

Discussion Paper

IN THE LINE OF DUTY?

INSTITUTIONAL INVESTORS' RESPONSIBILITIES REGARDING SYSTEMIC RISKS

October 2024

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We recognize that the subjects covered in this report remain areas of substantive investigation. CCSI hopes that the publication of this report will support the continued debate and discussion among relevant practitioners, policymakers, financial institutions, and regulators. Please share any feedback or comments with us at ccsi@law.columbia.edu.

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IN THE LINE OF DUTY?

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October 2024

Discussion Paper: “In the Line of Duty? Institutional Investors’ Responsibilities Regarding Systemic Risks”

The attached report describes findings from research commissioned by the World Bank and conducted by Harald Walkate in Q4 2023. The main research questions were: **“Is it possible to allow, or encourage, institutional investors to engage in systemic risk mitigation interventions with the prevailing definition of fiduciary duty? What can we do to further encourage and support universal owners in addressing the systemic risk of climate and nature loss?”**

These questions come from a desire for institutional investors to contribute to climate solutions: the systemic risk / fiduciary duty framing is intended to persuade institutional investors to take action by convincing them that (1) they face substantial systemic risk; (2) they have a number of tools at their disposal to address this risk; (3) fiduciary duty poses no barrier to addressing the risk and deploying the tools.

The two overarching messages that emerge from this project are:

- 1) Financial markets (including institutional investors) cannot and will not solve systemic issues on their own. Institutional investors are market-takers, not market-makers. To be sure, financial actors can contribute to solutions, but we should be clear on their societal mandates, incentives and capabilities as they inform us as to what is reasonable and realistic to expect in terms of their potential contributions. In addition, we should be clear on which societal actors do have the primary agency in addressing systemic issues, which more often than not will be governments or other public institutions, and should be aware that reliance on the social impact of financial actors may distract resources and political capital away from more promising (policy) solutions.
- 2) There are tensions between institutional investors’ fiduciary duties, the actions many of their stakeholders want them to take regarding systemic issues, and the agency they have regarding these issues. Even if an expanded concept of fiduciary duty were feasible over short time horizons, it would still not equip investors to tackle systemic issues. Rather than calling for an expansion of the concept of fiduciary duty, therefore, we should address those tensions more honestly and publicly, which would better enable institutional investors to make the inevitable tradeoffs in a transparent and accountable way.

We hope that this report prompts and supports engaged discussion among institutional investors and their stakeholders, including their beneficiaries, investor networks, civil society, and policy makers, around whether and in which ways fiduciary duties shape investors’ ability to respond to systemic social issues and the risks they pose.

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October 2024

Disclaimer: the views expressed in the attached report do not necessarily represent the views of the World Bank Group or Columbia Center on Sustainable Investment.



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I. ONE MINUTE SUMMARY



1. If we could substantiate that institutional investors are facing substantial and imminent climate-related risk, we could persuade them to take climate action as a risk-mitigation approach, but substantiating that risk is far from straightforward.



2. More important than the question whether there are risks is the question what institutional investors can actually do about them – unfortunately this is relatively little. Portfolio risk management tools such as hedging are unavailable or too costly. Most (sustainable) investing approaches have very little use for portfolio risk management, let alone for impact – i.e. risk mitigation effects – in the real world. Though unproven, systemic engagement is very unlikely to be effective – institutional investors don't have the incentives, capabilities or budgets to drive systemic change at scale.



3. Therefore, fiduciary duty is neither a blocker nor an enabler here: if it were evident that there were material risks and that investors could do something about them, fiduciary duty would already allow, or even require, investors to take action. Fiduciary duty may evolve to require investors to take action even if it they do not face credible investment risk or if tools at their disposal are suboptimal in addressing them but this seems exceptionally unlikely. Even if it were to happen, it wouldn't give institutional investors the required agency (mandate, capabilities, budgets) to act effectively to mitigate the underlying systemic issues.



4. Although it's regrettable that governments haven't done more to deploy public policy to address systemic issues, the best that institutional investors who are genuinely concerned about these issues can do is to engage in policy advocacy, also because putting too much emphasis on the role of institutional investors may be a distraction from public policy. Institutional investors can also make contributions through corporate or 'systemic' engagement though expectations as to what this can achieve at systemic levels should be modest.



5. The best way to leverage institutional investors' deep pockets to fund the climate financing gap is to create investment opportunities out of climate solutions; this can be done through macro policy (laws, taxes, subsidies, etc.) or at a project- or investment-level through blended finance (guarantees, co-investments, etc.).



6. We should explore the option of creating a 'public good investments' initiative that would direct capital towards solutions to systemic issues. If this could be credibly seen as mitigating investment risks that might materialize out of systemic issues, this could be considered a 'collective insurance policy'. If properly structured (e.g. using blending approaches) this could catalyze hundreds of billions from institutional investors.

II. INTRODUCTION AND MAIN CONCLUSIONS

At the outset of this project, the main questions were seen through a systemic risk and fiduciary duty lens: “is it possible to allow, or encourage, systemic risk mitigation interventions by institutional investors with the prevailing definition of fiduciary duty? What can we do to further encourage and support institutional investors in addressing the systemic risk of climate and nature loss?”

Through the reading and interviews for this project it became clear that these questions come from a desire for institutional investors to contribute to solutions: the systemic risk / fiduciary duty framing is intended to persuade institutional investors to take action by convincing them that (1) they face substantial systemic risk; (2) they have a number of tools at their disposal to address this risk; (3) fiduciary duty poses no barrier to addressing the risk and deploying the tools.

However, a conclusion from this project is that (1) substantiating that systemic issues pose substantial and/or unrecognized economic or investment risks is far from straightforward; (2) tools at the disposal of institutional investors are unlikely to be effective in mitigating portfolio risk or the underlying systemic issues; and (3) while the concept of fiduciary duty is always evolving, it is exceedingly unlikely that it will evolve so radically so as to require institutional investors to address systemic issues when they do not pose an identifiable risk to their portfolios and when they have little agency in addressing the underlying issues.

At the same time, it is easily observable that for many systemic issues, climate change being the clearest example, there is a gap in financing solutions. Also, institutional investors are always looking for investment opportunities that meet investment requirements that are driven by their liabilities.

In sum, the key recommendations coming out of this project are the following:

I. Systemic risk

More work is needed to understand, assess and measure investment risk posed by systemic issues. Various studies suggest that impacts on economies and investments will be catastrophic, whereas other studies suggest that the economic and investment impacts will be relatively modest. At the same time, commentators across the spectrum seem to agree that financial markets are not fully incorporating the likely physical or transition risks.

Regulators can play a key role in encouraging or even requiring this further work from institutional investors; academic research and debate also need to evolve further to understand the linkages between planetary, economic and investment impacts. While scenarios can never contain all relevant detail, and while we shouldn't expect them to hand us a crystal ball, further development of scenario analysis tools and wider adoption of the scenario analysis practice will be helpful.

Today, it can be difficult to approach this work objectively given that assessments that suggest that economic impacts may be modest can be brushed aside as being unrealistic, or even as “climate denying”, rather than used to develop deeper understanding of the drivers of economic and investment risks, linkages between planetary impacts and economic systems, or what institutional investors can do about any of this.

We should insist on the best evidence-based approaches, and should invite actors with relevant expertise in investing, risk, energy systems, climate science, economics and public policy to contribute to these discussions.

2. Institutional investor actions

More work is needed to understand the likely efficacy and cost of tools at the disposal of institutional investors to address risks. This includes tools to mitigate portfolio risk (hedging, insurance, portfolio allocation) as well as tools to mitigate the underlying systemic issues. For most systemic issues public policy will be critical, and therefore the tool that institutional investors can best deploy is policy advocacy.

Policy advocacy: this requires better platforms for collaboration and exchange of information, to which public institutions, regulators, institutional investors, and industry groups can contribute. Institutional investors should do more to clarify which policy signals they need and should demonstrate how policy signals are incorporated into risk assessment and investment decision making.

Systemic engagement: This is an emerging practice that requires further experimentation and demonstration. The available case studies and literature, however, suggest it would be a nearly insurmountable challenge for institutional investors – after all, organizations whose business is making investments and who have no democratic mandate or accountability – to build the needed resources, to coordinate actions to achieve targeted outcomes, or to bear the costs that may be substantial if the goal is truly to affect societal and economic systems. Systemic engagement should also focus as much as possible on achieving solutions that involve interventions from public institutions that do have democratic accountability and that are more likely to be effective across systems.

Sustainable finance / Net zero investing: Regulators and asset owners should also discourage the deployment by asset managers of most of the sustainable finance tools typically committed to today: portfolio decarbonization, Paris/1.5 degree-aligned investing, emissions accounting – these do little or nothing to mitigate portfolio or real-world risks and may create the illusion of investor agency that can pose a distraction from the climate action that is really needed.

