WORLD ECONOMIC FORUM

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White Paper

Managing Investment Risk for the Long Term

Insights on practitioner progress beyond short-term financial considerations

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Foreword

Michael Drexler
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Today's financial markets are experiencing a high degree of change due to technology, automation and highly available data in previously unknown quantities. While some of this is welcome in the spirit of increased efficiency and transparency, it can equally propagate a trend towards short-term optimization. As the main actors in financial markets, investors serve a critical purpose in setting the balance between long-term value and short-term returns, a key dilemma for corporate managers and boards.

In many cases, investors see and are exposed to long-term, cross-sector trends that complement the sectoral expertise of corporate managers. However, the interaction between corporates and investors frequently swings between the extremes of disengagement and shrill activism – neither being a good blueprint for sustained exchange on how to create long-term value.

Recognizing this, the World Economic Forum's Compact for Responsive and Responsible Leadership was launched in 2017, calling for a realigned relationship among management, corporate boards and investors based on inclusive dialogue and a long-term focus. To date, over 140 chief executives and chairpersons across all geographies and sectors have signed this document.

Supporting this expression of intent with best practice, the Global Future Council on Long-Term Investing, Infrastructure and Development surveyed the asset owner community to study investor practices that support long-term and inclusive business strategies. It transpired that, in many cases, investors are supporting long-term and inclusive leadership by serving as active investment stewards, engaging with management on questions of strategy, and providing insights into long-term, non-traditional risks such as climate change and governance.

This white paper emphasizes the value of constructive engagement of investors with corporates and their boards. Successful investors have gone beyond mere compliance on investee governance (and environmental, social and governance issues more broadly). They have developed agile organizational cultures that engage with their portfolio holdings, with the capacity to improve risk-adjusted returns and therefore outcomes for all current and future beneficiaries. We hope that this short paper is helpful for investors wanting to learn from the best – but equally for corporations as they look to define what their ideal investors would look like and how to attract them.

In addition to thanking the members of the Global Future Council, I would like to express my gratitude to Alison Tarditi, Scott Kalb and Josh Lerner for contributing their expertise and leadership to this work, and to Natalya Guseva and Vangelis Papakonstantinou for their management of this initiative.

Introduction

The Challenge

Institutional investors (such as sovereign wealth funds and government pension funds) recognize that building and stewarding wealth over long horizons requires consideration of a broad range of risks, not all of which are easily measured. The increasing sophistication of investors and new technologies are slowly increasing the transparency of some of these risks. However, the practical challenges of consistent assessment and effective management of risks in long-horizon investment portfolios remain significant.

In the case of public companies, public disclosure is required for traditional financial metrics. As a result, public company management teams focus on these metrics. And financial markets are relatively efficient at assessing and assigning valuations to companies and securities that reflect them. These factors, however, are only part of the story of a company's sustainable franchise value. Non-traditional risks, including those that relate to environmental, social, governance, intellectual property, regulatory, technological, security and demographic considerations, are far less consistently measured or understood. Yet it is transparency on these strategic risks that is required to build insight into long-term franchise value, as today's corporate activities manifest in internalized costs or benefits, over time.

The data on these strategic risks has been improving over the past decade but remains inconsistent, of varying quality and patchy across industries and regions. These risks are generally poorly reported and sometimes still ignored entirely by company managements. As a result, they often are not priced efficiently in financial markets.

Even in the cases where long-term investors can identify such long-term risks, their capacity to influence the management of those risks is limited in public markets. This results from three common characteristics. First, ownership stakes are typically small compared to the overall market capitalization of the company. Second, long-term investors have found it difficult to articulate and communicate their concerns consistently and clearly. And third, cooperation among long-term investors to overcome these friction costs remain constrained by regulatory hurdles in some regions. Historically, these three factors have contributed to inefficient outcomes.

Contributing to the Solution

This paper engages directly with practitioners for a "temperature check" of long-term investors around the world. We seek to understand their attitude and capacity to identify, integrate and manage the non-traditional, less visible strategic risks embedded in their portfolios.

In our work, which includes case studies and a survey, we asked investors:

- How do you think about non-traditional investment risks?
- How can you act on these risks?
- Are these methods effective?
- How are you investing in your capacity to address this challenge?
- Where are the real constraints versus the perceived ones to progress?

The survey covers a broad cross-section of large institutional investors, including government pensions, foreign exchange reserve funds and sovereign wealth funds globally.

We also identified three organizations that have been early movers in this area. Each has addressed a particular aspect of this challenge to long-term investing in a unique way. Their innovations in addressing the challenge to long-term investing are presented in the three case studies below.

The survey provided context in the form of changes in attitudes on the part of long-term investors, and highlighted the following three points:

- Active ownership and engagement with portfolio companies is trending upwards
- Focus is firmly on "risk- and value-based" disciplines, rather than "values-based" strategies
- Emphasis is placed on strong board composition and effective collaboration with external agencies

The case studies suggest that those organizations that have moved to address non-traditional risks, have several common characteristics:

- **Innovation:** A willingness to move outside their traditional toolkits and actively engage in change
- **Organizational buy-in:** Investment boards were active in supporting and shaping these decisions
- **Collaborative execution:** Cooperation or partnership with external resources was used to leverage or build specialist skills, defray costs and achieve higher quality outcomes
- **Enduring constraints:** Measurement, governance and execution challenges remain genuine constraints

This work was undertaken through the World Economic Forum's Global Future Council on Long-Term Investing, Infrastructure and Development. Among other objectives, the council aims to create a set of principles on investor-corporate engagement, focusing on incentives to active stewardship and two-way dialogue, and addressing non-traditional risks. The goal is not to dictate what investors or corporates should do but rather to create awareness of these risks, strengthen internal strategic decision-making and promulgate best practices in active ownership. Institutional investors want to make sure that the companies they invest in understand and price non-traditional risks appropriately in their business models and avoid engaging in practices that could erode value over the long term.

The Status Quo: Long-Term Investor Survey

One of the inevitable trade-offs associated with the development of case studies is that of depth for breadth. It is natural to wonder about the extent to which these concerns are reflective of the broader community of long-term investors, or the concerns of a non-representative minority. Moreover, we sought to put these specific cases in the context of long-run changes in attitudes on the part of long-term investors.

To this end, we complemented the case studies with a survey of a broad cross-section (23) of large institutional investors, including government pensions, foreign exchange reserve funds and sovereign wealth funds. The mixture of these investors was global, though with an overweighting of Asian and Australian institutions. These asset allocators were identified through the World Economic Forum network, personal contacts and participating in events of the Institutional Investor's Sovereign Investor Institute, which one of the authors chairs. The survey was implemented by email and in-person interviews, which also included qualitative discussions.

