative return implications for long-term diversified investors at a total portfolio level over the period modelled (to 2050), and is expected to better protect long-term returns beyond this timeframe."
- The desirability of investors acting as "future makers", not least because the report highlights that

6 The Ceres Principles were announced in 1989 http://www.ceres.org/about-us/our-history/exxon-valdez-oil-spill-still-leaves-a-painful-legacy

7 See CFA ESG Survey results: http://www.cfainstitute.org/ethics/Documents/esg_survey_report.pdf Slide 5 indicates less than half of US respondents consider environmental issues, and slide 9 shows less than half respondents consider climate change to be an important risk.

8 http://www.calstrs.com/sites/main/files/file-attachments/calpers-calstrs_climate_change_fact_sheet.pdf

9 http://www.ceres.org/press/press-releases/365-companies-and-investors-announce-support-for-epa2019s-clean-power-plan

10 2011 Mercer Report: http://www.mercer.com/insights/point/2014/climate-change-scenarios-implications-for-strategic-asset-allocation.html

11 2015 Mercer Report http://www.mercer.com/insights/focus/invest-in-climate-change-study-2015.html

the most severe impacts will be after 2050 (see Appendix 2).

These are major wake-up calls to the financial services industry. Given the reach of the organization behind Mercer – the NY headquartered Marsh & McLennan Companies Inc, a major global professional services firm with deep roots into the financial sector through several of its subsidiaries (e.g. Guy Carpenter, Oliver Wyman Group including NERA) – just the publication of this report could have huge ramifications.

In spite of these positive developments, it is rare for climate-related shareholder resolutions to garner anything near a majority of votes. In fact, major proxy advisory services do not yet see climate risks as material for mainstream investors. Most asset managers are not acquainted with the full breadth of climate related risks, and it is typical for them to consider climate risk primarily as regulatory risk—which they then discount because the most significant action on regulation requires Congressional action. Even the most optimistic analyst would find it tough to envision the passing of a carbon regulation bill in the foreseeable future.

DOES TRANSATLANTIC DIVERGENCE OF DIRECTION OFFER OPPORTUNITY FOR COLLABORATION?

We have seen the European landscape change significantly this past year, particularly in contrast to the US. First, we have seen the success of the "Aiming for A" resolutions with BP and Shell – and the internal change processes they have acted as the catalyst for – while climate resolutions were again meet with stiff board resistance at Exxon and Chevron[12]. Second, the largest European oil and gas companies have called for governments to agree on carbon pricing at the upcoming UN climate summit, whereas Exxon and Chevron have decided to opt out of the initiatives[13]. ConocoPhillips only recently suggested 'conditional' support for a UN climate deal[14].

This divergence in approaches places a stark choice in front of investors who have exposure to the US market and, to state the obvious, this includes all the members of UN-supported Principles of Responsible Investment (UN PRI) Initiative and the International Corporate Governance Network (ICGN). It makes little financial sense for investors to play both sides of the coin – back European fossil fuel companies who may be at the early stage of aligning with a 2°C world but also back American companies who seem to be at best indifferent if not actively trying to prevent this outcome. Investors need to choose which scenario they want to help be "Future Makers" of.

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12 http://insideclimatenews.org/news/28052015/exxon-chevron-reject-shareholder-measures-climate-change-again

13 http://pirc.co.uk/pircnews/the-transatlantic-gap-what-to-do-about-chevron-and-exxon

14 http://www.reuters.com/article/2015/09/04/usa-oil-climatechange-idUSL1N11A25J20150904

More practically, investors could play a big role in disseminating good practice standards between investee companies. But to do this, investors must first decide what they want to see happen. Forceful Stewardship fully recognizes that leveraging learning does not require replicating approaches to engagement, but rather, that past resolutions can be built upon and made more assertive in subsequent AGMs.

COORDINATION OVER RESOLUTIONS AND SOCIAL CHANGE STRATEGIES: IS IT POSSIBLE? IS IT DESIRABLE?

There are clear benefits to having multiple resolution types for investors to choose from. And in this context, if there could be a standard form of resolution which was forceful, systemic in focus and broadly supported, this also would be a positive development. But there is considerable doubt over whether this is possible in the US, specifically with regards to whether an “Aiming for A” type resolution would work with at the US supermajors.

The main concerns expressed during the ThinkTank about “Aiming for A” type resolutions were:

1. Companies would simply refuse to comply, responding instead that a 2°C ceiling on warming is not possible, so why should they prepare for it.
2. The SEC has excluded certain climate related proposals in recent years either because the company successfully argued “substantial implementation”[15] (example Exxon Mobil 2015 proposal on dividends and climate risk Exxon Mobil Corporation[16]), or because the Company asserted that the proposal went beyond addressing climate change to encompass other matters of ordinary business[17], or that it was deemed by the SEC under then prevailing circumstances to be too similar to other proposals on climate filed in previous or current years[18].
3. “Aiming for A” type resolutions would be seen as “back slipping” since they would be easier to comply to than earlier, more specific and more challenging climate resolutions. Or perhaps worse, companies will go along with an “Aiming for A” resolution on the grounds that they could tick the box in a tokenistic manner. Whether the assessment is fair or not, ISS said: “Unusually, BP is recommending support, which suggests that it does not believe the information requested by the filers will be particularly onerous or costly to assemble.”
4. Mutual funds would argue that they voted with “Aiming for A” in Europe because the resolutions were board approved and that this is where the responsibilities should rest. So if management

15 http://media.mofo.com/files/Uploads/Images/Frequently-Asked-Questions-about-Shareholder-Proposals-and-Proxy-Access.pdf
16 http://www.sec.gov/divisions/corpfin/cf-noaction/14a-8/2015/arjunacapital031715-14a8.pdf
17 http://www.sec.gov/divisions/corpfin/cf-noaction/14a-8/2013/asyousow030713-14a8.pdf
18 http://www.sec.gov/divisions/corpfin/cf-noaction/14a-8/2014/andrewbehar022714-14a8.pdf

objected, they would support management (their default position).

All of these are real risks. But there are also potential benefits of bringing forward an "Aiming for A" type resolution in the US:

1. It would force the debate over climate risk disclosure into the public arena and, in particular, force US mutual fund managers to take a public position. With companies and investors on either sides of the fence, the ensuing debate would be useful in terms of educating retail investors and the public. This could also trigger useful change, including from governments and regulators. What mutual fund managers have gotten away with in the past should not be considered a predictor of what they will be allowed to get away with today. Indeed, significant position changes such as support by some mutual funds for resolutions on disclosure of political spending suggest that industry thinking on stewardship has evolved. There are now marked differences between, for example, Alliance Bernstein and MFS on one hand, and Blackrock and Vanguard on the other[19].

2. One critical factor in defining how mutual funds respond is the public / consumer demand they experience and the media attention this brings. Put simply, whether US mutual fund managers dare to justify not voting for "Aiming for A" style resolutions in the US (because boards reject them) on the ground that they only voted for the BP and Shell resolutions because it was board approved depends on how US environmental and divestment campaigners approach this opportunity. Today, these groups are focused on particular fossil fuel companies / projects (e.g. Shell and Arctic) or divestment campaigns targeted primarily at university endowments. Focusing on the "invisible gorillas" of the US investment system and focusing on systemic disclosure initiatives would represent business model innovation as fundamental to what we want from fossil fuel companies.

3. It might "push" the SEC to consider the need for such resolutions in light of changing market conditions and the maturity of public debates over climate risk metrics. The fact that "Aiming for A" resolutions have been board approved and voted on by the vast majority of global, including US, investors is a significant argument. The SEC approach to climate risk resolutions at US coal companies is also ripe for reconsideration given the losses end beneficiaries have faced, as well as their guidance on climate risk materiality for listed companies[20]. The fact that the SEC has done so little in response to investor calls for improved climate risk disclosure is another reason why pushing for such resolutions may succeed. An important point to bear in mind is that to some degree, it is simply impossible to know how the SEC will actually respond to any resolution, and changes in SEC judgment over time are also well known.