3. Fiduciary duty

A lot of work has been done to clarify the implications of fiduciary duty for institutional investors in dealing with systemic issues, which should be welcomed at a time when linkages between systemic issues, economic systems and investments are becoming clearer. Nonetheless, it seems clear that in most if not all jurisdictions, fiduciary duty does not stand in the way of investors acting on identifiable, material investment risks, at least when they also have agency to act on them and this is not financially detrimental. Also, from this research it seems clear that persuading institutional investors they face much more substantial investment risk than previously thought will be difficult or impossible. Furthermore, additional clarification of fiduciary responsibilities would not give institutional investors more agency to address systemic issues. Finally, it seems highly unlikely for the concept of fiduciary duty to evolve so radically so as to require institutional investors to take action where there is no portfolio materiality and where they don't have control. Therefore we should manage our expectations as to what additional work on fiduciary duty can yield in terms of institutional investor action or real-world outcomes.

4. Investment solutions

If the point is in fact to leverage institutional investors' vast capital in order to help close the climate financing gap then there are other ways of achieving this than relying on the 'systemic risk – fiduciary duty' framing described above. At the core of institutional investors' mandates is their continuous search for investment opportunities. While many solutions needed to address climate change, especially in developing countries, do not (yet) meet typical institutional return and risk requirements, we have tools such as blended finance that can make them investable, and therefore a more promising framing is likely the development of attractive investment opportunities.

However, there are constraints to scaling up this type of investment, including but not limited to: (1) supply of investable projects; (2) supply of public/philanthropic concessional capital to catalyze private investment; (3) the leverage ratio, which determines how many private sector dollars can be raised for each concessional dollar; (4) private investor orientation – the degree to which institutional investors are open to considering this type of investment; (5) marketplace – the lack of a well-functioning market where public and private investors and projects seeking funding can connect.

While these constraints might seem overwhelming, based on the reading and interviews conducted for this project as well as our other experience, in our assessment this route to unlocking institutional investors' capital is more plausible than the 'systemic risk – fiduciary duty' route.

Our recommendation therefore is to address these constraints urgently and for asset owners to engage with governments, development banks, investment banks and asset managers to proactively identify opportunities to contribute to these kinds of investments, thereby fulfilling their fiduciary duty to beneficiaries and potentially mitigating current or future planetary or portfolio risks.

III. DISCUSSION OF THE RESEARCH QUESTIONS

To address the main question: **“Is it possible to allow, or encourage, systemic risk mitigation interventions with the prevailing definition of fiduciary duty? What can we do to further encourage and support universal owners in addressing the systemic risk of climate and nature loss?”** a set of sub-questions was defined. In addressing the questions and each sub-question, a small body of literature was reviewed, and approximately 30 commentators were interviewed.

Literature: Appendix A lists the literature that was reviewed in full for this project. We make no pretense of having conducted a complete literature review and do not limit ourselves to peer-reviewed academic literature; in part the aim of this research was to analyze arguments and concepts that have not yet been covered by academic research. This particular set of publications was selected by asking interviewees and other experts for recommendations in relevant areas, including fiduciary duty, systemic risk, climate change and climate change impacts, efficacy of sustainable investing, system-level investing and systemic engagement. A small number of other publications that were not reviewed in full but have relevance for some of the questions addressed here are referenced in footnotes.

Interviews: Approximately 30 interviews were conducted for this project, in a range of disciplines: law/legal commentators; investors; (investment) consultants; academics (in a number of fields); advocacy groups/investor initiatives. We took care to ensure a range of different perspectives on the questions discussed in this report. A listing of interviewees is not included in this report given that some spoke with us on condition of anonymity.

A few notes on scope and terminology:

- **Systemic issues vs. climate change:** the questions for this research were formulated with systemic issues broadly in mind (i.e., climate change, inequality, biodiversity loss, anti-microbial resistance). However, in the interviews and in most of the literature, discussions often center around climate change. What is said below in terms of risks and solutions related to climate change may not apply to other systemic issues.
- **Universal owners vs. institutional investors:** the questions for this research were formulated with ‘universal owners’ in mind. However, not all commentators use this terminology or agree that this should be considered a subset of investors with capabilities or motivations that are distinct from other types of broadly diversified investors. The term ‘institutional investors’ is most used and also seems to best capture the type of investors we are discussing here.

1. CLIMATE MODELS / MACRO-ECONOMIC LINKAGES

1a. What do climate models tell us about the likely *climate* impacts?

The likely impacts of climate change on the planet have been better described elsewhere and were not a research focus for this project. Suffice it to say here that they may be very severe, and the higher the temperature increase, the larger the impacts.

Academic interview: “We know GHG emissions, and they are continuing to grow. The effect is temperatures being raised and this is relatively easy to forecast. But there are second and third order effects – sea levels rising, precipitation, extreme weather, droughts, displacement – these are all much harder to predict. If we have 4-5 degrees warming in 50-100 years, that would probably imply 20 meters of sea level rise – so you can forget about the Netherlands and a good portion of Europe. There has been a time in the past where we had these sea levels at lower temperatures. If we would stick to 1.5 degrees it would be 4-5 meters, which is still a lot but definitely manageable. But areas like Bangladesh, Pakistan, coastal cities in China, Hamburg, I would still say ‘good luck’. But sea level rise is the easiest to forecast. Other effects, storm activity and so forth, are much more difficult. I don’t think we’ll make 2 degrees. 3-4 degrees is optimistic; beyond that is a possibility, and it will get pretty bleak.”

1b. What do climate models tell us about the likely *economic* impacts?

The comment above notwithstanding, we don’t know the *exact* physical impacts of climate change, especially far in the future and certainly if we take into account tipping points, nor do we know the speed or nature of the policy response. So we don’t know how much longer we’ll continue to emit GHGs, nor what ultimately the temperature rise will be, let alone the second order and third order effects. Then it’s also impossible to predict how economies and investments will be impacted in these many different possible scenarios.

Surveying the literature for this project and the comments from interviewees, the following seems a fair assessment of where we are on this question: (1) especially with high temperatures, planetary impacts will be severe; (2) it is virtually certain that this will also impact economic systems, economic growth and specific assets; (3) but attempts to specifically model or quantify these economic impacts end up concluding that the uncertainty is too great or that the economic impacts will be less catastrophic than planetary impacts. (To be sure, there is a wide spectrum: from models that claim all economic activity will be wiped out, to models that suggest climate change might have *positive* impacts on economic activity.)

Stern, Stiglitz, Taylor: “A central problem is that climate change is moving us into uncharted territory: we do not know how an increase in greenhouse gas concentrations will affect whether and how changes in climate will affect the economy, simply because our economy has never experienced in the lifetime of homo sapiens anything like what we are likely to face.” (p. 21)

Basel paper: “The particular focus of the paper is to understand the reason why the impact on banks as observed so far is relatively moderate. We consider two alternative hypotheses: whether the risk is effectively small, or negligible, or whether it is mispriced by banks or markets, which would be more a source of concern for supervisors.” ... “Apart from a few outliers, according to the overall distribution of impact across academic studies, the microeconomic impact of climate change on particular portfolios is so far relatively small, below 50 bp on loan and bond spreads. Stock markets appear to react more significantly and have started pricing some, but maybe not all, the risks. There is some evidence of discount in real estate prices for high flood risk areas. As a consequence, significant uncertainty remains regarding the magnitude of the effects of climate change.” (p. 1)

Academic interview: “The models are putting all the emphasis on physical damage. But we want to know how much the economic pie will shrink. We can do this in different ways: (1) Enumerative, or bottom-up, this is the Nordhaus original approach: you look at industries and determine if they’re resilient yes or no; this typically comes up with small damages but it’s guesswork. (2) Econometric: you look at changes in GDP that are linked to changes in temperatures: factor of production starts to go down after a certain optimal temperature – here the impact on economic output will be quite big. Also tipping points are a possibility – thawing of permafrost, melting of icecaps,

etc. Investors should be given the dispersion of the estimates and investors should learn to say ‘talk to me about your assumptions’. They must be aware that the dispersion is huge. If they’re fed one big number they should be suspicious – this is not possible to provide. Then investors should be cautious about saying ‘I’ll go in a prudential direction’ – this might be appropriate from a societal point of view, i.e. for policymakers, but investors being too prudent might be damaging.”

Academic interview: “Either we do the economic transformation (energy transition) – which is almost impossible. Or we do nothing, and we enter into uncharted waters, with likely 3 degree warming and profound economic shifts, which must result in price reverberations. In either of the polar scenarios there will be large impacts on firms and governments. There’s also a central scenario, where the repricing is gradual, and that’s the most benign scenario.”

Academic interview: “The IAMs¹ and DICE² have had a lot of bad publicity. DICE is not a single model but a conceptual framework. No economist is using the original model today – though it’s still called the DICE model – but the utility and damage function has been changed in line with the best information. It is true that the original DICE model by modern standards was lacking. Disingenuously people use the outcomes of these outdated models but that has nothing to do with how the models should be used today. IAMs can provide a useful way of thinking about climate change. But we should bear in mind that all models were created with policymakers in mind. If people use these models for [investor] scenario analysis that’s “sorcerer’s apprentice” – it’s not what they were built for. Some economists say very low damages, some say catastrophic.”