Three observations stood out from our survey work:

1. Active ownership and engagement with portfolio companies is trending upwards. Institutional investors' approaches, particularly to public company investments, has changed substantially in recent years. This is due in large part to the increasing importance of non-traditional risks. Attitudes increasingly are recalibrating away from passively voting in line with portfolio company managements towards efforts to influence their holdings. "Active ownership" is now used by most of the responding investors to both mitigate risks and enhance returns in their portfolios. The shift in attitudes was apparent in the survey responses highlighted below:

- About 95% of the long-term asset allocators surveyed vote on shareholder resolutions. Over 50% engage in proxy voting themselves rather than delegating to outside service providers. Among those institutional investors that delegate, about one quarter provide their agents with internal guidelines to use when voting on their behalf.
- Over 60% of asset allocators polled have a set of proxy voting principles in place. Many of these institutional investors' principles can be found on the public record.
- Nearly 60% of asset allocators keep track of when they vote against company managements. Voting issues where disagreements most often occur include executive compensation, board composition and business strategy.
- Over 40% of surveyed institutional investors are engaging in direct dialogue with companies in which they have significant holdings. Shareholder concerns include fiduciary responsibilities, the independence of boards, transparency, shareholder rights, and a variety of other environmental, social and governance (ESG)related issues.
- Engagement with portfolio company managements appears to be confined to holdings in domestic markets. Institutional investors identified a lack of regional consistency, the poor quality of non-traditional risk measures, and a lack of information as constraints to ongoing engagement beyond home borders.

2. The focus is firmly on "risk- and value-based" disciplines rather than "values-based" strategies. Institutional investor demand for non-traditional risk assessment in portfolio companies is predominantly driven by a desire to generate stable risk-adjusted returns over the long term for stakeholders rather than a desire to impose a set of "values" on managers, companies, or the world.

- In qualitative discussions, the institutional investors made it clear that they are compelled by the conventions of risk and return and must always invest within the bounds of their missions – to achieve appropriate risk-adjusted returns for stakeholders.
- Most viewed the consideration of non-traditional risks as a critical part of the investment process. At the same time, they also well understood the positive benefits to their institutions, to stakeholders and to society that such investing could help bring about. Most felt that, to the extent they could invest in strategies which help to accomplish their missions while also achieving positive externalities, it would be a win-win proposition.
- However, they clearly expressed the view that it was important for the investment process to stay rooted in "risk- and value-based" disciplines. They preferred to focus on generating economic and financial value over time, rather than a "values-based" framework, defined as making investment decisions from a moral or philosophical point of view.

3. An emphasis is placed on strong board composition and collaboration with external agencies. Over half the investors identified a lack of internal resources as the greatest impediment to progressing from transactional to strategic partnerships with portfolio companies.

- Another 30% identified a lack of information and proper data as important obstacles.
- Aware of these limitations, the respondents put considerable weight on the development of two strategies:
  - The formation of appropriate and well-composed boards, both at the companies in their portfolios and at the institutions themselves – these governance bodies can play an important role in deepening and improving the relationship between corporations and the institutional investors who finance them
  - Partnerships with external agencies, such as local or international associations, that could help in providing greater flow of information and detailed data – these institutions can play a vital role in helping institutional investors to become better informed and active owners

Innovative Approaches in Operation Today

We undertook three short case studies of asset allocators, examining their successes and failures in engaging with portfolio companies regarding non-traditional risks. The case studies focus on three types of asset allocators and how they are grappling with these challenges:

- Commonwealth Superannuation Corporation (CSC) efforts to systematically measure and make investment decisions incorporating a wide variety of non-traditional risks
- The decision of the New Zealand Superannuation Fund (NZSF) to shift towards a low-carbon investment approach by reducing exposure to fossil fuel reserves and carbon emissions
- The Office of the Chief Investment Officer of the Regents of the University of California (UC Investments) effort to pursue clean-energy investments, building, in part, on its parent institution's knowledge

The case studies below offer many insights into the challenges facing institutional investors seeking to incorporate non-traditional risks into their investment process and provide

valuable information on a variety of responses implemented by our case study institutions. We were struck by the following insights:

- *An increased willingness to actively address non-traditional risks.* Each case study highlights the extent to which institutional investors – already facing the daunting task of generating attractive returns in frequently crowded markets – will move outside their traditional toolkits and actively catalyse change to address non-traditional risks.
- *The active role of investment boards in supporting and shaping these decisions.* These steps would have been impossible without the active support of these institutions' governance bodies. In many cases, there were tough decisions without clear "right answers" to be made – as illustrated by the differing approaches of NZSF and UC Investments to the divestment of legacy fossil fuel holdings – where the guidance of their boards was critical.
- *Partnering to leverage outside resources.* Whether it is UC Investments using services of the aligned intermediary to tee up transactions or CSC building Regnan's new team of analysts, these institutions recognize that they cannot "do it alone". Given limitations in staffing, resources, economics and information flow, complementary organizations and collaborations play an important role in addressing these risks.
- *Enduring measurement and governance challenges.* Each of the institutions struggled with integrating non-traditional risks, alongside more traditional risk metrics, in the investment decision-making process and how best to measure and manage these risks systematically.[i]

Looking Ahead

The evidence in the case studies and the survey suggests a challenge to major public corporations. Far too often they have defined their ideal investor by highlighting what they do not want: an activist hedge fund demanding changes, often in the form of payouts to shareholders focused on short-term gains and generated by the unwise selling-off of strategic divisions or termination of valuable projects. This analysis suggests such a view is far too simplistic.

The institutional investors featured in the case studies and survey of this report have long-term horizons and low turnover in their portfolios. They are focused on economic and financial factors in their portfolio holdings, including non-traditional risk factors, to generate stable long-term returns. If company managements are willing to reach out to long-term shareholders, articulating an understanding of the risks they face in their business, both traditional and non-traditional, and their long-term strategy for measuring and managing these risks, the asset allocator community can indeed be valuable long-term partners. This process will require effort and learning on both sides. But this study suggests that institutional investors are increasingly ready for the challenge.

Case Studies

Commonwealth Superannuation Corporation: Seeding Innovation

In the early 2000s, the leaders of the Commonwealth Superannuation Corporation (CSC) sought to consider and manage long-horizon, extra-financial risks[ii] within its members' investment portfolios. They found that these risks were not well understood in the market. Financial risks received notable management attention and were reported on in detail, with regulatory oversight. However, non-financial risks were not systematically measured or addressed. Seeking to remedy these data gaps, and to do so rigorously, at the company level, CSC seeded a standalone, not-for-profit, research firm, which eventually became Regnan[iii], with a team of analysts acquired from Australia's Monash University.

Constructive dialogue

Today, CSC retains 50% ownership of Regnan, which now speaks for aggregated institutional funds-under-management equivalent to about 5%-6% of the Australian equity market's capitalization. These institutional investors all consider themselves "universal owners". Like the United Nations Environmental Program's Finance Initiative, the term "universal owners" describes investors who incorporate environmental, social and governance issues into their decision-making and exercise their ownership rights through constructive dialogue with companies[iv].

CSC's Chief Investment Officer Alison Tarditi notes the increasing co-dependence of financial and extra-financial factors in determining the value-per-unit-of-risk within investment portfolios. She said: "Value can be created or destroyed not only by direct corporate or asset-management operations but also through the indirect consequences of those activities. This is gauged primarily, but not exclusively, through the strategic proficiency of management and boards, the articulation and implementation of long-term corporate strategies, and their openness to constructive but proactive engagement on matters of consequence to these long-term strategies."

On behalf of its universal-owner clients, Regnan's team of analysts continually assesses the Australian Stock Exchange (ASX)'s top 200 companies against 12 universal principles, categorized for simplicity across environmental, social and governance factors (Figure 1[v]). To enable investors to analyse their portfolio exposures efficiently, Regnan scores a company's management of extra-financial risks according to their materiality to long-term value, given their business activities and specific circumstances. In this way, the 12 principles are not treated thematically or applied in a "blanket" fashion across all companies with any exposure. Company-specific scores are updated and reported monthly, with emphasis on companies whose scores have changed.