4. Whilst some US companies may have disclosed climate sensitivity analysis, this is far from being

19 http://www.politicalaccountability.net/index.php?ht=a/GetDocumentAction/i/8720
20 http://www.ceres.org/press/press-releases/investors-push-sec-to-require-stronger-climate-risk-disclosure-by-fossil-fuel-companies

universal. More importantly, simple disclosure of sensitivity analyses is not the same as reporting on a low carbon business model and plans to thrive in a low carbon world. This includes indicating how capex, lobbying strategy and executive remuneration, to pick just three topics, would change. Getting the latter kind of integrated disclosure into the public debate, and forcing information intermediaries to analyse this – and holding them accountable for doing this in a rigorous manner – is a critical step which is easy to ignore. Moreover, if there is trans-Atlantic gap emerging, at least in leadership signals on climate risk readiness, failure to move the US majors could result in this opportunity being lost. In fact, while they may be loath to admit it, some C-suite executives in the energy sectors may prefer to see a reframing of how success is defined and the incentive systems that follow (i.e. more in line with their own personal values and concern about climate change), with long-horizon investors being the catalyst for removing the career risk that might otherwise come from expressing those values.

5. Part of the answer to the legitimate concerns raised above is to make the ask more demanding in an "Aiming for A +" type resolution. Of course, if this happens only in the US, this would give US mutual funds another easy argument for sitting on the fence. Thus "Aiming for A +" resolutions would need to become the norm for this approach to succeed.

The above lists illustrate difference of opinions within the investment community. There are even bigger major differences in approach between campaigners and investors.

DIVESTMENT VS. ENGAGEMENT: INSTEAD, ACT WITH SOLIDARITY, AND FORCEFULLY!

Underneath the noisy debate between divesters and engagers – reminiscent of the debate between the supporters of the Peoples Front of Judea and the Judean People's Front[21] – is another reality: these players may have more in common with each other than may otherwise appear:

- Both really want to be part of the solution, even if they have different views about how to achieve this.
- Both lack a 5-10 year strategy for how to plausibly shift the debate in such a way as to get society back to a (maximum) 2°C warmer world.
- Both do not have a plan for how to bring US mutual funds into the debate in a forceful manner in the timeframe that is relevant.
- Both have total conviction in the merits of their strategy[22] and the lack of value and possibility of doing things differently.
- Both (in private at least) are acting from positions which accept that they are "David" in relation to

21 https://www.youtube.com/watch?v=gb_qHP7VaZE
22 CERES has produced on behalf of INCR a defence of engagement no doubt in response to the critique offered

the Goliath (of fossil fuel and heavy user vested interests).

- Both really need each other. To use a military analogy, the divestment movement is the (public) infantry and it will be critical to victory. But without the support of the heavy guns and air cover (the investors) their public's energy may well be wasted.
- And both find it very hard to listen to each other.

Might Forceful Stewardship thinking provide a broad enough intellectual space to explore common ground for concerted action? There are some grounds for hope!

- Forceful Stewardship is a financially focused argument that cannot be ignored by boards and senior executives of mutual funds and trustees of pension funds. Nor can it be delegated to heads of corporate governance.
- It shares some of the views of divestment campaigners (namely that BAU engagement is not fit for purpose given the plausible worse case) but it also shares some of the views of investors who choose to engage (namely that divestment does not address systemic risk; i.e. is at best about managing sector risk of individual investors, since other investors will buy what is sold).
- It recognizes that the focus should be on both fossil fuels or heavy users (and so stimulating overall demand for green growth) as well as "enablers" e.g. financial/insurance or some mix of all energy market participants.
- It is fully compatible with policy related forceful stewardship efforts directed at regulators (e.g. SEC) and/or legislators.

For the same reasons, Forceful Stewardship could also be common ground for the three types of foundations:

- Foundations that support the "divest/invest" movement but who could still be Forceful Stewards given a) they have some fossil fuel companies in their portfolio now (some have only decided to divest from coal, others have decided to divest from oil & gas but are doing so over a multi-year period); and b) all the other companies in their portfolio which need to align their respective business models with a 2°C/450 ppm world (see Chapter 6 for how non fossil fuel sectors contribute to the problem).
- Foundations that care deeply about "symptoms" of climate change (e.g. pollution, human health, conservation, refugees, food security, economic resilience in the face of severe weather events etc.) but will not divest but may be persuaded to be Forceful Stewards.
- Foundations of individual philanthropists who care deeply about climate change but who operate with the same mainstream mindset that is fundamentally at the root of our problems. Namely, that it is possible to do good with one hand whilst ignoring how the other hand makes the money.

The big question unanswered in the ThinkTank, is whether there is any person or any agency that is trusted by enough of the players to be able to convene such a US dialogue. It is doubtful that a non-US player could do this. But equally all of the US players who care have positions that make them party to the debate. Who might be the movement's "President Carter" and could she/he be engaged in time to influence the 2016 AGM season resolutions?

OPPORTUNITIES FOR ACTION: INVESTMENT MANAGERS

One of the highest hurdles to clear in getting more action on the part of investment managers is temporal. Particularly in the US, investors have extremely short time horizons[23]. "Long term" rarely means anything longer than five years, and risks that manifest over longer time spans are therefore discounted, often without a great deal of analysis, as immaterial.

When the long term is considered, asset managers—as companies—should be very interested in the long-term horizon, and in particular the prospect of markets going up over the longer term. If the markets suffer badly, then ultimately this gives asset managers less assets on which to charge fees. So at the board level for an asset manager there should be a fiduciary duty to manage systemic risks.

What can investment managers do (and/or their Boards ask to be done)?

There is growing awareness – as a result of projects like the CFA's Future of Finance project and authors like Jim Ware ("Investment leadership: building a winning culture for long-term success") – that culture change is needed in the investment industry. The Presidential election – whoever wins – seems set to make this debate about short-termism even higher profile[24]. According to one participant in the ThinkTank, one menu for the "secret sauce" is as follows (with minor edits) but regardless of exact ingredients, the case for culture change is clear.

- Develop a reflective, research-orientated culture that questions what it's doing and to constantly be looking to improve visionary leadership.
- Empower implementation-focused leadership to make it actually happen in the organization.
- Support the development of internal resources (a team) to take change forward at a practical level.
- Orient investment teams with a long-term perspective and a learning mindset.
- Design internal incentives that reward the 'right' behavior (and not just pay structures etc. but soft rewards such as internal profile and inclusion in client reporting).
- Assist clients to articulate their clearly specified expectations (e.g. about voting policy), so this can

23 http://corpgov.law.harvard.edu/2015/08/24/institutional-investors-and-corporate-short-termism/
24 http://www.bloomberg.com/politics/articles/2015-07-24/hillary-clinton-calls-for-investors-to-escape-tyranny-of-short-termism-

be written into contracts.

- Develop an open culture that values collaboration, with an organizational structure that supports this governance that brings in 'real world' perspectives - e.g. beneficiary representation on a pension fund board, and
- Make it clear that the organization cares about its reputation and overall sense of mission and social purpose.

What cannot be glossed over is that this will take time. And hence the need for action which is much more direct and focused.

What can clients of investment managers do?

Asset owners should include effective assessment and management of climate change as a systemic risk, including active ownership policies as key requirements in their mandates. If an investment manager fails to adequately address climate change as a systemic risk, the asset owner should actively and publicly consider taking their business elsewhere. Climate change risk management needs to become mandate threatening. Asset owners should no longer tolerate inaction by the investment managers.

OPPORTUNITIES FOR ACTION: ASSET OWNERS

Asset owners are far from homogeneous. While some state and city pension funds have been leaders on integration of sustainability into investment processes, and some have been leaders on engagement and advocacy, many more are passive, agnostic, or uninterested. As this report explains, asset owners have the strongest reasons to act, at least on climate risks: their investment time horizons are much more likely to be long term, particularly for pension funds.

Yet asset owners, while often describing themselves as long-term investors, often have the same short-term performance measures and pressures as investment managers, and little is done to create measures and indicators that more accurately track long-term performance.

It is true that some asset owners may also believe that regulations prevent them from taking issues like climate change into account[25]. However, the fact that other asset owners are not constrained by their legal advisers is an indication of where the problem rests.

25 Some have speculated that the Department of Labor's 2008 "Interpretive Bulletin Relating to Investing in Economically Targeted Investments" made it tougher for trustees to act. This is rebuffed by Tessa Hebb and Jayne Zanglein, Economically targeted investing: changing of the guard, Cambridge Handbook of Institutional Investment and Fiduciary Duty (2014).