Consultant interview: “I’ve spent my whole career developing models, stress testing, etc. Since 2019 I’ve led the climate modeling team – 40 people, not all quant, focusing on regulatory side of climate, climate modeling, ESG ratings, etc. I’ve been helping firms embed climate in credit decision making, new loans, extending credits, they can take into account results of scenario analysis and determine if they want to do business with the client. But it’s challenging – there has been a big push from regulators but there’s a huge amount of skepticism in the banks, with credit risk officers, etc. about what all this really means. A lot of banks are saying, ‘we’ve done the work, we’re concluding it’s not terribly relevant. Yes, we made commitments to decarbonize portfolios, but this is not really a loss/credit issue.’... I get a bit like ‘what do I tell my clients?’ I don’t think there will be big impacts on the business, but they do have the regulators all over them. As CIO I’d be much more concerned about inflation, contraction, conflicts in the world, cybersecurity.”

Investor interview: “We do believe the climate risk is imminent, though there’s probably not a great way to model it.”

Investor interview: “There’s this problem that we’re working back from the assumption ‘climate will be really bad so our model outcome needs to be really bad too’; also we can’t pretend that we can predict the future. We have a terrible record of predicting sector returns even over 10 years; these models should never be an investment tool – perhaps useful for academic studies, not for investment decisions. People may be right about tipping points. But a lot of these impacts can’t be captured in a model. The average lifespan of a company in the S&P is twenty years. Trying to take your portfolio holdings forward twenty years is completely meaningless.”

Consultant interview: “It’s really hard to quantify this; we have tried to do it through scenario analysis, but it doesn’t really work. Tipping points are hard to predict, famine etc. You can’t really price them. You can’t say ‘3 degree pathway: costs are x, and 2 degree pathway: costs are y’. It doesn’t work like that. We can’t make comparisons on a financial basis.”

Stern, Stiglitz, Taylor: “The damages from a global temperature increase are reflected, in most IAMs, by a proportionate reduction in overall output. For example, in Nordhaus’ DICE models, losses from a 3 degree Celsius temperature increase are around 2.1 percent of GDP, and for a 6 degree Celsius temperature increase, 8.5 percent of GDP. There is no damage to capital stocks in most IAMs, nor any reduction in the underlying growth rate, which is assumed to be exogenously determined. As we have already noted, a 4 degree Celsius, let alone a 6 degree Celsius, increase in temperature would have large and highly uncertain consequences, likely involving a massive disruption in livelihoods and severe loss of life across the world. What we know about climate change strongly suggests that damages increase non-linearly with temperature. Given that many parts of the world would have to be abandoned as submerged, or vulnerable to severe weather events, including outdoor temperatures intolerable to human beings, for extended periods (wet-bulb temperatures above 35 degree Celsius) (Xu et al., 2020), the assumption of no reduction in, or damage to, capital stocks is clearly untenable. So too is the idea that there could be an unchanged underlying growth process. The estimates of damages from climate change calculated

1 Integrated Assessment Models.

2 Dynamic Integrated Climate-Economy model, integrated assessment model developed by William Nordhaus.

in those IAMs incorporating such damage functions are much smaller than that which is likely to occur. Obviously, since damages are particularly intense in the upper tails of temperature distributions, small changes in mean temperature can have large effects on the probabilities of those extreme events; and given the complexity of the climate system and the fact, repeatedly emphasized, we are moving into uncharted territory, we can have only limited confidence in estimates of damage functions based on past data. ... As we explain below, while they might make the IAMs seem more reasonable, these studies simply illustrate, but do not resolve, the extreme sensitivity of results in these models, which make them very weak frameworks for policymaking.”(p. 26/28)

Oxford Economics: “Under this new specification, we find that 2.2°C of warming by 2050 has the potential to reduce global GDP levels by up to 20%. Warming of up to 5°C by 2100 would lead to economic annihilation, consistent with scientific research on mass extinction thresholds. ... Our approach assumes no adaptation to climate change. ... Given that humans have been adapting to their environments throughout history and can be expected to continue doing so, the magnitude of the estimated productivity impacts constitutes an upper bound as adaptation would reduce both the estimates of historic and future projected damages in our model. However, even when we take the 66th percentile of possible damage estimates to allow for potential offset from climate change adaptation, our new damage function still implies a sobering reduction in projected global output of 10% by 2050.”

Basel paper: “The ultimate impact of climate-related risks, both physical and transition risks, on banks’ credit exposures is not easy to quantify. This is true for a number of reasons. One is that conventional risk models do not capture potentially severe facets of climate-related risks, such as tipping points and outcomes such as climate-induced mass migrations and associated warfare. This omission is understandable, as these effects are extremely difficult to model; yet their omission is likely to lead to an underestimation of the impact of climate change on banking systems and economies more broadly. A second reason is the indirect nature of climate-related risks for banks, such as impacts to their customers’ supply chains arising from climate physical risks, and the unpredictability of transition risks associated with political measures to mitigate climate change. Third, and perhaps the main reason why it is difficult to quantify the impact of climate change, is the related uncertainty. For example, as noted by Lenton et al. (2019), there is a lot of uncertainty about how much ice sheets will melt, given any assumed amount of global temperature rise. And, as noted by Pindyck, considerable uncertainty remains about how much average temperatures will rise given any assumed path for greenhouse-gas emissions. For example, the extent of coastal flooding from future sea level rise (SLR) is likely to be substantial but highly uncertain, making it extremely difficult to estimate damages to coastal real estate from future SLR. All in all, the long-term forecasting horizons and data gaps only make the task of estimating the impact of climate-related risks more difficult.” (p. 1)

While it might seem counterintuitive, there are a number of good reasons why the investment impacts of climate change might be less catastrophic than the societal, or non-financial, impacts:

- Most institutional investors, even ‘universal owners’ (the moniker notwithstanding), only have exposure to a relatively small slice of the global economy; therefore their risk exposure does not mirror the risk the global economy is exposed to.
- Developing countries will be disproportionately affected by climate change and institutional investors often have very modest, even declining, allocations to developing markets.
- Institutional investors invest mostly in large companies that are better positioned to deal with the effects of climate change than smaller companies (e.g. can move factories away from coastlines).
- Many of the impacts of climate change will be non-financial (i.e. deaths, illness, displacement) with no or very indirect links to economic systems or costs that are relevant for institutional investors.
- For transition risk: there would only be (substantial) investment risk if there were a very sudden and disruptive transition that is more or less unexpected (as some say, a “Minsky moment”); however, given the scope, complexity and costs of the transition that would meet Paris goals it seems exceedingly unlikely that we will see the public policy response needed for this. As the various quotes from interviews here demonstrate, many commentators believe that a sudden transition to meet the Paris goal of 1.5 degrees warming is unlikely, perhaps impossible, making such a Minsky moment improbable.
- Because many climate impacts will occur far in the future, and because investors use discount rates in assessing future (impacts to) cash flows, it may be that impacts are “discounted away”. While this is likely part of the explanation, this cannot be easily corrected: there is no central authority that can tell institutional investors to simply adjust their discount rates.

Stern, Stiglitz, Taylor: “This approach misses crucial distributional issues as it is the poorest who are hit hardest by the effects of climate change; see, for example, the cyclone in Mumbai and Hurricane Katrina in New Orleans both in 2005.” (p. 28)

Tallarita: “Furthermore, index funds are disproportionately invested in richer economies, which are relatively less vulnerable to climate change.... Such a strong geographic bias toward richer countries means that these funds internalize only a portion of global climate externalities and therefore would likely oppose many potential climate mitigation measures that would be socially desirable on a global scale.” (p. 518) “For example, ‘subsistence’ or ‘smallholder’ farmers are responsible for 90% [of the production] of rice, wheat, other food crops, cocoa, and cotton in Nigeria,” and for greater than “70 percent of arable and permanent cropland in several West and Southern African and Pacific countries. ... The economic activity of these farms is very vulnerable to extreme weather events and other climate change effects. But stock market investors, including index funds, are not exposed to these risks and therefore have no incentives to mitigate them.” (p. 539)

Tallarita: “There is near universal agreement that poorer countries are more vulnerable to climate change.” Referencing: Richard S.J. Tol, *A Social Cost of Carbon for (Almost) Every Country*, 2019, estimating that “the country-level social cost of carbon for the United States, India, and Africa are 0.6%, 23.9%, and 30.4%, respectively, of the global cost of carbon.” (p. 540)

Tallarita: “As a recent study shows, “poor countries are projected to disproportionately experience [climate change effects] through deaths, while wealthy countries experience effects largely through costly adaptation investments.” (p. 547)

Basel paper: “At the country level, Kraemer and Negrilla (2014) find that poorer countries are more exposed to climate risk, because agriculture sectors account for a larger share of GDP in these countries. ... Only a few studies look at effects in emerging markets, despite these countries being potentially more vulnerable to both physical climate risk and the costs of transition.” (p. 3)

Stern, Stiglitz, Taylor: “Increasing risk over time justifies using an interest rate that is lower than the safe interest rate, simply because the increasing risk (normally) leads to an increase in the expected marginal utility of income.” (p. 47)

Tallarita: “Finally, index funds likely discount the distant future at a much higher rate than what most experts believe is the correct social discount rate for climate damage. The consensus among experts is that society should discount future climate damage at a rate between 1% and 3%. By contrast, the stock market discount rate is 7% or higher. Although we have little evidence on how the market discounts climate mitigation investments, it is plausible that this rate is much closer to the 7% average stock market rate than to the social discount rate. As a result, index funds massively underestimate the social value of climate mitigation and have very weak incentives to invest in it.” (p. 518)

Academic interview: “Since all this costs money people want to know what is the benefit-cost ratio of my investments to mitigate risk. That’s where the discount rate comes in. There was a wonderful discussion between Stern and a Yale professor – Stern argued very rightfully that the discount rate for adaptation and mitigation measures should be negative. We should see the increasing benefits. That’s such an alien way of thinking for the financial sector.”