Figure 1: Making extra-financial risks transparent

Corporate Governance	Environmental	Social
– Board – Audit – Remuneration – Accounting – Other	– Climate change and energy – Water security – Other environmental management	– Human capital management – Stakeholders – Business conduct – Workplace health and safety

CSC incorporates this and other relevant information to profile its portfolio. Emphasis is given to material changes in corporate scores, interdependencies across its portfolio holdings, and a self-awareness of its own, measurable footprint on the world over time. As an example of this, CSC was the first Australian fund to open its portfolio to carbon footprinting by the Climate Institute in 2012. It endeavours to reduce this footprint over time and its most recent measure of portfolio carbon emissions was 11% below benchmark, as of June 2017.

Innovative approach

Tarditi stressed that the organization's purpose means that its frame of reference – as active owners – is to "value", rather than an affiliative proposition for particular "values". CSC is seeking to understand potential portfolio cross-synergies material to member outcomes over long horizons, as distinct from trading-off performance to subsidise collective causes. The innovation to seed an organization like Regnan was a pragmatic step to help fill a data gap and give genuine effect to that purpose. "A core objective is successful delivery of our members' financial objectives. We are striving to maximize investment returns per unit of risk deployed and to assess our portfolio's footprint on the world over time. By being better able to integrate consideration of financial and extra-financial factors into our process, we expect the financial returns to our members to be more resilient and sustainable. Moreover, the net externalities from our portfolio companies' activities will be increasingly positive," said Tarditi.

Proactive and constructive engagement with investee companies is another important aspect of CSC's approach to integrated risk-management and the stewardship of its assets. CSC prosecutes its ownership as a partner to, rather than in conflict with, the public corporations in which its members' savings are invested. Exceptions to this are rare. Exclusion from the portfolio is used only as a last resort, where governance risk cannot be mitigated via such engagement (e.g., single-product entities with underpriced and material negative externalities).

Credible engagement
To harness the network benefits from collaboration with like-minded institutional investors (to both investors, in terms of cost sharing, and their investee companies, in terms of one message), CSC's Australian-company engagement programme is also prosecuted through Regnan. To this end, Regnan conducts analysis of specific Australian public companies to which its clients have *material* financial exposure. These assessments are conducted by an experienced team of analysts, a number with PhDs in the subject matter, who have assessed the index for more than a decade to deepen their understanding of the stocks and issues assessed. They can take months to complete, as Regnan researchers seek to develop a full profile of the company and its management through not only quantitative but also, importantly, qualitative information. This facilitates credible engagement with the boards and management of investee companies. These key stakeholders are approached with a view to preserving and enhancing corporate value for their long-horizon investors. Such relationships can take years to develop but are critical to any capacity to influence genuine change and support strategic public-company management teams. To date, Australian companies have (by and large) been receptive to these efforts, happy to benefit from advice paid for by the company's long-term investors and receive feedback on their comparative strengths and weaknesses in consideration of longer-horizon, extra-financial issues.

This framework supports CSC in its commitment to vote actively on all investee company shareholder resolutions in a way that supports the extension of decision-making horizons and the thoughtful consideration of social licences to operate.

Given the volume of resolutions, CSC deploys an exceptions-based process. The default position is to vote in line with the investee-company management. Exceptions arise in cases where one of CSC's active investment managers – chosen because they seek to integrate extra-financial risk analysis into their investment processes – or advisers raises an objection. Regnan provides this advisory role to CSC in the Australian market.

Tangible changes
Reflecting on these efforts in 2017, Tarditi was struck by the progress made in understanding the footprint of Australian company externalities and the efficacy of engagement in bringing about tangible changes in corporate practice to improve governance arrangements and awareness of social and environmental licences.

She wondered when she would be able to utilize a Regnan-like infrastructure across the fund's global investments. Many challenges to full integration of financial and extra-financial risks within the investment process remain. Some of these still pertain to risk transparency, with variable rigour and little consistency of methodology in extra-financial risk measurement across regions. Others pertain to the challenges of valuing intangible, long-horizon risks within traditional valuation frameworks. Furthermore, real or perceived regulatory impediments to collective engagement practices in some regions reduce the capacity for proactive and constructive engagement by investors to support corporate management teams to lengthen their decision horizons.

New Zealand Super Fund: Low-Carbon Investment Strategy

As guardian of the country's sovereign wealth fund, established to smooth the cost of universal pension payments between generations, the New Zealand Super Fund invests commercially and responsibly in an array of investment classes. Responsible investment means accounting for environmental, social and governance factors that could impact returns over the Fund's long-term investment horizon or harm New Zealand's reputation in the world. Climate change is one of the most significant environmental, social and governance risks identified by the Fund. To tackle it, the Fund's board has decided to shift towards a low-carbon investment approach by reducing exposure to fossil fuel reserves and carbon emissions. This case study describes how the Fund decided to implement the climate change strategy and alternative strategies other investors are executing to deal with climate change risks.

Background
The New Zealand Super Fund was established in 2001 with the mandate to invest a proportion of New Zealand's GDP to relieve future generations' tax burden due to the country's ageing population[vi]. The government contributed NZD 14.88 billion between 2003 and 2009 and is expected to re-commence payments in 2017. The government is not likely to start withdrawing money from the Fund until 2029-2030. The Fund will most likely reach peak capital, as a percentage of GDP, around 2080[vii], which gives it the ability to truly be long-term focused.

The Fund's asset allocation is heavily focused on equities (75% of total across both emerging and developing markets) and has provided a return of 20.71% for the 2017 full year (ending 30 June 2017) ahead of the Reference Portfolio[viii] by 4.37%. As of October 2017, the Fund is managing NZD 37.2 billion[ix]. To achieve such high overall returns in excess of the Reference Portfolio, the Fund deploys an active and passive investment strategy. Active investments are preferred when diversification is required, certain asset classes are cheap and can benefit from the Fund's long-term horizon, or can outperform benchmarks. Active investments are made in accordance with the Fund's investment beliefs, that in the long run returns revert to the mean and that responsible investors must have concern for environmental, social and governance factors because these are material to long-term returns[x].

Climate change is a social, environmental, and economic risk expected to have an impact over long time horizons due to four factors: technology, resource availability, physical effects, and policy[xi].

First, the rate of progress of technology in support of a low-carbon economy might be quicker and more disruptive than is being priced. Second, resource availability might be affected by chronic weather patterns. Third, acute weather conditions might impact the physical condition of asset, and finally, national and global policy responses might be unpredictable in terms of timing and impact on carbon-intensive sectors[xii]. These factors are likely to also affect companies operating in industries other than energy and multiple business areas (operations, marketing, finance etc.).

Mercer undertook an extensive assessment of climate change impact on investors in 2015. This report was used as the cornerstone for informing New Zealand Super Fund's climate change strategy. Mercer predicted that climate change will impact returns for different industry sectors between -6% and +3% over 35 years and at an aggregate level, the value

at risk may be between 5%-20% in 2030[xiii]. Despite the high unpredictability of climate change impact, it is estimated that the most significant climate change physical impact will be felt after 2050, and, therefore, is highly relevant for New Zealand Super Fund's investment strategy. The combination of factors, in particular technology and policy impacts in the shorter term, and physical impact in the medium to long- term, mean that not acting on climate change could be deemed as taking undue risk to the portfolio and, therefore, be against the mandate extended by the state[xiv].