OPPORTUNITIES FOR ACTION: INTERMEDIARIES

Intermediaries like investment consultants are as varied a group as asset managers and asset owners. Some, like Mercer, have been leaders in assessing ESG risks and opportunities, informing clients (and others) about these, and creating measures to assess levels of ESG integration. Others see ESG risks as non-financial or immaterial, and will only act when specifically instructed to do so by a specific client. Another influential group of intermediaries are the proxy voting advisors. These firms have incorporated climate and other ESG risks into voting recommendations and analysis for clients specifically interested in these issues, but have yet to see these issues as pertinent for their mainstream clients. In short, they see environmental risks not as financial issues, but as preferences related to values. For many years, SRI firms and sustainable investment nonprofits have engaged with proxy advisors on these issues, and while there has been occasional progress, the perception of immateriality remains. Hence the importance of mainstream investors – and not just in the US – prioritizing this aspect of Forceful Stewardship.

Finally, regulatory authorities can wield significant influence. In 2007, a group of SRIs, nonprofits and asset owners petitioned the SEC to issue interpretive guidance related to climate risk. And in 2010 the agency did so[26], noting that Regulation S-K already compels disclosure of all material items, including many forms of environmental risk. In the years since then, however, the agency has shown minimal interest in enforcing that, despite entreaties from investor groups under the auspices of INCR. It is absolutely critical that mainstream investors who are concerned about climate disruption – and again, this includes investors outside the US – do more to support INCR in this work[27]. (See Chapter 5, “Recommendations for action”).

OPPORTUNITIES FOR ACTION: NGOS AND FOUNDATIONS

An essential component of effective leadership is the ability and courage of supporters and followers to critique leaders’ ideas and actions[28]. This type of dialogue allows for collaboration in service of an organization’s mission. In the case of specialist NGOs that support Asset Owners’ and Asset Managers’ efforts to invest in a transition to a low carbon economy, this relationship characteristic is sufficiently lacking as to prevent the needed energy transition from progressing with the speed demanded by big climate risk.

First and foremost among the associated challenges specialist NGOs must acknowledge is that there is an unwillingness to exercise candor in communications with investors. This is understandable but the outcome is dysfunctional: it results in praise where this is not due, under-reaching on goals, and

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26 https://www.sec.gov/rules/interp/2010/33-9106.pdf

27 http://www.ceres.org/files/confidential/investor-sec-letter-inadequate-carbon-asset-risk-disclosure-by-oil-and-gas-companies

28 http://www.courageousfollower.net/

acceptance of inaction. Undoubtedly, this unwillingness to potentially offend financial leaders has roots in the conflict of interest inherent in accepting funding and fees from the institutions being supported. The integrity of this arrangement is further compromised when one realizes that these specialist NGOs' Board of Directors' are heavily populated by current and former investment executives.

Equally problematic, are the well-known low pay rates specialist NGO's offer employees. This issue prevents attracting candidates with sufficient understanding of investment processes, which results in: (1) misplaced optimism in terms of what can actually be accomplished; (2) an inability to meaningfully engage with investors, that is to say, challenge, advise, and offer alternatives; and (3) high turnover rates for the most valuable employees.

Finally, despite having similar goals, specialist NGOs are often competing with one another for the same funding sources. In such an environment, meaningful collaboration is rare and the desire for credit is strong. This problem serves to create a cycle in which specialist NGOs are willing to accept, promote, and claim credit for their members' lackluster performance. In turn, securing continued funding yet perpetuating a slower-than-needed transition to a low-carbon economy.

Related forms of inconsistency are characteristics of some foundations as well[29]. Despite commitments by some to divest from fossil fuels, the details of the commitment are often limited to coal while investments in oil and gas remain untouched and investments in renewable energy remain under-represented. Thus, it being the case that the effects of climate change adversely impact issues foundations are dedicated to alleviating, such as poverty, hunger, water availability, pollution, etc. holding fossil fuel investments creates a misalignment with a foundations mission.

As the Pope articulated clearly in his recent Encyclical[30], everyone is asked to step-up and do more. The leadership of NGOs and Foundations have a particular responsibility to raise the bar on their climate related efforts as well. The introduction of the Forceful Stewardship Guidelines provides an ideal opportunity for a step-change in approach. Addressing systemic risk requires a collaborative systems thinking approach to the issue. This is a great opportunity for leading American NGOs and Foundations to step forward and lead the way, setting an example for peers in other countries where the same dynamics operate.

WILL THE THREAT OF LITIGATION IMPROVE COMPANY TRANSPARENCY & ACCOUNTABILITY ON CLIMATE RISK?

US company management is generally opaque to shareholders and the public. This stems from the limited power shareholders have to verify company statements or to determine the accuracy of SEC

29 http://www.reinhartlaw.com/Documents/RIIS_20150114FINAL.pdf
30 http://www.eastbayexpress.com/oakland/three-cheers-for-the-pope/Content?oid=4381564

filings. This lack of transparency creates potential risk for shareholders regarding their ability to identify problems that may lead to loss of shareholder value. To cite an infamous example, on August 22, 2008 the New York Times reported, "…Lehman is expected to report another bad quarter. Analysts expect the bank to lose as much as $3.30 a share..."[31]. But by September 15, the company had declared bankruptcy, thereby completely destroying all shareholder value.

To be fair, however, many investors were asleep at the wheel. Having watched idly as companies mismanaged short- and long-term risks that resulted in a variety of negative outcomes for years, U.S. investors have maintained a passive attitude towards company management. This is the very opposite of Forceful Stewardship, which is why a sharp wake-up call, via litigation, may unfortunately be essential.

This tendency of investors to be ill-informed would diminish if investors followed advice of the Delaware courts and made greater use of "books and records" requests, with the implicit threat of potential shareholder litigation to encourage more accurate and useful reporting[32]. When used by shareholders, "books and records" requests could be one of the most forceful means by which shareholders can steward their investments. It is an attempt to more forcefully protect the company from the damage that can be caused by a board's inability or unwillingness to prudently manage risk and be to be held accountable for overseeing development of fit for purpose business plans. The strategy is best suited for matters in which a company's actions have been egregious, long term, and apparent to third parties. The purpose of a "books and records" request is to require a company to turn over internal documents, thereby enabling the performance of an analysis of specific issues authorized under state corporate law. See Appendix 3 for more information on "Books and Records" requests.

If such a demand is rejected by the board, shareholders can proceed with a lawsuit to enforce the request. If successful, a "books and records" request would enable shareholders to review documents and better evaluate what is happening "behind the curtain," for instance, how a company's public statements align with actual treatment of an issue like exposure to climate risk. Where the review shows negligence, misconduct, waste of corporate assets, or similar harm to the company, filing of a derivative action by shareholders (acting in the place of the board to recover losses incurred for the company) might be appropriate.

A "books and records" request, together with ensuing derivative litigation to recover corporate funds where appropriate, is a key strategy for shareholders to hold companies accountable for their actions on climate change. As climate change represents potentially staggering losses to companies across sectors, it is in shareholders' best interest to exercise these rights to prevent (or recover) losses that are preventable.

31 http://www.nytimes.com/2008/08/23/business/worldbusiness/23lehman.html?_r=0

32 The Delaware courts have encouraged shareholders to use books and records requests to evaluate potential misconduct before filing any derivative action. In re Walt Disney Derivative Litigation, 825 A.2d 275, 279 (Del. Ch. 2003).

CONCLUSION

We have two clear focus areas—US corporations and the US investment community—and goals and targets must be set for moving each along on the path for 2°C pathway. The commitment and ingenuity of shareholder activists and environmentalists in the US is awe-inspiring, and provides a great spring-board upon which to propel us forward. On the flip side, the US corporations – including US headquartered global financial giants – often remain as laggards in their respective sectors. Whilst non-US players will clearly be out of their depth when it comes to technical detail, concerned US players may find benefit from greater collaboration with non-US players, at least in terms of testing different strategies and unusual alliances to see if they have value. Outsiders may also assist US players to collaborate with each other more productively than has happened to date in the way that external third parties can sometimes do. These benefits may or may not be realized but given the scale of the challenge and the speed with which change needs to happen, there is arguably a strong case for limited resourcing of innovation in stewardship strategies.

CONCLUSION AND NEXT STEPS

Every innovation is risky, but in the ESG world, sometimes it feels even more so.

When some colleagues and I started the International Investors Group on Climate Change (IIGCC) over a decade ago, the dominant view was that it wouldn't work. Now, collaborative investor engagement of that kind is taken for granted and IIGCC acted as a catalyst for similar projects globally. When "Aiming for A" was first launched in 2012, some felt it was too aggressive. A year or so later, 98% of investors backed it.