Tallarita: “Adaptation to climate change is relatively more difficult for smaller companies, which have more limited capital for investment in expensive climate resilience projects with long-term, uncertain payoffs. Therefore, a portfolio with a disproportionate fraction of large companies may be underexposed to the total risk of climate change and thus have reduced incentives to address climate externalities.” (p. 557)

Academic interview: “Financial markets are amoral: a dollar is a dollar in whomever’s hands. ... Financial markets are just that: financial. The clue is in the title. 2020 and 2021 showed that markets can go up while life for most people is getting worse. This is not a criticism of financial markets; it is what they have been set up to do, and very useful it is too. This analysis simply points out that there are certain things we should not expect of financial markets. Nor does it imply that we should not do anything about global warming. But an important result of this analysis is that the value-maximising level of global warming for financial markets will almost certainly be higher than the level set by a political process that takes a much broader view of economic welfare and intergenerational issues. Tallarita puts this same point in a different way: even widely diversified shareholders only internalise a small fraction of the social costs of global warming within their portfolios.”

1c. Can we substantiate that the climate models used by institutional investors and their advisors are underestimating the likely climate / economic impacts? What is the role of tipping points in this context?

This cannot be substantiated. It is certainly possible, also given the likelihood of tipping points, but given the vast uncertainty around the first, second and third order climate impacts, the unpredictability of the timing or impacts of tipping points, and the uncertainty around the policy response, it's impossible to say that models are underestimating the likely climate or economic impacts. It should be noted that a different, and perhaps more relevant question, is whether financial markets are underestimating climate risks – this is discussed in 2b. below.

Stern, Stiglitz, Taylor: “The more fundamental problem is that these models are not well suited to analysing problems of deep uncertainty, extreme risk, endogenous preferences, intergenerational equity (where future generations are not discriminated against), and increasing returns to scale and rapid technological change. Even “new and improved” IAMs are likely to be of only limited value in providing policy guidance for several reasons-- and that will continue to be true even as more information becomes available as to the nature of climate change and the policies and actions that might tackle it. First, even if we make the assumptions more realistic, these models have been shown to be very unrobust; they are not helpful for guiding policy decisions, unless we are very confident in all of the key functions and their parameters—which we cannot be. Here, though, the models, perhaps unintentionally, have proven their usefulness in another way, by highlighting some of the variables, like risk and distribution, which are critical. To be sure, any theoretical analysis would have given the same results, at least qualitatively.” (p. 49)

1d. If that is the case how can investors correct for this and what are available investing or hedging strategies they can deploy?

As Stern, Stiglitz and Taylor suggest (directly above), it seems wise for investors to consider a broad range of models and scenarios in considering the potential climate-related impacts on their portfolios, taking into account that we cannot predict the future, and that there is vast uncertainty around potential pathways and policy responses. This should give them a good qualitative understanding of the different moving parts and how much can be predicted or modeled quantitatively today. Then the focus should be on how much investors can do to mitigate these risks or the underlying sources of risks. This is discussed in more detail below.

2. RISK

2a. Where is the overlap between climate risk and other systemic issues (1) for the planet and (2) for investors?

This is impossible to say, other than that it is certain that not all physical climate impacts (temperature increase, sea level rising, extreme weather) will necessarily impact economic systems or activities that institutional investors are also exposed to. (See also the various reasons for this under question 1b above.) The distinction between uncertainty and risk should also be noted.

Stern, Stiglitz, Taylor: “The risks that the firm looks at are its private risks, which are distinctly different from those of society as a whole.” (p.47)

Academic interview: “Shareholders are not synonymous with the planet. You can end up with inappropriate conclusions. You’re not assessing risks to the planet.”

2b. How can we substantiate that investors / financial institutions are not fully taking into account these risks?

Opinions on this issue vary. Many commentators agree that climate-related risks are priced in to a certain extent; e.g. for physical risk this is reflected in rising insurance premiums for real estate in coastal areas and for transition risk this is shown by asset prices responding to government announcements about the policy response. Nonetheless, most commentators also feel that markets are not fully pricing in climate-related risks. This applies in particular to transition risk: there is discussion about the potential for a sudden, disruptive transition and fear that investors may not be taking this into account. However, this is likely a reflection of the perceived improbability of a sudden and disruptive transition given the lack of political will to develop the necessary policies, and the vast cost and coordination needed for a complete transformation of the global economy.

In this sense, ironically, in order to *take away societal risk* (i.e. physical risk) that investors may have little exposure to, *investor risk needs to be created*. This is because the intervention that takes away societal risk (i.e., the energy transition) would create significant disruption and change to systems and assets that investors do have exposure to, but that are not considered likely or imminent today.

Academic interview: “Climate risks are priced across a range of asset classes, but we don’t know if they are adequately priced. ... Also, while there is disagreement about the magnitude of economic impacts the sheer magnitude of uncertainty should be reflected in prices. And some studies suggest severe consequences. This should be reflected. Uncertainty affects prices as much as expectations.”

Academic interview: “But you need to go at this question on physical risk: it’s impossible to say investors aren’t acting on transition risk, because there’s no baseline. Markets are probably taking into account a lack of policy response, which is probably correct. You can definitely say that markets react to policy announcements and climate events. But it’s hard to say they’re fully taking it into account. On physical risk you’ll see work being done on real estate pricing, some investors seem to be taking this into account, but maybe not all investors. We could get more of a sense on physical risk, e.g. see if valuation differences correspond to changes in underlying changes in cash flow estimates.”

Investor interview: “There’s a bunch of academic evidence pointing to the fact that investors are pricing this in; price of oil majors, real estate, municipal bonds. ... It doesn’t seem very feasible with all this attention to ESG that investors *aren’t* thinking about it.”

Basel paper: “That said, there are no clear benchmarks that quantify climate risks and fair pricing of such risks. Therefore, it is not feasible to gauge whether current asset prices underestimate or overestimate climate risks and the scope for repricing.” (p. 1)

Academic interview: “Our financial systems are already accounting for all the risk that they see. [This pension fund] is pricing in risk as they see it. Nothing is hidden, they don’t need activists to point this out to them. My colleagues will train institutions on understanding climate risk, but they are already doing it. But they are also operating on relatively short time frames, if you tell them something will happen in 20 years they don’t know what to do with this. The CPPIB article shows that he clearly sees climate as relevant to their decision making as a risk and the opportunities it presents but also that it’s not within their fiduciary duty to affect any outcome in the economy.”

Stern, Stiglitz, Taylor: “In the case of climate change there is powerful evidence that the risks are very far from being fully embodied in markets. Given that that is the case, the possibility, if action is delayed, of a disorderly financial transition, as the risk of climate change finally becomes generally recognised, cannot be ignored. A “disorderly” transition to a greener, sustainable economy would entail sudden changes in the price of carbon, resulting in sudden changes in asset values.” (p. 36)

Basel paper: “Several authors conclude that realized returns on assets related to companies vulnerable to climate-related risks are below expected returns, providing evidence of underestimation of risk. ... There are still data issues, notably in terms of granularity, as well as methodological issues, which prevent a definite assessment of the situation, both for physical risk (lack of exact location of the exposures in many instances) and transition risk (notably the lack of evaluation for SMEs). ... All in all, one may conclude that the overall balance is more in the direction of an underestimation of the risks from climate change from the perspective of banks, rather than a situation where the risks are likely to be fully measured and managed by banks. The main channel is the materialization of unexpected risk insufficiently priced in lending or bond spreads.” (p. 2)

Basel paper: “Despite this uncertainty, most research finds a measurable impact of climate risk on banks’ credit exposure. Some research tries to capture the effects of this uncertainty, e.g., Ilhan, Sautner and Vilkov (2021) show that climate policy uncertainty seems to be priced in the option market.” (p. 2)

French Prime Minister Report: “Financing these investments will likely entail an economic and social cost between now and 2030, since they do not increase the growth potential. Of course, the extra investment will have a positive effect on growth by stimulating demand. But the transition away from fossil fuels will likely result in a temporary slowdown in productivity, estimated at one quarter of a percentage point per year. This is due to the redirecting of investment towards reducing reliance on fossil fuels rather than towards expanding production capacity or increasing its efficiency. It will also bring labour reallocations.” (Executive Summary, p. 16)

2c. Can we quantify or assess the ‘value at risk’ for investors/universal owners?

There seems to be fairly broad consensus that climate-related risks cannot be modeled or quantified, given the vast uncertainty around climate change impacts, the potential impact of tipping points, and the lack of clarity on government responses. What is also relevant is that there are myriad different climate- or policy-related effects that will impact various asset classes, sectors, or individual assets differently, and different assets may be more or less vulnerable to these impacts.