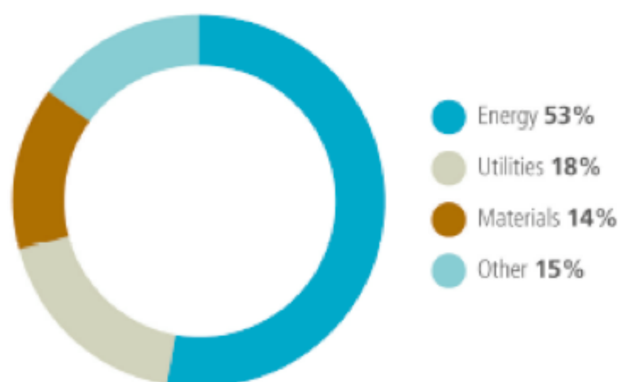
New Zealand Super Fund's Climate Change Strategy
The Fund is a founding signatory to the United Nations Principles for Responsible Investment. Subsequently, it joined the Carbon Disclosure project in 2007 to improve corporate disclosure of information on greenhouse gas emissions[xv]. The Fund also signed the Paris Pledge for Action to limit global temperature rise to 2 degrees Celsius[xvi] and is part of the Investor Group on Climate Change[xvii].

In 2016, the Fund announced a comprehensive climate change strategy, aiming to make its portfolio more resilient to this risk. Targets were announced in 2017; they are for a 20% decline in carbon emission intensity and 40% in carbon reserves by 2020[xviii].
There are four key elements to the Fund's climate change investment strategy:

- To divest companies with high exposure to fossil fuels or carbon emissions, to reduce the Fund's carbon footprint
- To incorporate climate change considerations into investment analyses for future acquisitions
- To manage climate risk by being an active owner
- To actively seek new low-carbon investment opportunities (for example, in renewables)[xix]

In 2017, the Fund implemented reductions in exposure to emissions and reserves across the passive global equity portfolio of NZD 950 million (297 companies, 3% of the Fund). This achieved a 19.6% reduction in carbon emissions intensity and 21.5% reduction in carbon reserves[xx]. Proceeds from the sale of the high reserve and emissions assets have been reinvested across the rest of the passive equity portfolio. The Fund's Matt Whineray notes that "by taking out the most exposed companies (in terms of both emissions and reserves) and allocating money to more carbon-efficient companies, we will lower the level of risk in the portfolio."

The chart below shows the breakdown of passive equities sold by sector.



Source: New Zealand Super Fund

The Fund's Reference Portfolio was adjusted to reflect the sell down effective 1 July 2017[xxi].

Using purpose-built tools developed in concert with MSCI ESG Research, the Fund monitors the carbon footprint and reserves of its portfolio. While this tool provides a good indication of carbon risk related to industries directly releasing emissions or using fossil fuel reserves, it does not measure the risk to assets relying on suppliers who are high emitters or products that are intensive users of fossil fuel reserves[xxii]. MSCI's and other research resources are being used to develop a revised valuation framework including carbon pricing (where available) to develop scenarios for climate change return impact on the underlying investments and overall portfolio. Furthermore, the Fund undertook assessments of climate change risks embedded in real estate assets (mostly focused on physical damage)[xxiii].

Managing risk
Through active ownership and revised voting guidelines for companies with carbon exposure, the Fund aims to manage risks by engaging portfolio companies to increase the transparency of carbon and reserves reporting and develop climate change strategies[xxiv].

To access climate change opportunities, the Fund is moving towards investing in a spectrum of opportunities that offer climate change solutions, currently with a focus on renewable energy and energy efficiency but also building a programme of other investments that benefit from climate change drivers[xxv]. The Fund carbon-reduction strategy does not preclude all investments in companies with high carbon exposure, provided that the overall portfolio exposure does not exceed set targets[xxvi]. However, to meet these goals, the Fund is also looking to reduce the carbon exposure in the active investment portfolio.

Receiving an A+ rating as part of United Nation's Principles for Responsible Investment benchmark for the third year in a row[xxvii] is a significant accolade to attest to the Fund's responsible investment governance and strategy.

New Zealand Super Fund's efforts to improve the resilience of its portfolio and increase awareness in the industry truly set an example for what long-term investors can do to address climate change risks while meeting their fiduciary responsibilities.

UC Investments: Strategic Framework

For six months in early 2014, a new committee comprising investment professionals from the Investment Office of the University of California (UC) Office of the President (UCOP or UC Investments), alongside members of the student body, met periodically to debate and craft what would become the first steps in developing a guiding, sustainable, investing framework for UC's $100 billion endowment fund.

Jagdeep Bachher, the newly appointed Chief Investment Officer, was particularly tuned to the growing advocacy for sustainable investing practices from students and stakeholders. He had made "figuring out sustainability" one cornerstone of his nascent tenure leading the endowment fund. Creating the committee was the first step, in a series of one-on-one encounters, written exchanges and meetings designed to explore a framework for incorporating non-financial risk factors – environment, social and governance (ESG) – into the fund's investing decisions.

The Call to Action

In May 2014, Bill McKibben's article in the Rolling Stone magazine, "*A Call to Arms: An Invitation to Demand Action on Climate Change*", precipitated a growing awareness among stakeholders of environment, social and governance risks. This in turn led to growing environmental advocacy by students and other stakeholders of endowment funds and long-term investors for a complete divestment from any existing fossil fuel investments within their portfolios. As of 2014, UCOP's portfolio consisted of allocations to equity, fixed income and alternative assets, which included some investments in oil and gas opportunities and coal-fired plants.

In response to stakeholder concerns, the UC investment team engaged sustainability experts, students and other stakeholders through the aforementioned committee, developing a qualitative framework of material environment, social and governance factors to include in-risk assessment for UC investments. These considerations, which included, among others, climate change, human rights, diversity, ethics and governance, would become tent-poles of its evolving non-financial risk assessment for new investments. Of these various non-financial risk factors, climate change in particular received considerable attention, as some stakeholders urged divestment of fossil fuel assets within the existing portfolio.

In contrast to these proponents for full divestment of existing fossil fuel portfolio holdings, UC aimed to develop a proactive approach. In particular, the fund sought to execute a strategy for increasing the flow of its investment capital into new clean energy opportunities without compromising the firm's stringent risk-return selection criteria. Imogen Rose-Smith, UCOP's Investment Fellow tasked with codifying the firm's evolving sustainability framework, said: "We will strive for low fees and good returns, while tackling climate change and other ESG risk factors. Divesting the existing portfolio holdings out of entire sectors of the economy, e.g., fossil fuel, is not aligned with our proactive investing approach."

Bold Strokes, Long Marches

With a clearly articulated mandate to proactively invest in new opportunities in the hopes of steering the fund towards its sustainability goals, the UC team actively sought and committed to a series of clean-energy focused initiatives and opportunities. These included the following:

Becoming a signatory to the United Nations-supported Principles for Responsible Investment: In September 2014, UC became the first American public university to become a signatory to the United Nations-supported Principles for Responsible Investment, joining an international network of institutional investors committed to including ESG factors in their investment decision-making.

$1 billion commitment to the Breakthrough Energy Coalition: Fifteen months later, Bachher, onstage with Bill Gates at the United Nations Climate Change Conference in Paris, announced UC's pledge to the Break-through Energy Coalition, committing $1 billion of its investment capital towards early-stage and scale-up investments in clean-energy innovation. UC would be the sole founding institutional investor to commit alongside the other 27 founding members, largely family offices.