So could now be the right time for another, yet bigger innovation of a similar kind that we can only deliver together? You may have seen the spoof video of the Pope fighting – quite literally – the fossil fuel industry in a boxing ring. What if mainstream investors also chose to really get into this (metaphorical) ring?

Because as Lord Nicholas Stern asks in his must-read new book: "Why are we waiting?"

Society has retired powerful economic interests that no longer fit with society's needs before: the abolition of the slavery for example. Or more recently, an issue which was totally divisive in the US – gay marriage rights – has been converted into something quite acceptable.

These were social challenges for other times. For other people.

Climate change is not only an environmental and social crisis, it also presents real portfolio risk exposures and investment opportunities.

Our challenge today as investors, is to get ready for the period after the international negotiations in Paris in December this year, because our industry may be the key mechanism for ratcheting up the "soft" agreements that come from those talks.

So the 2016 AGM season will be a key test for us.

The content of this report comes from an on-line dialogue held last month – a virtual ThinkTank facilitated by Convetit . The idea for this came after I saw an interview with the President of the World Bank. Comparing his experience of dealing with the HIV /AIDs challenge where civil society made companies and governments respond proactively, he highlighted current weak collaboration between specialists and campaigners on the climate challenge.

Certainly, as Howard Covington, the lead author of our research work, and I started talking about our proposal, we found a divide between NGOs and concerned foundations on one hand, and investors on the other. We also found international divides; particularly between North American and European players, and also between Western and Emerging Market players. And perhaps most interestingly, we found differences within the organizations that are working on climate issues, with some people seeing the need for fundamental innovation and others seeing only the possibility of incremental evolution.

So what we did, in tandem with researching and networking, was to get as much of this diversity as possible into one room. And to ensure it was productive, we've focused on "positive mavericks"; people who would take a chance and say what they really think. And constructively!

With these carefully selected investment specialists along with equally carefully selected non-investment specialists – lawyers, campaigners, scientists and academics – we found that we were able to come up with ideas that neither party could do alone. The cross-pollination between experiences from different countries was also powerful.

It would be impossible to write a consensus report which people could get signed off. So instead we – and it really is we – have written a report heavily informed by the discussions and the surveys.

So we hope you find what we have written stimulating. And we look forward to hearing your thoughts and conclusions.

For our part, the priorities are:

At the Global level:

We will continue with quarterly global ThinkTanks with participants who are seriously committed to the idea. We will also investigate the possibility of stakeholder specific dialogues, for example with proxy agencies (about their approach to future resolutions) and investment consultants (about their approach to stewardship activities by fund managers).

We will seek commitments and resources for the launch of the Forceful Stewardship idea around the COP21 agenda, so that in the months that follow, investors won't be surprised to hear from us.

At the National level:

The ThinkTank highlighted the possible value of country pilots in Canada, the Netherlands, and the USA. We will be bringing this discussion to the next level by exploring with individuals and organisations in those countries whether this will be useful.

Climate disruption does not bode well for investment prospects and thus our beneficiaries. The effects of climate change are non-diversifiable and destruction of the value of our portfolios is where we are heading. The only thing that can work is a rapid transition to a low carbon economy. The good news is that investors have the tools and the influence to make this happen. And they would benefit financially if this happened.

As Lord Stern might say, why are we waiting?

APPENDIX 1 CLIMATE SCIENCE AND BIG CLIMATE RISK

"The uncertainty is mainly linked to what we as a species choose to do, not uncertainty in the science." Andy Pitman

The second investment belief underpinning the Forceful Stewardship states that "Whilst we are aware of the serious case for setting the ceiling on warming at or perhaps even below 2°C, we believe that the most vital action for institutional investors to take today is to fully engage in system change to support a 2°C ceiling or maximum of 450 ppm of CO2, and to also be ready for changes in scientific/policy consensus which may come suddenly."

The following section provides some additional insights on the 2°C warming ceiling as well as the implications of non-linearity of climate change for investors..

WHAT INVESTORS NEED TO KNOW ABOUT THE 1.5°C VS 2°C DEBATE

The UNFCCC, looking at the Long Term Global Goal (LTGG) of 2°C, makes the following recommendation: "While science on the 1.5 °C warming limit is less robust, efforts should be made to push the defence line as low as possible"[1]. The UNFCCC also highlights the fact that 2°C should not be seen as a safe "guardrail", with a 1.5 °C limit coming closer to it and that there are uncertainties

1 http://unfccc.int/files/science/workstreams/the_2013-2015_review/application/pdf/sed_final_report_presentation_a__fischlin__zou_ji.pdf

whether the difference between 2°C and 1.5°C is gradual or non-linear, something which could have catastrophic consequences.

David Spratt[2] goes further and questions if 2°C is an appropriate focus for policy making.

HISTORY[3]:

- 2°C is not a scientifically informed target
- Proposed by the EU as a policy target in 1996, as "maximum allowable warming to avoid dangerous anthropogenic interference in the climate"
- Quite a lot of science in the last 20 years, in fact most of what we know has been understood in the last 20 years.

THE ISSUES AROUND 2°C ARE 2 FOLDS:

- 2°C is the global mean warming and doesn't translate into 2°C everywhere. The map hereafter shows how today's warming of 0.9°C translate globally[4]. The areas in purples are already showing a warming of more than 1.75°C.
- 2°C in the mean translates into a significantly larger amount of warming in the source of extreme temperatures which tend to have a big impact on socio-economic systems. In the last 10 years for example, even though the average global warming has slowed, the warming in the extreme temperatures has continued unabated.

1.5°C VS. 2°C

- 2°C is better than 4°C, which is where we are heading currently, and 4°C is unlikely to be a planet that we will really be able to cope with.
- 2°C is a global mean and Implies 3°C to 4°C over the global land, 4°C to 5°C over some mid/high latitudes
- 4-5°C in these regions implies more than 5°C increases in extreme temperatures
- There is already a clear evidence of large and dangerous increases in some extremes with observed

2 http://www.alertis.nl/Uploaded_files/Zelf/Dangerous%20climate%20change_Myths%20and%20Reality_August%202014LR.pdf
3 Randalss S, 2010, History of the 2°C Climate target, WIREs Clim Change,1, 598-605,10.1002/wcc.62.
4 https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WGIAR5_SPM_brochure_en.pdf

warming (0.9°C). If we've seen some large and dangerous warming at 0.9°C, it's very difficult to assert than 1.5°C is safe, but it is safer than 2°C.

CONCLUSIONS

- We have seen massive extreme events emerge at 0.9°C (Europe, Australia, US)
- Further warming will change the magnitude frequency and duration of some of these
- The good news is the scale of these changes is clearly less if we are able to limit global warming to 1.5°C relative to 2°C.

BIG CLIMATE RISK

FAT TAILS - PARALLELS BETWEEN FINANCE AND CLIMATE SCIENCE

The parallels between environmental extreme outcomes and investment extreme outcomes can be striking. Investors tend to think about probability distributions of outcomes, they know that there are often "fat tails" (non-normal distributions), but they still are still surprised by them. In using VaR analyses, for instance, investors look at probable outcomes to a 95th or 97.5 percent probability, but rarely understand the magnitude of what can/will happen if a result is in the outlying 5 or 2.5% range. In other words, how bad (or good) can a tail event be. If investors don't understand it (or, perhaps, if they don't internalize it and therefore over-discount it) in financial markets, why would they understand it in climate science?

It is understandable that 100 years is beyond any investor's timeframe, but a fiduciary who is responsible for retirement payouts to participants entering the work force today must think decades ahead. Not simply to the day they retire, but throughout their retirement years, which are longer and longer. And, of course, if we are making decisions today that lock us in to severe damage next century, we must find a way to make that risk present.

INVESTOR REALITY CHECK

It seems reasonable to assume that very investors have seriously considered the different damage curves and the impact sensitivity of different outcomes. There is beginning to be an acceptance that climate change could have material impacts and investors need to consider them, which is a start, but the debate between 2 vs. 1.5 degrees is almost lost on investors. Even among those that are thinking about this, there is sense that 2% may be too hard to achieve. Probably the consensus thinking (among climate aware investors) is that we are realistically looking to a 3.5°C to 4°C warming, which a decent level of action could bring down to a 2.5 to 3 degree warming. It's not to say investors have given up a 2°C outcome, but the first challenge is to make 2°C a reasonably possible outcome. It would also probably be useful to brutally clear about what a 4°C world implies.