Academic interview: “We don’t have a good understanding of likely climate outcomes, so investors have to be provided with approximate probabilistic outcomes, but we’re talking about order of magnitude probabilities. A ‘VAR of 9.453%’ doesn’t make any sense. You want to give the investor the sense ‘should I lose sleep on this?’ – so that it can be incorporated into decision making. ... With a distribution of probabilities for different temperatures investors can determine whether they need to worry about 7 degrees (probably not), 4 degrees (borderline), 3 degrees (yes probably).”

Academic interview: “Regarding quantification; if you look at the Abrdn paper, they were trying to do this, by building off economic scenarios, using IAMs. I don’t know why you shouldn’t be able to do this. What’s more difficult is at an aggregate sense to VAR at portfolio level. You don’t know how the economy will adapt to these things – so not sure how helpful these exercises are. This comes back to uncertainty about connections between climate & economic impacts. And what do you about that.”

Tallarita: In the real world, estimating the costs and benefits of specific carbon mitigation measures for each public company is extremely difficult. Given the different portfolio compositions of the various funds, however, it is reasonable to believe that many measures that result in an aggregate net gain for the whole stock market will create a loss for many individual funds.” (p. 563)

2d. Can investors effectively manage these risks through hedging or through explicitly integrating systemic risks into their investment analysis?

Typically, institutional investors use a combination of swaps, swaptions, forwards, inflation-linked bonds, insurance-linked bonds, or (re) insurance to mitigate interest rate risk, currency risk or inflation risk. However, it seems that there is very little investors can do to manage or mitigate climate change related or other systemic risks.

Academic interview: [Discussed potential investment impacts of climate change] “What can investors do about this? That’s your job. Investors need to know the dispersions and this will feed into the investment decision making. So they might split their portfolios 50-50, and allocate more to treasuries in one, and something else in the other.”

Academic interview: “You can hedge individual situations, using insurance policies, but you can’t hedge an entire portfolio, only if you just hold cash.”

Academic interview: “Can we identify investments in things that are less damaging? The problem is that ultimately you just don’t know the future, maybe you’d like to avoid infrastructure investments that have a 30 year time horizon. The question of how you respond as investor is really, really hard. Of course a whole other question is if these things then help solve the underlying problem. ... Compare this to e.g. AI – we don’t know the impact across industries, this is unpredictable, investors need to figure it out as they go along.”

Academic interview: “There’s no hedging strategy; you can hedge against specific scenarios – e.g. you could say you’re most concerned about physical risk. You might not be investing in windfarms because you might assume we don’t get our act together, then you might go long on security, defense, everything related to adaptation. Personally I’d be most concerned about the scenario where the world goes to hell in a handcart; but in fact people manage for the scenario where we have a robust policy response, and economic damages. ... There are papers on climate hedging strategies but it’s mostly bollocks. You can’t meaningfully hedge against this. ... You can connect a climate model to an economic model and come up with a scenario that’s a plausible worst case, you might say earnings will be 1/3 less, you’d get a 60% VAR. But what can you do about this as investors? Probably nothing. What you need to know is which bits will do worse than others. Which we don’t really know. There’s no actionable investment strategy. There might be risk but is it avoidable?”

Investor interview: “There’s ESG as risk mitigation; perfectly legitimate to reduce exposure to energy companies if you think a transition is coming – if you’re thinking of people with the 50 year horizon it becomes reasonable, but for those with a one day horizon it’s unreasonable. We use ESG integration which is all perfectly aligned with fiduciary duty. But there are some grey areas; pension regulators said it’s ok for trustees to do positive things for the environment, if it is also financially positive.”

Investor interview: “We don’t have hedging stuff for climate related things; I can’t imagine that would be an actual financial instrument. It would probably be possible to find a hedge, but I don’t think we’d do this, too bespoke and costly. It’s more likely a capital allocation choice. We did look at carbon offset derivatives; if we want to offset our portfolio emissions it’s going to be very expensive, with all of these commitments. Also we got into issues around credibility of offsetting, we didn’t feel comfortable with it.”

Regulator interview: “The argument is essentially: in 2050 or 2100 the world will be uninhabitable based on climate science of 3-4 degrees. But what should pension funds be doing about that – there’s only so much you can do to understand risks so far into the future. I find it hard to sometimes engage when it’s just criticizing [models or scenarios], rather than trying to come up with productive solutions.”

Investor interview: “There are no tools to manage climate risk. Things like insurance work well when you have uncorrelated risk a lot of people want protection for. Climate risk – will be very expensive to buy insurance against this. There are cat bonds that insurers and hedge funds buy. Beyond that I’m not aware of anything. ... It’s not like ‘you just short industrials and fossils’; it would have to be very different.”

Consultant interview: “Institutional investors can consider insurance-linked bonds or reinsurance. However, climatological disasters are basically ‘acts of god’ and are considered more or less uninsurable.”

2e. Or can these risks only be addressed by correcting the underlying source (e.g. reducing greenhouse gas emissions and investing in resilience and adaptation)?

Also based on the quotes for the previous question, the answer to this question is almost certainly “yes”.

Academic interview: “It’s a related, but different question, of risk and how we manage it. It has a place, for regulators and central banks to understand the risks of climate change and how they in their roles as stewards of financial systems should integrate these risks, scenarios make sense in this context. Makes sense to consider mitigation and adaptation. But this is all different from the question how we decarbonize the economy. ... This is a conflation of a risk management and a problem solving approach.”

Finance for Zero: “One way in which FIs mitigate exposure to climate risk is to focus on portfolio decarbonization. For instance, investors may seek fossil fuel-free or low-carbon equity portfolios or exchange-traded funds as a means of mitigating exposure to climate risk. Other investors may choose fossil fuel-free or low-carbon portfolios for moral or other reasons. However, as with the conflation of climate risk mitigation and climate impact, so too is confusion perpetuated around the climate impact of low-carbon portfolios. Equity portfolios constructed with no or low carbon-intensive assets may have lower exposure to climate risk than a portfolio with high-emitting assets, but they have no climate effect in the real economy, as the outstanding shares already sold by fossil fuel companies are simply held by other owners. A focus on decarbonizing portfolios may also incentivize a fund to spin or sell off high-carbon assets, decarbonizing the seller’s portfolio by shifting asset ownership to the buyer, with no impact on real economy emissions. For example, analysis from the Race to Zero Finance Sector Expert Group found that 96% of Swedish pension fund AP2’s disclosed carbon-footprint reduction between 2019 and 2020 was due to changes in their holdings, rather than due to behavioural changes by portfolio companies.” (p. 13)

3. UNIVERSAL OWNERS

3a. Can we substantiate that universal owners cannot diversify away from, or fully eliminate, systemic risk?

Based on the discussion under question 2 – Risk this appears to be the case.

Goshen & Hamdani: “Some systematic risks are beyond the control of investors. Universal owners, for example, do not have the resources to analyze how each firm in their portfolio should conduct its business to avoid the negative effects of inflation. Indeed, reducing the systematic risk of inflation is best left to the Federal Reserve—by the policy of raising interest rates. However, there are other systematic risks that universal owners can address on their own. ... In the climate change context as well—argue systematic stewardship proponents—universal owners should prioritize the systematic risks of climate change’s effects on their entire portfolio over the profits of specific industries (such as the fossil fuel industry). Universal owners can, for instance, adopt a policy requiring firms across their portfolios to adopt emissions targets to reduce the risk to the portfolio on average, notwithstanding that this may also negatively affect some firms that depend on emissions for most of their profits. In this way, universal owners are not targeting a single company and forcing it to overturn its business model for the good of the market. Rather they are indiscriminately applying a policy that is calculated to reduce risk on average across their portfolio. ... As we will show, unfortunately, universal owners lack the necessary incentives and competence to be able to reduce carbon emissions.” (p. 27-29)

Academic interview: “We know based on academic literature that 75-94% of return is due to systematic, non-diversifiable level risk, price level in the market etc. Those price levels are effected by capital markets relying on the economic system, which relies on social systems, etc. If you can’t diversify this risk ... you have to try to mitigate the systemic risks; you have to go to the causes of the risk. There are legitimate issues around this: how much do you spend, how to deal with freeriders etc., but philosophically few would disagree with this.”

3b. Can we substantiate that universal owners give more weight than traditional portfolio managers to intergenerational concerns and to the sustainability of the economy as factors affecting future risk-adjusted returns?

Some interviewees feel that ‘universal owners’ should be considered a specific subset of investors, with unique characteristics, which has to do with the fact that they ‘own’ the assets, instead of managing assets on behalf of others, and that they have exposure to a very large part of the economy. Also, because their liabilities stretch very far in the future, they are considered to have longer time horizons than other investors. However, most interviewees and most of the literature do not make this distinction and refer to ‘institutional investors’ or ‘(broadly) diversified investors’ and seem to assume that asset owners and asset managers have similar exposure to climate-related risks and similar wherewithal or incentives in terms of dealing with it. Also it should be noted that institutional investors in fact have exposure to a relatively small slice of the global economy, because large parts of the economy are privately or government-owned, and a lot of economic activity is conducted by SMEs, often in developing countries, that most institutional investors only have very modest allocations to.

The bottom line is that where it concerns understanding and managing risks, asset owners and asset managers likely have a very similar outlook. But there are also differentiating factors: asset owners typically lack a commercial imperative; often have a more homogeneous set of clients or beneficiaries; and are typically the ones setting the mandates that need to be implemented by asset managers. All of this likely makes asset owners slightly better positioned when it comes to contributing to solutions.