$500 million commitment to Aligned Intermediary: In December 2015, UC's steady march towards sustainable proactive investing was again visibly demonstrated by its $500 million pledge to clean energy investments sourced by Aligned Intermediary. This newly formed investment advisory group was created to help long-term investors accelerate and increase the flow of private capital into climate infrastructure projects in the areas of clean energy, water infrastructure and waste-to-value. Ashby Monk, Co-founder and Chairman of AI, said: "After Bachher joined UC, we were approached about helping build a platform providing access to deals that could fulfil both risk-adjusted return requirements, with a clear sustainability impact. Because of AI's unique no-fee structure and proprietary deal flow, we've been able to provide access to opportunities with an attractive returns profile, leading to three successful investments in clean energy by these LTIs in the past 12 months."

Each LTI committed to working with AI could be certain that any deal sourced through the group would meet stringent environmental risk assessments, while demonstrating opportunities to deliver strong financial returns. In 2016 alone, AI screened over 200 clean energy projects and, after vetting each, presented to its members only those opportunities that matched their investing constraints and requirements. At least 30% of these vetted opportunities have now reached successful financial close.

Additionally, UC exhibited flexibility in its approach by also considering divestitures on a case-by-case basis, where the assets did not represent a meaningful impact or position on the portfolio. In 2017, the fund chose to divest from bonds issued by companies funding the controversial North Carolina pipeline.

The Path Forward

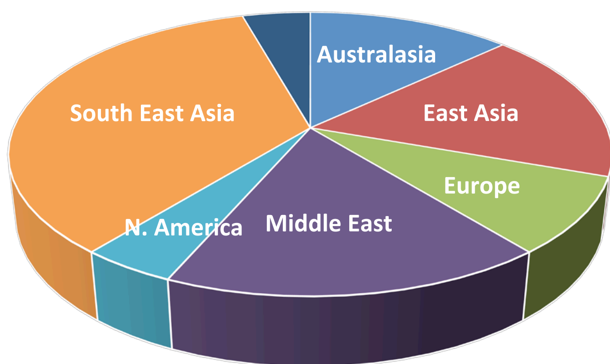
Long-term investors leading the charge on sustainability investing, like UC, had only just begun to develop and execute their sustainability investing strategies. However, one perennial question within investor and stakeholder circles remained unanswered: to what extent can fiduciary-bound investors truly incorporate non-financial metrics in making investment decisions while ensuring strong financial returns for stakeholders? Would there need to be a recalibration of the investment process and target risk-adjusted returns, considering the guardrails mandated by the sustainability investing philosophy? The lack of a standardized ESG matrix for these LTIs further extends the learning curve for each of them in developing a fiduciary framework which balances non-financial and financial factors without compromising either.

Furthermore, the universe of clean-energy investment opportunities presenting strong financial returns at scale appears difficult to easily identify. The AI-UC partnership has yielded two successful investments since the partnership was announced in December 2015. However, the large number of opportunities screened and vetted during that period indicates some difficulty in easily finding attractive and sizeable best-in-class investments that fit UCs risk-return profile. One potential solution would see UC build an in-house dedicated team to focus on pursuing asset classes that specifically drive deal-flow, or perhaps working with AI to scale up its platform of deals with best-in-class. One thing is sure, there will need to be an increased deal-flow of large-scale, clean-energy opportunities for UC for the successful investments to become a significant proportion of the $100 billion fund.

UC's journey towards achieving its sustainability goals has only just begun but is grounded in the firm belief that, in the long term, investment decisions using this new framework would have a positive impact on returns, or would reduce downside risk.

Survey Results and Construction

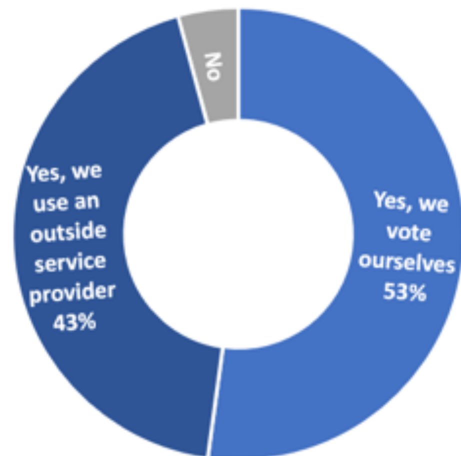
Methodology
The survey data in this report is based on responses from 23 sovereign and government funds, comprising eight sovereign wealth funds, 12 government pension funds and three central bank reserve funds. The geographic breakdown of funds interviewed, summarized in the pie chart below, represents a reasonably broad array of perspectives, although the authors intend to expand the universe of surveyed funds. The survey was conducted through email and in-person interviews, including qualitative discussions, during the third and fourth quarters of 2017.



Survey Questions and Responses

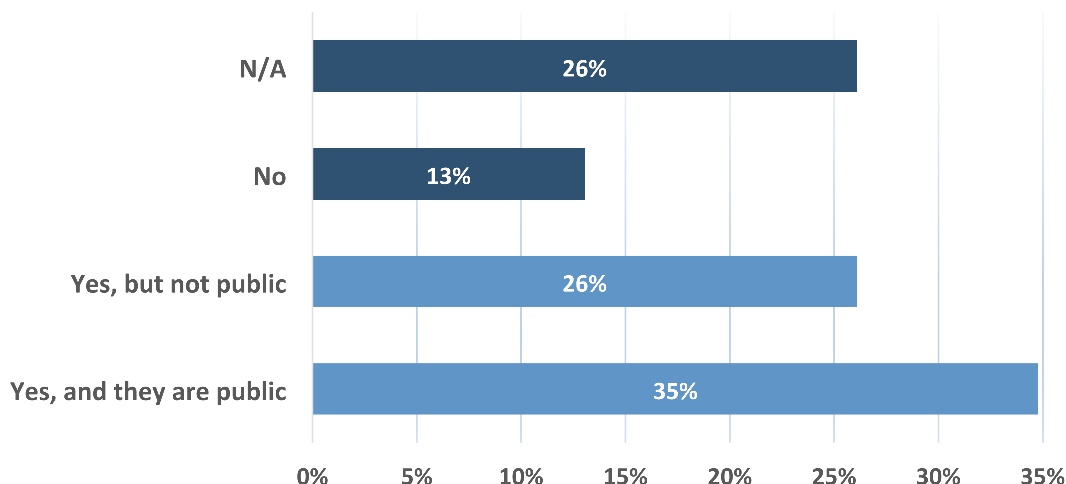
1. Proxy voting activity: Do you vote on shareholder resolutions?
Asset allocator interest in voting on shareholder resolutions is strong.

- Over 95% of the asset allocators polled vote on shareholder resolutions
- Over 50% of asset allocators vote themselves rather than outsource
- Institutional investors made it clear they seek to vote directly. One fund said: "We vote ourselves in all countries, except for a few where voting process and regulations are onerous." Another institutional investor said: "We vote ourselves and solicit advice from our active managers, CGI Glass Lewis, as well as an independent engagement firm we established."



2. Proxy voting principles: Do you have a set of proxy voting principles in place and are they public?
Asset allocators have established frameworks and guidelines for handling voting matters.