One of the problems is that investors are used to being "takers" of economic forecasts - rather than seeing themselves as "makers" of the economic outcome. Although investors are starting to engage a little more in the policy debate, there is a long way to go. So in the absence of the sense of being able to change outcomes, investors take a very hard nosed approach to what they see.

Another issue is that much of the damage is ultra long term in investment terms - 100 years which challenges the mindset of even the most long term investor (10 years being the longest that anyone uses for practical portfolio management) - yes investors have liabilities stretching out that long and can buy 100 year bonds, but the reality that it is very difficult to get a handle on those timeframes as an investor. Melting ice caps would be catastrophic, but take hundreds of years.

A final issue is that for investors (more than the planet) the impacts are also quite policy dependent, particularly if they to be brought forward to a more manageable time frame - making robust climate action important.

APPENDIX 2
CLIMATE VALUE AT RISK METHODOLOGIES

To support the intellectual infrastructure for the initiative, Preventable Surprises would like to help realize a comparative analysis of a small-N set of Value-At-Risk methodologies (distinct from economic damage assessments resulting from climate change).

Can you help? Are you a foundation that could support this work? Or are you academics who could take this analysis forward on a pro-bono basis. Our ideal academic collaborator(s) would:

- Be independent minded
- Understand climate science i.e. emissions trajectory towards 4+ degrees warming and what that means
- Be willing to name conservative assumptions/methodologies for what they are/avoid self-censorship
- Have strong credibility as an economist/specialist in a relevant field
- Disclose or preferably avoid any relevant conflicts-of-interest

The specific research questions are twofold:

1. Are you aware of any reports that compare what climate-change induced economic damage means for investment portfolios? We are specifically looking for examples that are in addition to the three listed below:

    - Covington, Howard and Thamotheram, Raj. The Case for Forceful Stewardship (Part 1): The Financial Risk from Global Warming (January 19, 2015).

- Mercer. Investing in a Time of Climate Change. (June, 2015).
- Economist Intelligence Unit and Aviva. The cost of inaction: Recognising the value at risk from climate change. (July 24, 2015).

2. For this set of reports and others identified, what are the respective assumptions and methodologies employed, and how do these yield different outputs?

   The review should first identify the key assumptions/ sensitivities for each model and then undertake a comparative analysis reviewing the following key issues, among others to be identified by the researcher:

   - How different models deal with the great uncertainty associated with calculating VaR. Specifically, do they (a) attempt to make quantitative assertions based on spurious data; or (b) do they address plausible worst case scenarios (probabilistic vs possibilistic thinking)?
   - Whether the models reference a high or low climate damage function, and how the choice of damage function affects outcome assumptions and findings.
   - Do existing VAR models pertaining to portfolio-level climate risk adequately explain variations across different possible modeling methodologies and appropriately defend their choice of assigned values?

For further details contact: Priya Bala-Miller, *Fink Fellow, Sustainability Accounting Standards Board (SASB):* pbalamiller@gmail.com

APPENDIX 3
BOOKS AND RECORDS REQUEST - AN OVERVIEW

AUGUST 13, 2015

The "books and records" demand enables shareholders to obtain information from companies they own. State law governs the procedures and substance of books and records requests. Typically, such statutes require that the request be made for a "proper purpose," which means a purpose related to the shareholder's interests as a shareholder. The contours of that interest are context specific and subject to interpretation by the courts of the state of incorporation. However, as discussed below, some general contours are evident.

As with any risk, investors in fossil fuel companies need to ensure that management is properly addressing climate risk and not making wasteful expenditures or risking the firm's reputation doing so. In light of evidence suggesting that fossil fuel companies have knowingly worked to deceive the public about the risks of climate change, investors may feel compelled to determine whether management is being completely truthful with shareholders and not expending corporate assets on deceptive information campaigns with potential future liability exposure[1]. Books and records demands may be one tool for doing so. In addition, recent divergence between US and European oil and gas companies toward addressing climate change in public reports might raise questions about compliance with SEC guidance on disclosure of material effects associated with climate change[2].

1 For additional information, see Union of Concerned Scientist, The Climate Deception Dossiers (Jul. 2015), available at http://www.ucsusa.org/sites/default/files/attach/2015/07/The-Climate-Deception-Dossiers.pdf; see also Suzanne Goldenberg, ExxonMobil gave millions to climate-denying lawmakers despite pledge, The Guardian, Jul. 15, 2015, available at http://www.theguardian.com/environment/2015/jul/15/exxon-mobil-gave-millions-climate-denying-lawmakers.

2 For the SEC guidance, see https://www.sec.gov/rules/interp/2010/33-9106.pdf.

QUESTIONS

WHY WOULD A SHAREHOLDER MAKE A BOOKS AND RECORDS REQUEST?

Shareholders need to receive information relevant to protect their interests in the company and make decisions regarding how to vote shares, buy sell or hold those shares, and determine that the company's agents are not mismanaging corporate risks or wasting corporate assets. The books and records mechanism permits shareholders to make such inquiries as discussed below.

WHAT MUST A SHAREHOLDER SHOW TO BE ENTITLED TO INSPECT BOOKS AND RECORDS?

Shareholders must have a "proper purpose" reasonably related to the person's interest as a stockholder. Generally speaking, books and records statutes do not permit shareholders to conduct a "fishing expedition" through company records. Some courts have summarized the "proper purpose" limitation as requiring shareholders to identify what they will do with the information and the end to which their investigation might lead. Proper purposes include:

- Investigating actionable mismanagement or potential waste of corporate assets;
- Clarifying an unexplained discrepancy in the corporation's financial statements;
- Obtaining information to support derivative lawsuits.[3]

Shareholders may seek this information regarding actionable mismanagement, waste, or financial discrepancies for the purpose of, among other things:

- Seeking an audience with the board to discuss reforms;
- Preparing a shareholder resolution for the next meeting;
- Initiating a shareholder derivative suit.

There is also some precedent for permitting shareholders to seek books and records for the purpose of a

3 Some courts, however, do not permit the filing of books and records requests after a lawsuit has been filed because such requests are seen as an end-run around discovery rules.

proxy fight, particularly if the books and records are used to verify company promises made in resolving a prior proxy fight. Generally, it is the shareholder's burden to identify a proper purpose and present a credible factual basis supporting the stated purpose.

ON WHAT GROUNDS COULD A COMPANY OBJECT TO A BOOKS AND RECORDS DEMAND?

The primary objections available to a company presented with a books and records request are that (1) it is sought for an improper purpose (such as to harass or conduct a fishing expedition, or where the information will be used by competitors); (2) the demand is overbroad in light of the purpose for which it is sought; or (3) where the demand is based on mismanagement or wrongdoing, it is not accompanied by credible allegations of such mismanagement or wrongdoing.

WHAT KINDS OF INFORMATION CAN BE ACQUIRED THROUGH A BOOKS AND RECORDS DEMAND?

The most common use of a books and records request is to obtain shareholder lists for the purpose of contacting other shareholders in the context of a proxy fight. However, shareholders can also obtain other books and records, provided that the shareholder is seeking the information for a proper purpose, the information requested is essential to that purpose, and assuming that the company keeps the pertinent records (i.e., it cannot be required to generate the records). Requests for documents not essential to this purpose can be denied. In this sense, the books and records request is a much more limited version of the broad discovery permitted under federal and state law.

ARE THERE REASONS OTHER THAN ACTIONABLE MISMANAGEMENT OR WRONGDOING FOR WHICH SHAREHOLDERS CAN OBTAIN BOOKS AND RECORDS INFORMATION?

The answer depends upon the particulars of the books and records statute in the state of incorporation. Courts in Delaware, for example, have made it increasingly difficult for shareholders to pursue books and records requests unless there are allegations of actionable wrongdoing or mismanagement, notwithstanding that the legal standard defines a proper purpose as "a purpose reasonably related to such person's interest as a stockholder." Del. C. § 220(b)(2)-b2. However, even in Delaware, there are instances in which shareholders have been able to obtain books and records information outside of the mismanagement/wrongdoing context. For example, in one case, shareholders seeking information on whether a company had fulfilled its agreement resolving a prior year's proxy fight were entitled to books and records necessary to make that determination. See High River L.P. v. Forest Labs., Inc., C.A. No. 7663-ML (Del. Ch. Feb. 5, 2013).