Academic interview: “A very important point that I hope makes it to your report – asset managers are not universal owners. The key word is ‘owner’. A pension fund’s job is to pay out pensions in 30 years. For fund managers, outperformance is everything; they are very short term oriented. Also they have conflicts of interest. ESG is great for asset managers even though it’s mostly bullshit, because it drives inflows and allows you to get higher fees. In contrast, universal owners care about beta, not alpha. But usually alpha is gleaned to the detriment of other factors. Also, externalities created by e.g. Exxon are causing harm to your real estate portfolio, insurance etc. So the Exxon returns aren’t actually your returns. Owners should be looking at the returns of the system... Universal owners are more aligned with the interests of the public, more so than other financial actors.”

Tallarita: “Portfolio primacy theory reveals an important fact: Broadly diversified investors are likely to be more incentivized than undiversified investors to address climate risk.” (p. 528)

Academic interview: “Almost everyone is a universal owner today. They are starting to realize this and starting to understand what it means for them, for the health of the financial system, capital markets.”

Advocacy group interview: “We try to not use the term universal owner – it gets people into debates about the definition of this – we think either investors are diversifying or making a mistake; so we talk about ‘diversified investors’.”

Gosling: “A case can be made that certain classes of asset owner, particularly long-term endowments and pension funds, have an interest in the time horizon over which they are able to generate sustainable investment returns as well as the absolute return. They are therefore concerned about the health of markets in 50 to 60 years, not just the total return available between now and then. Therefore, it can be viewed as being in their interests to seek to avoid a situation in which a cataclysmic climate outcome damages the depth, integrity and quality of markets even beyond the horizon at which discounting renders impacts irrelevant.” (p. 1)

Academic interview: “Somehow this would have to reflect itself in how they think about investments; when you look at climate impacts, one of the problems is that even quite significant climate impacts 70 years out barely affect investments. So you might place a larger weight on certain assets, e.g. it’s plausible that long duration assets have greater climate sensitivity. Whether this again causes them to act differently is a question – they might be more motivated but can they actually do something about the problem?”

Consultant interview: “Universal owners – I think of them as somewhat different. You start with asset owners – managing some sort of collective pool of money for a group of beneficiaries under a specific framework. Asset owners aren’t necessarily universal owners – this implies a certain strategy and way of thinking, an organization that is large, long-term and leadership-minded. It has the opportunity to influence the system. Has to see the benefits of changing the system and enjoy the benefits and that is a long-term thing. Leadership-minded means: doesn’t make sense for organizations in the investment area to do this on their own – they’re working on the collective beta of the market. ... A deliberate strategy is essential: a combination of capital allocation and stewardship. Capital allocation could be collective, but is mostly individual. Stewardship should be collective. They try to exercise some influence over externalities. E.g. carbon – a pension fund has a big portfolio of carbon externalities, i.e. the costs of causing climate change – influencing that is internalizing future costs. So, a hyperintegration of the costs and benefits. The universal owner sets out very deliberately to manage in this way. ... I can’t find that many universal owners, for what it’s worth.”

3c. How can we encourage and support universal owners in addressing the systemic risk of climate and nature loss?

In the book “Moving Beyond Modern Portfolio Theory”, Lukomnik and Hawley argue that institutional investors should address systemic issues by changing (economic) systems. This idea of ‘system-level investing’ is supported by organizations such as the PRI: “It is in the financial interest of Universal Owners to address environmental impacts of business activities to reduce this exposure.”³ Tallarita sums up the thinking: “Portfolio primacy [the idea that index fund portfolios mirror the entire market and therefore have strong financial incentives to reduce market-wide threats, such as climate change, even if it is financially detrimental to individual firms] is appealing for many, as it promises to be a powerful market-based tool to bypass the political gridlock and government paralysis on climate policy. If governments do little to tackle climate change, private actors must step in.” (p. 515)

However, to answer the question of how institutional investors can address systemic risks, first we need to understand what tools institutional investors have at their disposal and the (likely or proven) efficacy of these tools. I discuss this question from a general perspective, and then discuss the individual tools of policy advocacy, systemic engagement and sustainable finance/ESG.

3 Universal Ownership: Why Environmental Externalities Matter to Institutional Investors; U.N. Principles for Responsible Investment & UNEP Financial Initiative, 2011

GENERAL

The literature, interviews and our previous experience all suggest that institutional investors have limited ability to influence the real economy.

CPPIB article: “There is a perception that the financial sector is a silver bullet to drive decarbonization in the real economy, but the reality is that financial market participants have limited capacity to force change in investee companies or creditors. We can influence portfolio design – the asset classes we invest in, and security selection – the individual investments we make. We can exercise our governance rights to hold directors accountable for integrating consideration of climate risk into company strategy and in certain asset classes we can negotiate contractual terms to secure climate related outcomes, but we don’t have any other levers to play with.”

Academic interview: “We said ‘if we would take an [institutional investor] initiative like that what would it look like?’ Our conclusion was the financial sector should get out of this. The financial sector is chasing returns; there’s not much they should do; we really need public policy. ... We are saying you should engage with companies but [investors] are really not incentivized to do that, e.g. to tell Exxon to go out of business. These things have focused a lot of people in the financial sector, [but] it’s kind of a desperate search for what they can do.”

Gosling: “The connection between the investor’s action and impact on the climate outcome is weak and uncertain, particularly for the secondary markets investments that dominate institutional portfolios.” (p. 2)

Investor interview: “People are bought into this idea that as universal owner we have a slice of the broad economy in our portfolio, if we want to insure for the longer term, to ensure they have a world to retire into. We want to use our position as universal owner to mitigate that systemic risk. That’s the principle, but the implementation is difficult.”

Consultant interview: “Some advocates are saying they should do it for intrinsic reasons but that’s not where I’m coming from – they need to do it for financial reasons. Why should they do things that are really in the domain of governments?”

PUBLIC POLICY ADVOCACY

In “Making Climate Policy Work”, Cullenward and Victor describe how climate change can be effectively addressed and why most of the interventions that are needed (laws, regulations, taxes, subsidies, etc.) can only be implemented by governments. This is echoed in other reading and interviews conducted for the project.

Stern, Stiglitz, Taylor: “A broad consensus to use a wide variety of measures, including carbon pricing, programmes for green investments, programmes for system design or reform (e.g. of cities or power grids), interventions in capital markets, and standards and regulations”. (p. 2)

Stern, Stiglitz, Taylor: [Offer a table of interventions to tackle climate change, without exception interventions only public institutions can deploy:] “**GHGs:** Carbon tax/cap-and-trade/regulation of GHG emissions (standards), public investments. **R&D:** Tax incentives, support for demonstration/deployment, publicly funded research. **Imperfection in risk/capital markets - lack of access to capital:** Government green lending (green development banks); risk sharing/reduction through guarantees; convening power for cofinancing. **Networks and system change:** Public investment in infrastructure to support integration of new technologies in electricity grids, public transport, broadband, recycling. Planning of cities. **Information:** Labelling and information requirements on cars, domestic appliances, products more generally; disclosure requirements, especially on financial institutions; stress tests; increased awareness of options. **Co-benefits:** Policies valuing ecosystems and biodiversity, recognising impacts on health; regulations.” (p.32/33)

Tallarita: “A traditional policy remedy to an externality problem of this kind is the imposition of a tax equal to the social cost of the relevant activity. With a ‘carbon tax,’ the individual firm would pay the entire social cost associated with the production of carbon emissions rather than imposing most of this cost on others. ... Other examples of possible climate policies are abatement subsidies (subsidies for the reduction of carbon emissions), cap-and-trade policies (which establish a total allowable quantity of emissions and allow firms to buy and sell emission permits), information-based policies (such as mandatory disclosure, ecolabeling, and certification programs), and traditional prescriptive regulation (such as mandatory technology standards and ceilings on emissions).” (p. 523)

Academic interview: “It’s not just about capital allocation. Do investors also engage in coalition building, engage with policymakers? ... I feel this is missing. Also means considering more to what extent investors help improve the resilience of our world? How can we help decrease systemic risks? ... But at the end of the day it’s still the governments who need to take action.”

Legal commentator interview: “Are pension funds well positioned to solve climate change? Should philanthropists do this? Should the World Bank? Frankly I think that governments should be doing this.”

Goshen & Hamdani: “Specifically, we show that ideology-driven activist funds, ESG directors, or investor coalitions lack the necessary competence and incentives to fill the role traditionally played by activist hedge funds. Ultimately, the only actor well positioned to fulfill this role is the predictable choice: environmental regulators.” (p. 55)

Edelman Trust Barometer⁴: “Government Expected to Lead on Climate Change – National government has a stunning 22-point advantage over business (32 percent) when it comes to which institutions people think should lead on climate change. Government has a three-point trust advantage (56 percent to 53 percent) over Business in being trusted to do what is right in regard to climate. The most important driver of our respondents’ trust in Government is its performance on balancing climate action with the country’s present energy needs, enabling quality of life and prosperity – when it does this well, people are 10% more likely to trust Government to do what is right on climate. A majority of respondents (52 percent) globally believe climate policy in their country is driven by politics, regardless of what the science says. ... Nearly two-thirds of respondents believe companies are doing mediocre or worse at keeping their climate commitments. CEOs are distrusted as spokespeople on climate – less than half of people (41 percent) trust them to tell the truth about climate change and what needs to be done to address it, nearly half as many as scientists/climate experts (76 percent).”