- Over 60% of survey respondents have a proxy voting framework in place
- Of those, about half make their principles part of the public record

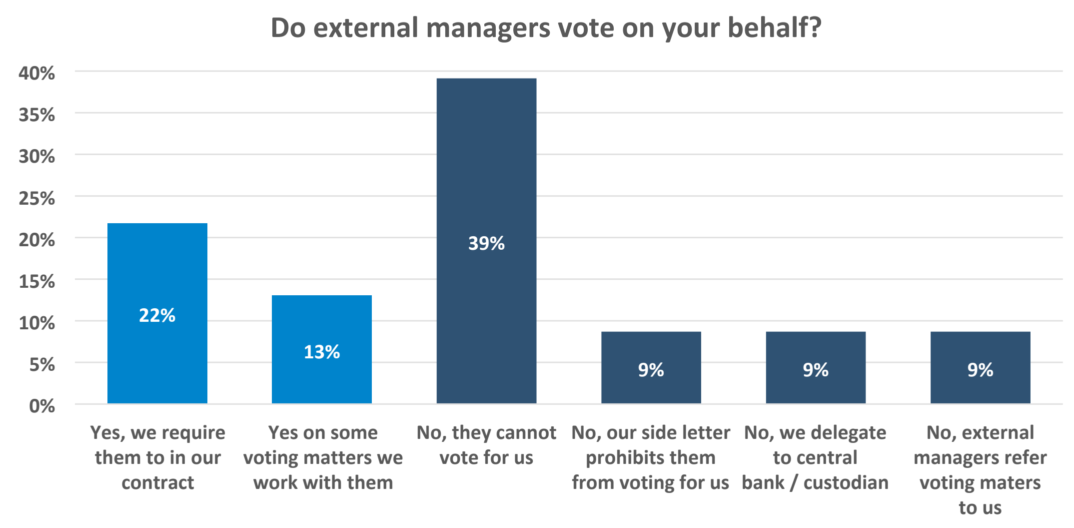


3. Proxy voting with external managers: Do you ask your external managers to vote on shareholder resolutions on your behalf?

While asset allocators may seek advice from external managers on voting matters, they generally prefer to vote on shareholder resolutions through their own internal process.

– Over 60% of asset allocators said they do not use external managers for voting
– Less than one quarter use external managers for voting consistently, as part of their contractual mandate
– Less than 15% use external managers from time to time; for example, in hard-to-reach markets

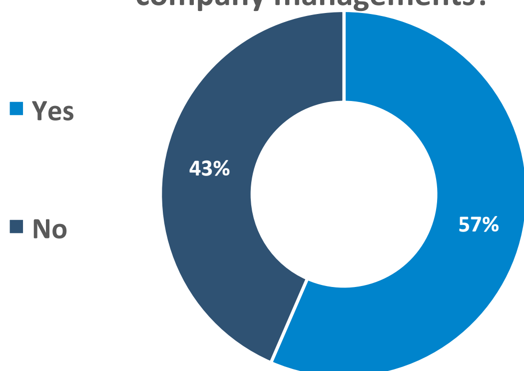
– External managers most often vote shares on behalf of institutional investors in co-mingled funds in overseas markets. One institutional investor said: "We vote ourselves, but in the case of investments in co-mingled funds in overseas markets, the manager votes their own proxies."

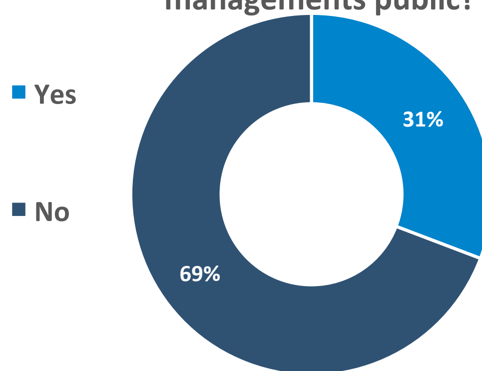


4. Accountability: Do you record and report the number of times that you or your agent votes against public company management?

Institutional investors do not vote passively with company management recommendations.

– Institutional investors do vote against company managements and a majority are keeping track of the occasions when they disagree
– Of those that keep track, over half make their voting results part of the public record and this percentage seems to be growing

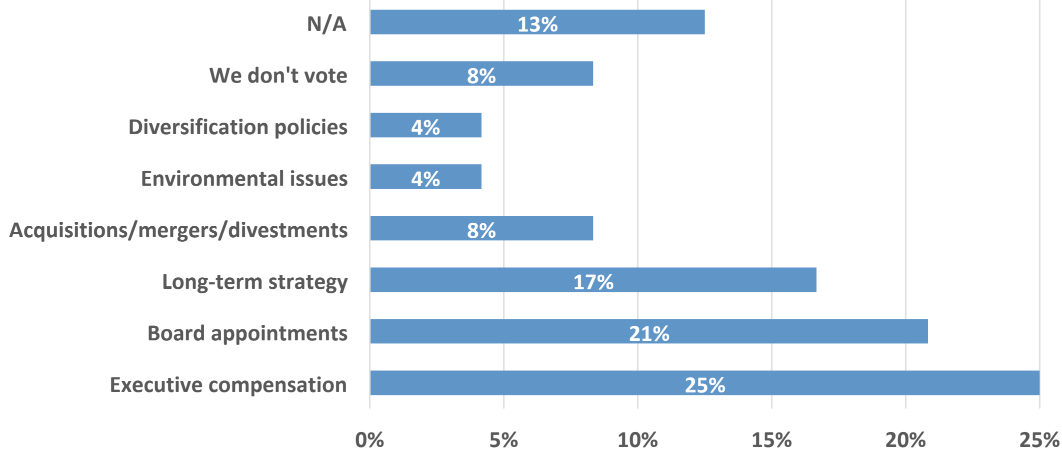




5. Voting issues: If you do vote against managements, what is the most common issue on which you disagree?

When it comes to voting against portfolio company managements, the issues where institutional investors most often disagree are executive compensation, board appointments and long-term strategy.

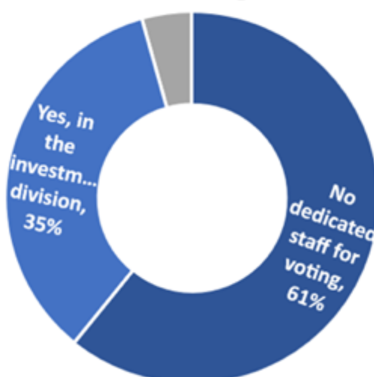
– These three issues comprised about two-thirds of the most common points of disagreement



6. Resources: Do you have dedicated internal resources for proxy voting and engagement?

A majority of institutional investors do not have dedicated staff for proxy voting and engagement and expressed some frustration at the lack of resources for this function.

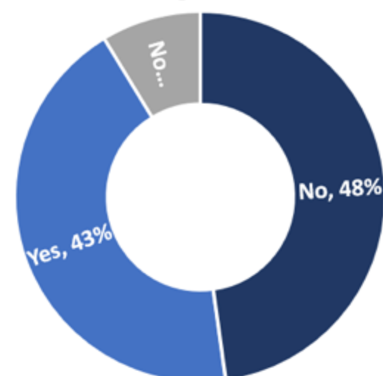
– Institutional investors tackle lack of resources in various ways; for example, by making it part of the job of the analysts or investment team. "We do not have dedicated staff. It is handled by the analysts as part of their job."
– Those that do have dedicated staff often make voting part of their ESG or stewardship efforts and incorporate it into the investment function.
– For example, one fund replied on this point: "Our ESG process is integrated into our investment team. We have one full-time staff member, an investment fellow, dedicated to all aspects of ESG including active ownership and proxy voting."
– Another fund said of resourcing: "We integrate risk and stewardship, including voting and engagement, into the investment function. The dedicated staff specialized in stewardship report to the CIO and risk report to the CRO, respectively."