Moreover, large institutional investors such as the New York State Comptroller's office have filed books and records requests for information related to corporate and political spending without alleging either actionable mismanagement or wrongdoing, arguing instead that Qualcomm's political spending was directly related to its interests as a stockholder since it did not add long-term value to the firm (but did have some correlation to self-aggrandizement by management). See New York State Common Retirement Fund v. Qualcomm Incorporated, Complaint, C.A. No. 8170 (Strine, L.) (Del Ch. Jan. 2, 2013). The dispute settled so no decision on this argument was reached. However, the fact that the plaintiff would make the argument on this basis suggests the possibility that a "proper purpose" could include obtaining information that doesn't directly relate to claims of mismanagement or wrongdoing. Compliance with SEC climate change disclosure and with fiduciary duty reporting requirements might present a similar proper purpose.

HOW DOES AN INVESTOR BRING A BOOKS AND RECORDS DEMAND?

Books and records actions are based upon the law of the state in which the company is incorporated. For many but not all major U.S. fossil fuel companies, that is Delaware[4]. In Delaware, the shareholder makes a written demand, under oath, on the company at its registered office in Delaware or its principal place of business. The demand must detail the books and records that the shareholder seeks. If the company denies the shareholder's demand, then the shareholder may seek relief in state court.

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Rick Herz of Earth Rights, Muriel Moody Korol of CIEL, Robert Schuwerk of Carbon Tracker, and Keith Johnson of Reinhart Boerner Van Deuren s.c. contributed Appendix 3 to the report.

4 Exxon, for example, is incorporated in New Jersey, but New Jersey's books and records provisions are similar to Delaware's.

APPENDIX 4
AIMING FOR A'S BP RESOLUTION

'Aiming for A' was launched by CCLA in 2012[1]. The 'A' refers to the best CDP banding. The ten UK-listed extractives and utilities companies the London-based investor coalition engages with had reached A (2), A- (1) or B (7) by the autumn of 2014.

Glass Lewis and ISS[2] recommended voting in favour of the 2015 BP 'Aiming for A' resolution (see overleaf). What they would have recommended had management not already indicated support is a critical question.

Glass Lewis stated that "Although the Company currently provides significant disclosure with respect to its risks and opportunities with respect to climate change, we believe that adoption of this proposal could provide meaningful information to shareholders. Particularly given board support for this resolution, we believe that both the Company and its shareholders will benefit from increased disclosure on in the information requested by this proposal. We recognize and the Company acknowledges that it is subject to certain risks concerning climate change. As such, we believe that the Company's support for this resolution demonstrates both leadership in this area and responsiveness to shareholder concerns"

ISS' summarised their analysis in this way "unusually, BP is recommending support, which suggests that it does not believe the information requested by the filers will be particularly onerous or costly to assemble. Furthermore, investors may benefit from additional information about how the Company

1 https://www.responsible-investor.com/home/article/why_were_aiming_for_a/

2 PIRC/LAPFF, who are part of the 'Aiming for A' investor coalition, unsurprisingly recommended voting for the resolution. Manifest stated that "actions regarding this resolution would be most appropriate left at the shareholders discretion".

is managing the risks and opportunities associated with climate change. It is worthwhile to emphasise that a board recommendation of support for a shareholder resolution is an extremely rare occurrence, in the UK and elsewhere. In the absence of any obvious concerns, and taking into account the Board's favourable recommendation, shareholder support for this resolution is warranted".

Aiming for A's BP Resolution	**Strategic resilience for 2035 and beyond:** That in order to address our interest in the longer term success of the Company, given the recognised risks and opportunities associated with climate change, we as shareholders of the Company direct that routine annual reporting from 2016 includes further information about: ongoing operational emissions management; asset portfolio resilience to the International Energy Agency's (IEA's) scenarios; low-carbon energy research and development (R&D) and investment strategies; relevant strategic key performance indicators (KPIs) and executive incentives; and public policy positions relating to climate change. This additional ongoing annual reporting could build on the disclosures already made to CDP (formerly the Carbon Disclosure Project) and/or those already made within the Company's Energy Outlook, Sustainability Review and Annual Report.
Requisition Statement – Preamble Extract	There are several reasons why UK asset owners and fund managers have come together under the "Aiming for A" initiative to support extractives and utilities companies in their preparations for the low-carbon transition. These range from systemic risk management and our collective fiduciary duty to engage in economic transformation, through to amplifying longer-term investor voices and involving ultimate beneficiaries. We believe that supportive but stretching shareholder resolutions can play a positive stewardship role in the UK. They could amplify the need to balance the short- and longer-term aspects of shareholder value creation.
1. On-going operational emissions management	In 2014 BP reached a "B" carbon performance band (on an A-E scale) through CDP. Within the performance banding methodology considerable weight is given to operational emissions management, alongside strategic and governance issues like those below. The "Aiming for A" coalition and other investors are interested in how the company is maintaining progress towards reaching an "A", including across companies where BP has a major shareholding. For further details see https://www.cdp.net/en-US/Programmes/Pages/CDP-Investors.aspx

2. Asset portfolio resilience to post-2035 scenarios	BP has a diverse portfolio of assets (operational and in reserve). The role of gas as a transitional fuel is well reflected in this portfolio, and the current resilience of the company's overall portfolio compares favourably with other oil and gas majors. We ask that an assessment of the portfolio's resilience against the range of IEA4, and any other relevant post-2035, scenarios be outlined to investors in routine reporting from 2016. Investors are also interested in the role exploration, disposals and cash distributions to investors will play in the nearer term.
3. Low carbon energy R&D and investment strategies	BP has an Alternative Energy business, and USD 8bn has been invested ahead of schedule. In addition, 20% of BP's. R&D is already directed towards the low carbon transition. Investors are interested in BP's post 2015 plans in these areas, including any for carbon capture and storage (CCS).
4. Strategic KPIs and executive incentives	BP was one of the first oil and gas majors to signal a strategy of "value not volume". Transitions that span decades are complex to manage and often require lead indicators and incentives. Investors are interested in BP's evolving approach to KPIs and executive incentives, in the context of the transition to a low carbon economy, including the role played by the reserves replacement ratio (RRR).
5. Public policy interventions	BP has co-ordinated its approach to public policy at group level since 2011 and recently joined over 70 countries and over 1000 companies in signing the World Bank statement for a price on carbon6. Investors are interested in BP's public policy programme, including positions on key policy measures, especially for the critical 2015 to 2020 policy making period.
Requisition Statement- Concluding Comments	Finally, we'd also like to highlight the global investor coalition on climate change's document outlining their expectations for oil & gas majors, which is available from: http://globalinvestorcoalition.org/. This builds on their carbon asset risk (CAR) initiative.

APPENDIX 5 PARTICIPANTS SURVEY KEY CONCLUSIONS

During the course of the ThinkTank we did 3 surveys. The raw data will be made available on the Preventable Surprises site shortly. The key conclusions were as follows:

1. There is a general consensus that **reducing carbon emissions is essential**. Participants do not agree on whether it is possible and in this important respect, **reflect the wider investment** community.
2. The two most favoured strategies for investors managing big climate risk are a) **engaging assertively with governments to implement effective policies** and **b) engaging assertively with companies to change their core business strategies**. In order of (decreasing) support, the other strategies were: portfolio decarbonisation; strategic asset allocation; green investing; and divesting from fossil fuels.
3. **There is strong confidence in the impact of pushing for low-carbon business models and plans.**
4. There is a general consensus that setting a **legal precedent is essential** for bringing about large behavioural change but also that it is only part of the solution.
5. **Firm demand from asset owners** in the form of clear RFP's and monitoring thereof, is also considered essential for investors to be genuine 'future makers'.
6. There is a strong consensus that **passive investors must play a greater role**.
7. **Sell-side research, central bank research & scientists** are considered key partners to further understand the implications of climate damage curves and the non-linearity of climate disruption, with polarised views about the expert role of NGOs.