Tallarita: “Like the supporters of portfolio primacy, Lund believes that index funds can and do play a role in climate risk mitigation; however, she attributes this role not to portfolio primacy but to the ‘demand for rules’ most likely to be embraced by a broad swath of their clients.” Lund: “Relatedly, the need to ensure client approval indicates that the Big Three will mandate only tepid changes in corporate behavior, and that their rules are not likely to bring about the sweeping changes that may be necessary to address pressing social problems. ... Moreover, there is no guarantee that these policies will further the public interest. Investors make up the wealthier half of America, and corporations likely embrace rules regulating their conduct for strategic reasons; in particular, out of a desire to forestall or co-opt future government regulation. (p. 7) ... Because client interests are not equivalent to the interests of the public, there is no guarantee that asset manager regulation will advance social welfare. Moreover, asset manager regulators operate with little accountability for and oversight of their actions. To the extent that the provision of asset manager regulation takes pressure off of the government to adopt rules better calibrated toward advancing public welfare, we should be especially wary.” (p. 46)

If governments are the primary actors in addressing climate change, and institutional investors genuinely want to see systemic issues addressed, this suggests that the best institutional investors can do is call for, and support, policy interventions.

CPPIB article: “Asset owners can also engage with policymakers to share their perspectives, feedback and the challenges that they encounter in deploying capital to support the fundamental decarbonisation of the real economy.”

Academic interview: “Goshen and Hamdani in Will Systematic Stewardship Save the Planet? basically argue that if [institutional investors] are genuinely interested in this they should be calling on policymakers to shift the economy; investors neither have the tools nor the interests.”

Academic interview: “[Asset owners] should be supportive of legislative action. Policy is critical. But asset owners have not paid enough attention to this. This is the advantage of a systemic view; you can choose initiatives that a) don’t inadvertently make a systemic issue worse; b) you can support legislation at the national level. In some cases, with incumbent industries, e.g. German auto industry, it’s actually more difficult for the government to insist on legislation because of the tax revenues, jobs, etc. Tar sands in Canada are also a good example.”

4 <https://www.edelman.com/trust/2022-trust-barometer/special-report-trust-climate>

Goshen & Hamdani: “Universal owners have proven adept at directing politicians to protect their interests through prodigious lobbying efforts. Therefore, the most effective systematic stewardship that universal owners can provide is repurposing their political capture machine from protecting themselves to protecting the universe.” (Abstract)

However, not everyone agrees with this.

Legal commentator interview: “This has indeed emerged as quite a strong theme – collaboration with governments. It’s the sort of thing an economist would say, not an anthropologist or sociologist – because society change is multifaceted. It’s also about building up a body of public opinion and one has to recognize what governments can achieve. These problems were not created by governments, but by public behavior. Governments are desperate for the markets to address some of these problems, because limited budgets and difficulty to get international political collaboration; the sort of systemic framework that is eco-systemically coordinating. I think we are seeing it emerging – the markets are acting in a way that’s consistent with government activity. Also look at who’s at the bottom of the investment chain – electors – those who are responsible for their money need to recognize that those people are depending on all of the elements in the network to work together.”

Advocacy group interview: “Regarding the role of governments: governments should take action. But the problem is that the government doesn’t always work. Another problem: there are 150 governments, who are also in competition, there’s a race to the bottom. Also companies have a value maximization process by capturing regulators, moving faster than regulation does; they have strategies for this. We think system stewardship is complementary to the political system. In the US the oil companies have captured legislature; 20 years ago we were headed for a carbon tax, now we’re not. You’ll never have regulators fix all the problems; corporations are such a powerful force – they will win every time.”

Nonetheless it seems clear that even strong supporters of private sector contributions often acknowledge that governments have a larger role than is recognized in these discussions. Finally, not everyone goes along with the argument ‘private sector should step in when governments are missing in action’:

Investor interview: “Governments missing in action? I don’t agree with that. For example, see the governmental response to Covid and the IRA, two big examples of substantial policies.”

SYSTEMIC ENGAGEMENT

A relatively new tool in the (sustainable) investment toolbox is systemic engagement, or ‘beta engagement’: instead of engaging (only) with individual companies, investors should engage with multiple actors, with a view to changing not only individual companies’ behaviors, but entire systems. While this approach is effectively unproven, a small number of academic papers and the available case studies suggest that this is unlikely to be effective at meaningful scale, given that institutional investors lack the needed capabilities, mandate, incentives or budgets.

Tallarita: “The analysis reveals three major limits, each reinforcing the others, that undermine the promise of portfolio primacy. First, the potential scope of index fund stewardship is narrow, as most companies around the world, including most carbon emitters, are private or controlled companies. Second, index funds internalize only a fraction of the social cost of climate change and therefore have very weak incentives to engage in ambitious climate stewardship. Third, index fund managers advise dozens of index funds with conflicting interests with respect to climate mitigation and therefore face serious fiduciary conflicts that would hamper any ambitious mitigation strategy. This analysis shows that we should have very modest expectations about the role of portfolio primacy in the fight against climate change.” (p. 511-512) “The thesis presented in this Article is not only that systematic or systemic stewardship would have a very limited impact on climate change mitigation ... but also that portfolio primacy creates very weak incentives to engage in climate-related stewardship in the first place ... and additionally, it creates serious conflicts within fund families.” (p. 516)

Tallarita: “Regulators can use different tools to address climate externalities, including Pigouvian taxes, cap-and-trade systems, abatement subsidies, information-based policies, and traditional command-and-control regulation (such as standard setting or emissions ceilings). Each of these tools presents advantages and disadvantages and raises complex legal and economic questions. But a meaningful conversation about climate policy must also consider private sector initiatives and private-public collaborative efforts to address climate risk. Portfolio primacy advertises itself as a powerful private sector tool for climate mitigation. Yet, the analysis

presented in this Article has shown that portfolio primacy is unlikely to have a meaningful impact on climate. Therefore, the main normative implication of this analysis is that we should put very low weight on the expected benefits of portfolio primacy. Among the many possible strategies that our societies can choose to advance toward decarbonization, portfolio primacy is not one worth a significant investment.” (p. 566)

Goshen & Hamdani: “We argue that universal owners lack the necessary incentives and competence to pressure corporations to lower emissions through systematic stewardship. Universal owners have distorted incentives, as they market ESG funds with conflicting promises: ‘Doing well while doing good.’ This untenable promise that ESG-fund will ‘do well,’ or match the returns of non-ESG funds, prevents universal owners from effectively ‘doing good, or meaningfully compelling corporations to reduce emissions. Furthermore, universal owners lack competence to fulfill this role because, although climate change is a systematic risk, addressing it requires firm-specific engagement, as well as economy-wide coordination, which universal owners cannot provide. Worse yet, we demonstrate that no other actors have the incentives or competence to provide the required firm-specific engagement. Ultimately, we conclude that investor stewardship is a very poor substitute for environmental regulation.” (Abstract)

Proponents appear to have high expectations of the additional returns they can achieve through systemic engagement, which would justify the high costs needed to undertake the engagement.

Moving Beyond MPT: “Our conservative estimate is that stage three risk mitigation efforts have probably caused, and will continue to cause, a market re-rating of at least 2-5%. ... Therefore, if we use \$100 trillion as an intermediate number [for global assets under management], that means that stage three corporate governance activities have created at least \$2 trillion – 5 trillion in global wealth.” (p. 108)

Academic interview: “Asset managers are paid based on AuM, and so should be able to spend 0,5% [on systemic engagement], think of this as an insurance premium where you’re actively underwriting these things to maintain the health of the marketplace.”

Moving Beyond MPT offers one example where this would have happened (that the above estimates are based on), and six case studies further illustrating systemic engagement. The example has to do with influencing corporate governance standards across firms, which says little about the efficacy of this approach for environmental and social causes (see also the investor interview quote below). The six case studies in the book did not discuss at all how the particular systemic engagements had mitigated systemic risks or improved returns. *Climate Change & the Engagement Gap*, a paper from The Shareholder Commons, also provides a theory and case studies that are equally unconvincing – essentially it suggests that investors, by exercising governance rights and creating ‘guardrails’ throughout supply chains, can “change the economy’s GHG trajectory, and by so doing, reduce risks to portfolios”.⁵ The guidance that the paper provides on how to agree on and implement those guardrails seems based on the assumption that economic systems can be transformed by shareholders sending letters asking companies to retrofit buildings or to stop buying ICE trucks, and vote against directors if they fail to comply.

One important reason why systemic engagement is unlikely to work is that any potential gains in terms of risk mitigation or market value increases are likely to be dispersed, and the cost of realizing these gains relatively large and concentrated within individual institutional investors, so that an individual investor is exceedingly unlikely to recoup the ‘investment’ in the systemic engagement intervention by an increase in its returns.