7. Engagement: Do you engage with portfolio company managements?

Besides voting, an increasing number of institutional investors are engaging with the managements of companies in their portfolios.

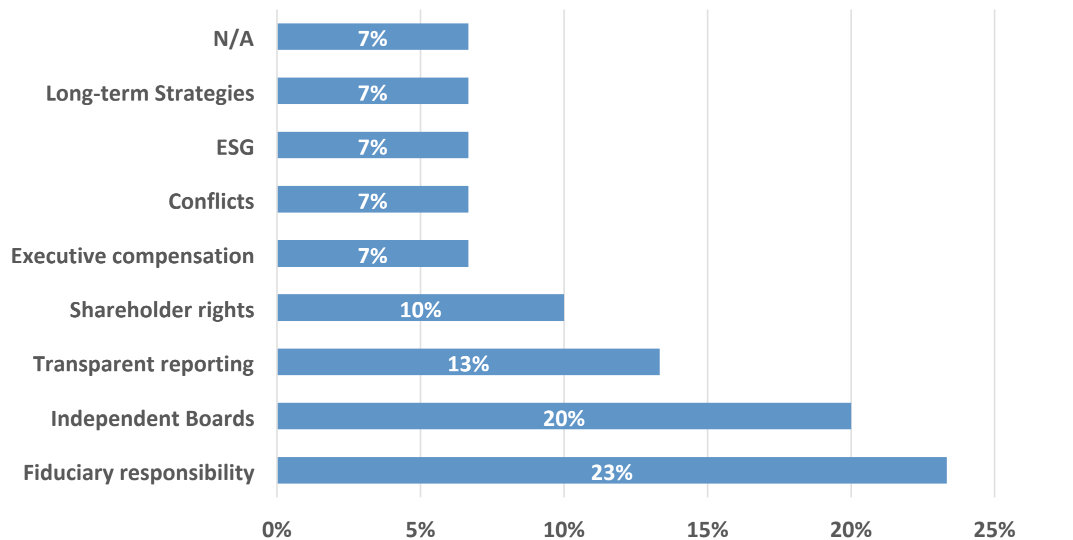
– Despite a lack of resourcing and staff, over 40% of the institutions we surveyed are engaging in discussions directly with company managements.
– Some institutional investors we surveyed are taking a traditional approach to engagement; for example, "We engage through face-to-face meetings with the board."
– Others are leveraging outside resources to engage with managements, especially regarding non-traditional risks, including ESG factors. "We use a corporate engagement firm to engage with company boards and management regarding non-traditional risks, including ESG. We do not impose values, social norms, ethics or morals on portfolio companies. Rather, we engage to ensure companies are pricing and managing non-traditional risks effectively in terms of the sustainability of the core business."



8. Shareholder issues: What do you consider the most important shareholder issues today?

Institutional investors indicated a variety of shareholder concerns they are interested to engage in with portfolio companies.

– Fiduciary responsibilities, the independence of boards and transparent reporting were the three biggest factors cited, comprising 56% of the top concerns of institutions surveyed



9. Challenges: What are the biggest constraints on your ability to be an active shareholder?

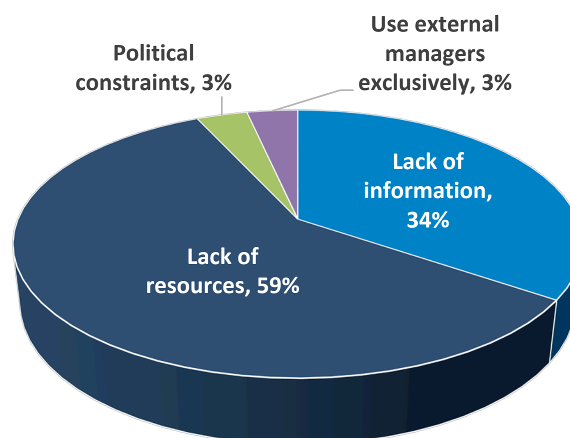
Investors feel the biggest constraints on their ability to be more active shareholders are lack of resources (59%) and lack of information (34%).

– Most felt that with better resources and information flow they could be doing a far better job in engaging with portfolio companies to manage and price non-traditional financial risks.

– Lack of resources has caused some institutional investors to "pick their spots" when it comes to engagement and to leverage the support of stakeholders and partners. "With more resources, we could expand our shareholder engagement efforts. As it is, we have to be very strategic in our approach, leveraging our partners and expertise – including our stakeholders – to best effect."

– Others have turned to outside agencies, or formed their own, to get better information flow. "We established an independent research and engagement firm to provide us with robust research into domestic companies to better understand non-traditional financial risks, including ESG, in our portfolio companies and to engage on them effectively."

– Many institutions rely on international associations for standards and guidelines on active ownership and engagement. "We are members of industry associations; for example, the PRI and the Global Institutional Governance Network, a sub-group of the International Corporate Governance Network. These and other memberships impact how we exercise stewardship activities including proxy voting and engagement."



Summary Conclusions

Three observations stood out from our survey work:

1. Active ownership and engagement with portfolio companies is important to institutional investors

- Institutional investors' approaches to active ownership and engagement, particularly in respect to public company investments, focus not on passively voting in-line with portfolio company managements but rather on influencing company holdings regarding risks important to the long-term sustainability of the company, their organizations and stakeholders. "Active ownership" is being used, in various ways, by most of the responding investors to both mitigate risks and enhance returns in their portfolios.
- A majority of the institutional investors we surveyed vote on shareholder resolutions (mostly themselves, rather than delegating), have a set of proxy voting principles in place (half of them share these principles publicly) and keep track of how they vote on shareholder resolutions, including when they vote against management (half of them make it part of the public record). The institutional investors have voted against management on executive compensation, board appointments and long-term strategy.
- Over 40% of surveyed institutional investors are engaging in direct dialogue with companies in which they have significant holdings. Shareholders are working with portfolio company managements on fiduciary responsibilities, well-composed independent boards, transparency, shareholder rights and a variety of environmental, social and governance (ESG) issues.

2. In evaluating non-traditional risks at portfolio companies, institutional investors focus on risk-and-return disciplines

- In qualitative discussions and through comments on the surveys, institutional investors consistently spoke about their management of non-traditional risks in portfolio companies, including ESG, through the perspective of risk and return, in line with their missions. Efforts in active ownership to date most commonly appear to be geared towards influencing investee companies to identify and price longer-term, non-traditional risks accurately, manage them effectively and report them transparently – to evaluate how they might impact the future sustainability of the business. Respondents generally did not report an intention to impose values on company managements.
- The institutional investors indicated a belief that by incorporating these risks into their investment decision-making process, they would improve their long-term risk-adjusted returns and increase their capacity for robust stewardship. Many of the institutional investors surveyed include their voting and engagement activities in their ESG and/or stewardship programmes.