APPENDIX 6 CHANGE IN SUPPORT FOR FORCEFUL STEWARDSHIP INVESTMENT BELIEFS

BETWEEN PRE- TO MID-EVENT SURVEYS

1. Institutional investors, like many organisations, are badly prepared for the climate disruption that we are currently on track for (average 4°C warmer or more by the end of the century).
   From 80% to 100%

2. Whilst we are aware of the serious case for setting the ceiling on warming at 1.5°C, we believe that the most important thing for institutional investors to do now is to fully engage in system change to support a 2°C ceiling or maximum of 450 ppm.
   From N/A to 91%

3. We believe that the climate related portfolio value at risk for diversified institutional investors is already significant, and will become very significant by 2030s, given the climate disruption that we are currently on track for.
   From 24% to 77% support increased 3 folds!

4. We believe that a rapid transition to a low-carbon economy will significantly reduce big climate risk and that this transition could be structured towards long term cost-neutrality for diversified investors.
   From 60% to 80%

5. We believe that fossil fuel company directors face a conflict of interest in advancing a rapid transition to a low-carbon future. Diversified investors are uniquely positioned to reduce or perhaps even eliminate this conflict.
   From 52% to 75%

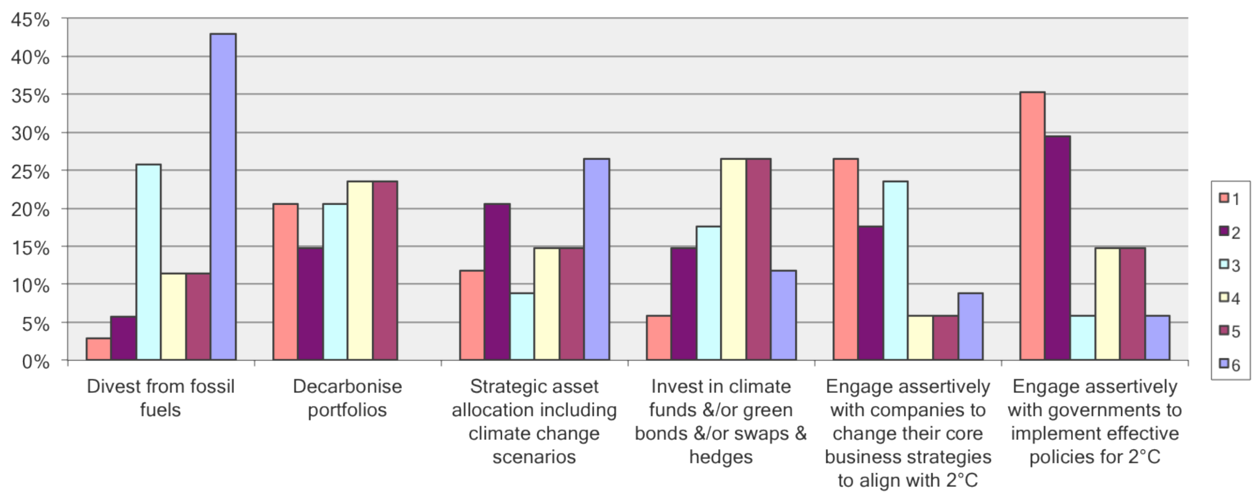
6. We believe that fiduciary capitalism requires a fundamentally different risk management approach with a focus on the prevention and mitigation of risks which are catastrophic and systemic.
   From 74% to 91%

7. We believe that forceful stewardship (i.e. fit for purpose given big climate risk) requires very significantly improved collaboration between diversified investors and also collaboration with informed non-investment specialists (e.g. scientists).
   From 63% to 97%

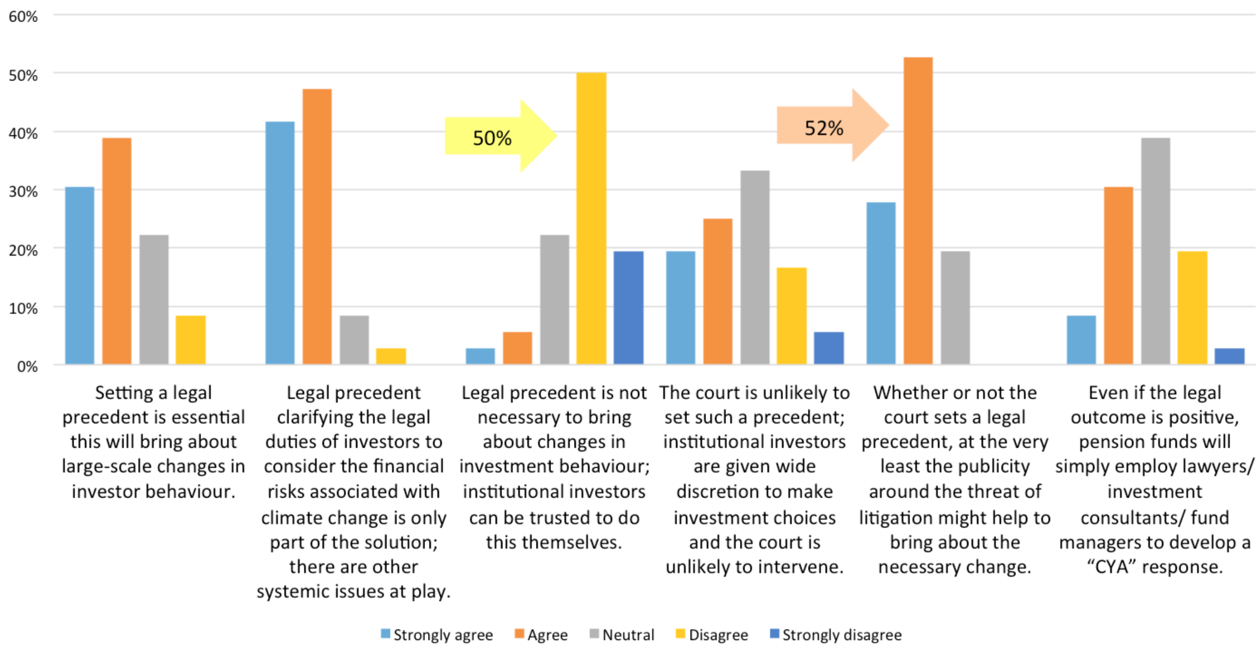
APPENDIX 7
WHAT THINKTANK PARTICIPANTS BELIEVE

This survey was done two thirds of the way through the ThinkTank in order to assess what the participants had concluded.

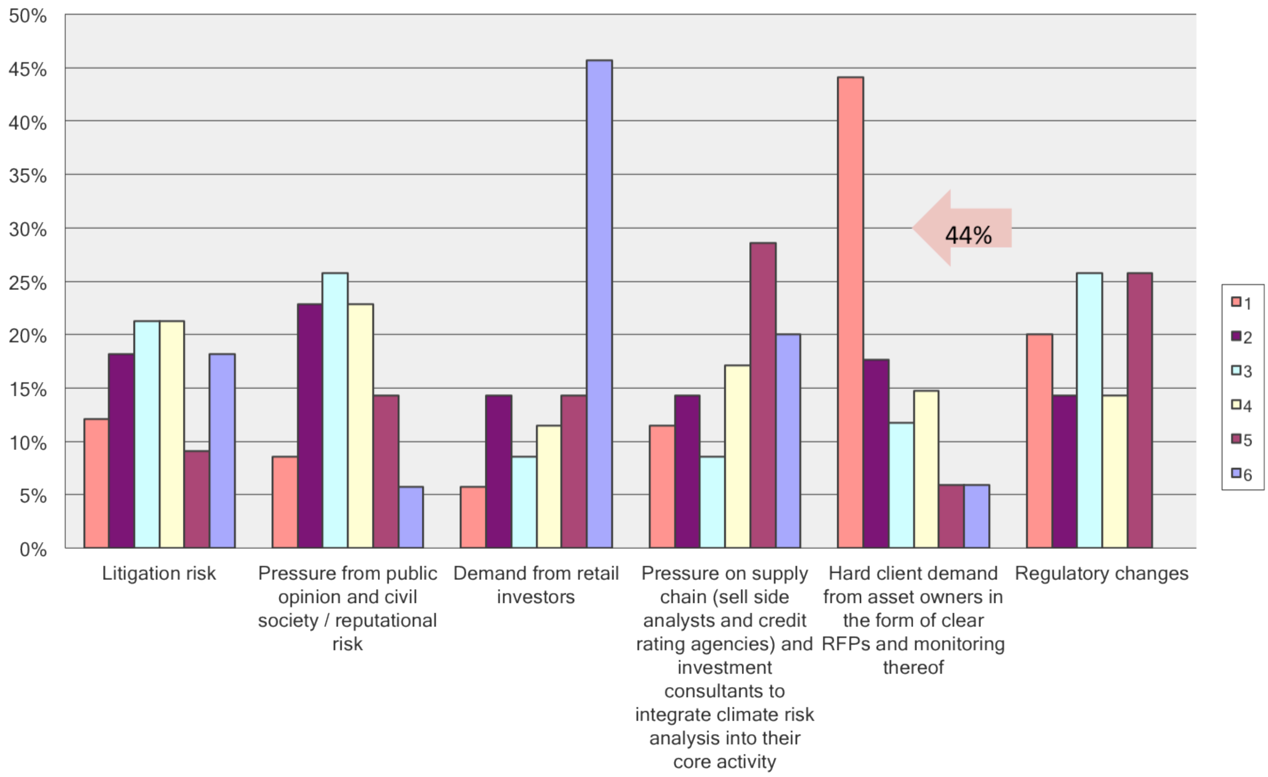
Q1: With 1 being the most effective and 6 being the least, please rank the following strategies the world's 100 biggest institutional investors could take in order to combat the effects of "big climate risk"