3. Emphasis on strong board composition and collaboration with external agencies.

- Over half the investors identified a lack of internal resources as the greatest impediment to progressing from transactional to strategic partnerships with portfolio companies. Another 35% identified a lack of information and proper data as important obstacles.
- Aware of these limitations, the respondents put considerable weight on two strategies:
  - First, forming appropriate and well-composed boards, both at the companies in their portfolios and at the institutions themselves. Institutional investors felt these governance bodies can play an important role in deepening and improving the way companies and investors, alike, measure and manage non-traditional risks and how they can engage more productively with each other.
  - Second, forming partnerships with external agencies, such as local or international associations, that can provide high-quality information and detailed data. Institutional investors felt these associations can play a vital role in helping them to become better informed and active owners, especially in foreign markets, where they may be at some disadvantage and tend to be less active.

Survey on Active Ownership and Engagement Practices of Long-term Institutional Investors

Description
This 10-question survey, which focused on the voting and engagement practices of sovereign and government funds, is part of a larger study on how institutional investors are dealing with non-traditional risks in their portfolio companies. The study is an initiative of the Global Future Council on Long-term Investing, Infrastructure and Development of the World Economic Forum. All data and responses are treated confidentially, and results are reported on an aggregated basis only. At the end of the survey, participants may elect to provide contact details for further discussion with the survey team.
Scott Kalb, Chairman, Sovereign Investor Institute and Founder, Bretton Woods II Responsible Asset Allocator initiative; Josh Lerner, Jacob H Schiff Professor of Investment Banking at Harvard Business School; and Alison Tarditi, CIO, Commonwealth Superannuation Corporation, Australia

Q1. Organization name and type of fund

____

Q2. Proxy voting activity: Do you vote your shares on shareholder resolutions?

____Yes, we do this ourselves

____Yes, we use an outside service provider

____No, we don't vote

If you use an outside service provider, please specify – Proxy voting adviser; external managers; etc.

____

____

If self, please give some details on your process

____

____

Q3. Proxy voting principles: Do you have a set of proxy voting principles?

______Yes

______No

If yes, are they public?

______Yes

______No

If public, please provide a link or copy of your proxy voting principles

____

Q4. Proxy voting with external managers: Do all or some external managers vote on shareholder resolutions on the companies they manage on your behalf, and report their voting actions to you?

______Yes

______No

Comment

____

____

If yes, is this part of your contractual arrangement with your external managers?

______Yes

______No

Comment

____

____

If all or some external managers vote on your behalf but it is not part of the contractual mandate, how is this managed? Do they report the results to you?

____

____

Q5. Accountability: Do you record and report the number of times that you or your agent votes against public company management?

______Yes

______No

If yes, are the reports public?

______Yes

______No

Q6. Voting issues: If you vote against management, what is the most common issue on which you disagree? (Tick all that apply, feel free to comment)
_____Management compensation
_____Board appointments
_____Environmental issues
_____Diversification policies
_____Acquisitions/Mergers
_____Divestments
_____Business strategy
_____Other (please specify) ____
Comment
____
____

Q7. Resources: Do you have dedicated internal resources for active-ownership/proxy voting?
______Yes
______No
If yes, how many staff? Are they integrated into the investment team or do they sit elsewhere in your organization?
____
____
If elsewhere, where do they sit? How do they interact with the investment team?
____
____

Q8. Engagement: Do you engage with portfolio company managements?
______Yes
______No

If yes, how do you engage? Please specify
____
____
Q9. Shareholder issues: What do you consider the most important shareholder issues today? (Tick all that apply and feel free to comment)
____Fiduciary responsibility
____Conflicts
____Transparent reporting
____Well-composed, independent boards
____Executive compensation
____Shareholder rights
____Other (please specify) ______________________________________
Comment
____
____

Q10. Challenges: What are the biggest constraints on your ability to be an active owner? (Tick all that apply, feel free to comment)
_____Resources
_____Information
_____Other (please specify) ____
Comment
____
____

Please provide contact details below if you would be willing to discuss details with our survey team
____

THANK YOU!

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Robert van Zwieten, Chief Executive Officer, The Serendra Group

Endnotes

[i] For further discussion of measurement issues in long-term investments, see Ann Leamon, Josh Lerner and Vladimir Bosiljevac, Measurement, Governance, and Long-Term Investing, Geneva, World Economic Forum, 2012; and Sean Koh, Josh Lerner, and Alison Tarditi, Innovations in Long-Term Capital Management: The Practitioner's Perspective. Geneva, World Economic Forum, 2016.

[ii] CSC defines extra-financial risks as those arising from issues that exist beyond the traditional range of variables considered as part of the investment decision-making process, but which could have short, medium and long-term effects on business performance and viability. Such risks are an increasingly complex set, including environmental, social, intellectual property, regulatory, political, technological, security and demographic considerations.

[iii] "Regnan" refers to eucalyptus regnan, the world's tallest flowering hardwood tree and a native of Tasmania, in Australia.

[iv] http://www.unepfi.org/fileadmin/documents/universal_ownership_full.pdf

[v] Regnan company materials

[vi] New Zealand Super Fund Website, https://www.nzsuperfund.co.nz/ , accessed November 2017

[vii] "New Zealand Superannuation and Retirement Income Act 2001", Public Act 2001 No 81, dated October 11, 2001

[viii] The reference portfolio is a notional portfolio that includes a globally diversified asset allocation, expected to meet the long-term investment objective by investing passively in liquid public markets at low costs. The reference portfolio is used by the Guardians of the Fund to benchmark the performance of the actual investment portfolio.

[ix] New Zealand Super Fund Annual Report 2017, October 2017, https://tinyurl.com/y826pmjl, accessed November 2017

[x] The Guardians of New Zealand Superannuation, "Investment Beliefs", October 2014, https://www.nzSuper Fund.co.nz/how-we-invest/beliefs, accessed November 2017

[xi] Mercer Climate Change Report 2015

[xii] International Finance Corporation, World Bank Group, "Climate Change and the Financial Sector", https://tinyurl.com/yas8d9r8, accessed November 2017

[xiii] Mercer Climate Change Report 2015

[xiv] "NZ Super Fund – Climate Change Background and Resources"

[xv] NZ Super Fund website, "Collaboration", https://tinyurl.com/y85cwt98, accessed November 2017

[xvi] Paris 2015 UN Climate Change Conference Website, http://www.parispledgeforaction.org/, accessed November 2017

[xvii] Investor Group on Climate Change website, https://igcc.org.au/, accessed November 2017

[xviii] Matt Whineray, "Climate Change – Investment Megatrend", November 2, 2017, https://tinyurl.com/yaxzjlle, accessed November 2017

[xix] Ibid.

[xx] Ibid.

[xxi] NZ Super Fund Climate Change Reduction Board Paper, April 6, 2017, https://tinyurl.com/ybwhonuu, accessed November 2017

[xxii] Matt Whineray and Anne-Maree O'Connor, "Climate Change Investment Strategy Refresh", February 20, 2017, https://tinyurl.com/ybwhonuu, accessed November 2017

[xxiii] Ibid.

[xxiv] Ibid.

[xxv] Ibid.

[xxvi] The Guardians of the New Zealand Super Fund, "New Zealand Superannuation Fund – Climate Change Strategy Background and Resources", October 2017, accessed November 2017

[xxvii] "NZ Super Fund Receives A+ Rating From Unpri For Responsible Investment Governance And Strategy", July 25, 2017, https://tinyurl.com/y927wc9x, accessed November 2017

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