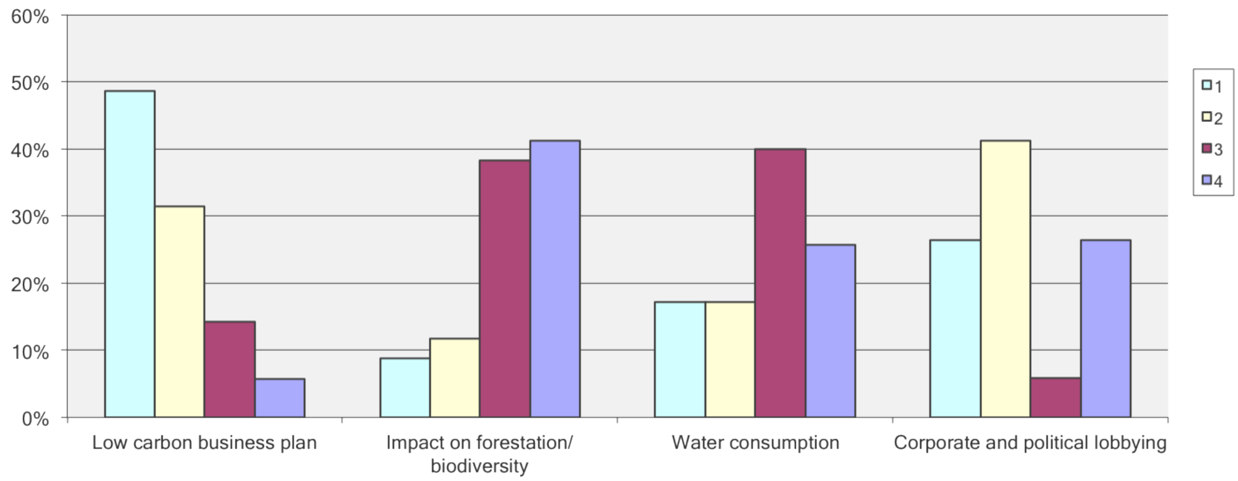
Q2: We are interested in your views about how setting a legal precedent regarding investor fiduciary duties compares with leaving it to the discretion of investors to make decisions that account for the material financial risks posed by climate change. Please indicate your views on the following statements:



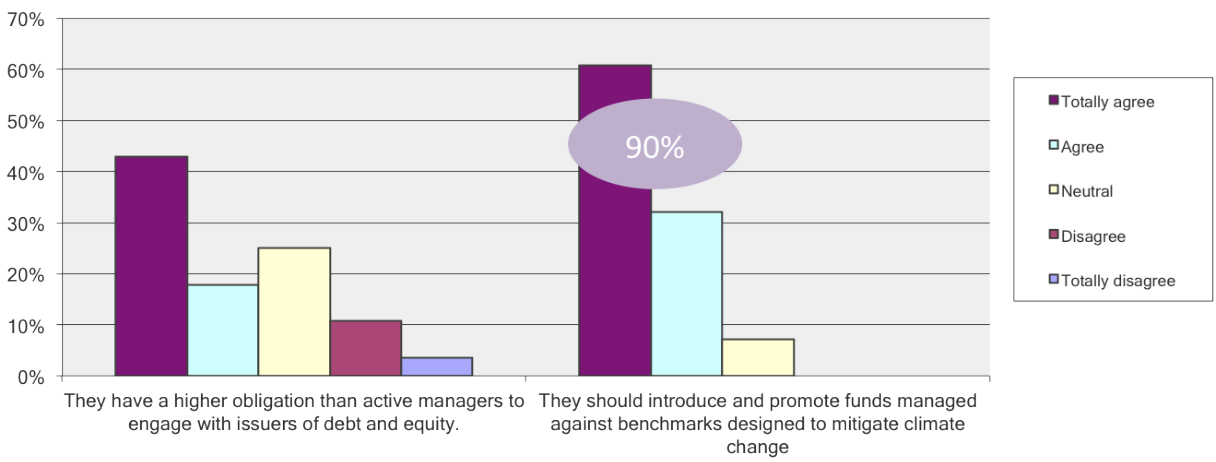
Q3: The results of the first survey suggested a vast majority of both participants and experts want to be "future makers". The reality is that investors are at best aware future takers and that many (most) may be unaware future takers. Please rank the following strategies according to their likelihood of having the biggest impact, with 1 being the most impactful and 6 being the least.



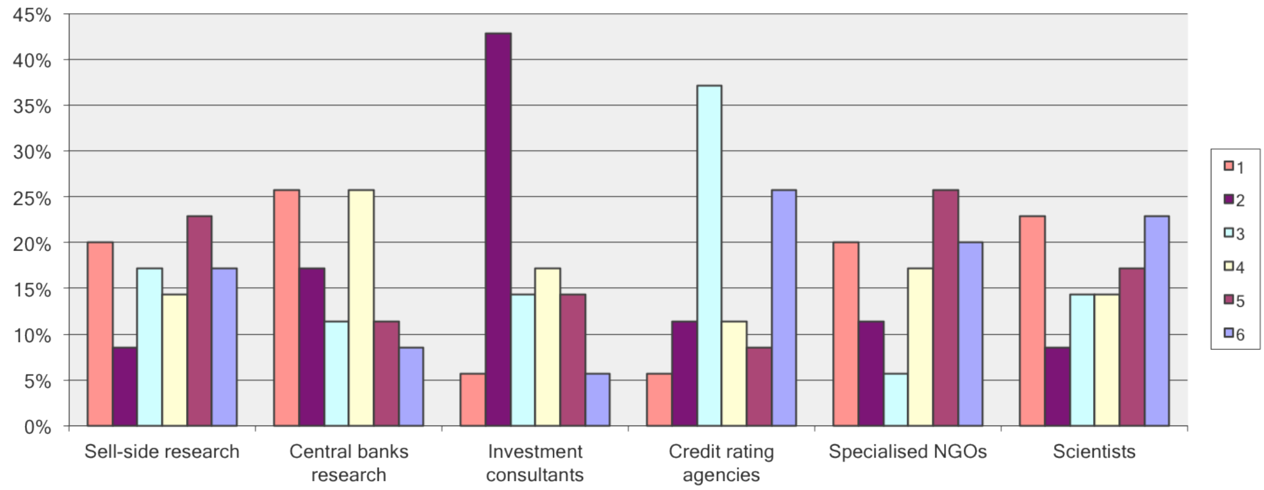
Q4: Which aspects of climate-related corporate behaviour do you think Forceful Stewardship could improve? Please rank the following proposals in terms of likely to show positive improvement, with 1 being the most likely to 4 being the least.



Q5: As passive investors are "locked in" to climate change damage, they should become "future makers". For each of the following statement, which best describes your views?



Q6: Investors may have insufficient understanding of the implications of climate damage curves and the non-linearity of climate change. Please rank the following players on their likely ability to help investors get up-to-speed on these issues, with 1 being the best suited and 6 being the least.



"Yes, the planet got destroyed, but for a beautiful moment in time we created a lot of value for shareholders."

We would like to thank the New Yorker and Tom Toro for permission to use this cartoon.
For further details about Tom's work, see http://tomtoro.com/

preventable surprises