Investor interview: “I don’t find the arguments convincing at all. For example, Lukomnik and Hawley make the claim that ‘our conservative estimate is that stage three risk mitigation efforts [through stewardship] have probably caused, and will continue to cause, a market re-rating of at least 2-5 percent.’ That is based on the results of a single paper extrapolated and then doubled a few times. Not very robust at all.”

Tallarita: “In the real world, estimating the costs and benefits of specific carbon mitigation measures for each public company is extremely difficult. Given the different portfolio compositions of the various funds, however, it is reasonable to believe that many measures that result in an aggregate net gain for the whole stock market will create a loss for many individual funds.” (p. 563)

Academic interview: “Regarding systemic engagement – I find it hard to see how you make money out of it. I think you’ll need to accept there are going to be losses.”

5 <https://theshareholdercommons.com/wp-content/uploads/2022/09/Climate-Change-Case-Study-FINAL.pdf>

Investor interview: “There’s a game theory element to this – you can ride on the coattails of others who are doing good. You might mitigate the risk a little bit but it might cost you so your clients are worse off. Why wouldn’t you let others take the negative? Your contribution is not going to move the needle. Why would we disadvantage ourselves and our customers? We can try to convince our customers it’s the right thing to do, and then we can do it. But us doing it on their behalf would be disingenuous. I’m surprised that others do this. Why are they doing this? When it comes down to the numbers – as actuary all the other times I’ve done modeling and you get to the bits that are hard to model you say ‘finger in the air’, round it off to the nearest 10 million – this sometimes hides a lot of detail and it doesn’t quite work. When people say ‘things offset’ that’s a red flag with me. ... Still I struggle to see how they can warrant the give-up of return. They say the ‘reason is financial’ but that’s disingenuous.”

Another barrier to effective systemic engagement is the need to coordinate activities at a systemic level.

Rouch & Reynolds: “A reorientation of this sort requires coordination among companies, investors, governments, civil society organizations, and citizens, as competition regulators increasingly recognize. Critically, systemic risks are a collective challenge that demand a system-wide response: No single entity can resolve risks of this magnitude alone and legal duties must be seen in that context.”

Goshen & Hamdani: “The likely failure of uniform emission targets suggests that coordination between universal owners and other universal owners and between universal owners and firms is critical for effectively reducing emissions. Yet, although they “own the market,” universal owners cannot engage in meaningful coordination (and even firms might be limited in their ability to coordinate). On the firm level, coordinating firm-specific policies is difficult when universal owners (including different funds managed by the same sponsor) hold different concentrations of shares in specific firms or sectors and consequently have differing incentives concerning any proposed policy. ... On the economy-wide level, since it will take years to transition the economy to rely on sustainable energy, the transition process must be coordinated to both increase the capacity of green energies and phase out fossil energy. Given the failure of markets to fund green energy, creating green energy capacity might require subsidies to new technologies and investing in startup firms and other research and development projects. Universal owners are not venture capitalists, and they can neither screen technologies nor subsidize green energy at scale.” (p. 12)

However, institutional investors don’t have, and are unlikely to obtain, the mandate, incentives, capabilities or budgets to take on this coordinating role.

Stern, Stiglitz, Taylor: “Moreover, the overall economic system consists of a multiplicity of subsystems— energy, cities, land usage, transportation. To describe the radical and wide-ranging changes that will be necessary to move these systems to zero-carbon would take us beyond the scope of this paper. Here we note: non-convexities abound and such transformations require extensive coordination. ... A multiplicity of interventions are required: in design, zoning, standards, regulation policy and so on”. (p. 37/38) “For example, the transition to zero carbon will be particularly R&D intensive; it will be particularly dependent on networks; many green investments are capital intensive, and capital market imperfections limit the ability of households, small companies, and poor countries to make what would otherwise seem to be efficient investments.” (p. 34)

Investor interview: “I don’t know if people understand this, all these different bits we’d have to change in our system to have an impact through financial markets or universal ownership; we would need to change fiduciary duty, need to educate trustees, get companies to report so companies can respond, all the elements in the chain, it’s a huge amount of work for stuff that we have much simpler tools for. All this would be fixed with a well-designed carbon tax. So I appreciate it’s difficult politically, but from an efficiency perspective it should be vastly preferred.”

SYSTEM-LEVEL INVESTING A DISTRACTION?

Beyond questions of efficacy, some suggest that system-level investing, including systemic engagement, may pose a distraction from the needed government interventions, and therefore might in fact be obstructing rather than facilitating climate action.

Tallarita: “Despite the superficial characterization of all index funds as ‘universal owners,’ some of these funds may have incentives to support a given climate mitigation measure, whereas some other funds, advised by the same asset manager, may have incentives to oppose it.” (p. 558) “To the extent that reliance on portfolio primacy reduces support for government intervention, support for portfolio primacy might prove not only ineffective but also actively damaging.” (p. 569)

Tallarita: “If citizens rely on index funds to internalize and reduce the costs of climate change, they might be less willing to support climate regulation that increases the cost of energy for households. If such an effect proved true, portfolio primacy would be not only ineffective but also actively damaging for climate progress. ... Another, more worrying, hypothesis is that portfolio primacy proves not only ineffective but actively counterproductive for climate mitigation. As I have argued in prior work, unfounded reliance on the social impact of private actors may distract resources and political capital away from more promising regulatory solutions. In the case of portfolio primacy, public opinion might become persuaded that the stock market on its own will be able to reduce climate externalities to a significant degree. This phenomenon might in turn reduce political support for more stringent regulation. Decarbonization will likely be costly for most people, with varying impacts on their habits, and political support for effective decarbonization policies is reduced by positive intergenerational externalities—that is, the fact that most of the benefits of decarbonization will be enjoyed by future generations. Therefore, portfolio primacy’s flawed promise of an internalization mechanism might become a political argument to justify weaker support for painful but necessary regulation.” (p. 519)

Pollman: “The relationship between corporate acceptance of stakeholderism and government regulation of corporate externalities is complex and multifaceted. There is a risk of stakeholderism being exploited for public relations purposes without substantive action. Corporations might engage in performative gestures that give the appearance of prioritizing stakeholder interests, while sidestepping meaningful systemic change. This could, indeed, chill the drive for robust government regulation, as it may seem that corporations are already taking adequate steps to protect stakeholders. There is so much, however, that is not understood about the relationship between private ordering efforts and government regulation. While it is conceivable that stakeholderism could chill regulatory efforts by creating a perception that voluntary measures suffice, it is equally possible that it could drive an environment where regulation becomes more likely.”

Academic interview: “Exasperatingly to me they think this [system-level investing] is the right approach for aligning our markets with global goals; I think this is a distraction. I may be wrong and would like to understand it. ... It may very well be a deflection campaign [i.e., corporations staving off regulation]; for example, Larry Fink said, ‘we don’t need regulation.’”

Lund: “Nonetheless, serious concerns loom large, including the fact that for-profit institutional shareholders lack accountability and oversight for their policymaking, with no guarantee that it will further the public interest. To the extent that their policies are shaped by the corporate clients that provide the bulk of their AuM, they are unlikely to be as impactful as many believe. In addition, the provision of regulation by asset managers may take pressure off the government to respond to these issues with policies better calibrated toward advancing social welfare.” (Abstract)

Investor interview: “I definitely believe that this can be a distraction from government action. I’ve been trying to convince people internally that it’s better for the climate if we’re transparent on the fact that we’re not doing that much; have talked about regulatory dependencies, or that other investors need to move in for us to make a difference. ... From my point of view the best outcome is if policyholders know the limitations of what we can do so they can put their money elsewhere; also with policymakers – if we’re transparent hopefully the whole industry can be and then it’s in the best interest of society. ... There’s a risk in saying ‘finance can do everything’ – some governments are now saying ‘markets will fix it’. Lot of people saying ‘we should just tell pension funds where to direct their money’.”

Tallarita: “Some commenters ... have argued that, due to congressional gridlock and bad political incentives, a carbon tax or other ambitious regulatory measures against climate change are unlikely to materialize in the near future. Therefore, these critics argue, index fund climate stewardship is at least a step in the right direction in the absence of better alternatives. ... I agree with these commentators that legislative and regulatory action on climate has been lagging dramatically, and in assessing how to tackle the climate crisis best and more quickly, we need to consider the respective roles of private and public actors, not only of public actors. In order to have a meaningful conversation on this crucial problem, however, we must be clear-eyed on the limits of index fund stewardship. The shortcomings of politics do not justify overreliance on private actors.” (p. 521)

Goshen & Hamdani: “Therefore, instead of applauding the ultimately futile or counterproductive attempts of universal owners to directly address climate change, scholars and investors should encourage these entities to advocate for federal government regulation. Such regulation can facilitate a comprehensive economic transformation and promote a transition to net-zero emissions.” (p. 29)

Bebchuk: “Our view is that embracing stakeholderism can indeed hurt and can be counterproductive from the perspective of society and the very stakeholders that many of the stakeholderists would like to protect. There are two main ways in which embracing stakeholderism can hurt. One is by making corporate leaders less accountable to shareholders or to anyone else because stakeholderists push for giving and relying on expanded discretion of corporate leaders and, managements all over the world have been using the stakeholderist argument, to try to get more deference from institutional investors, less support from institutional investors, to hedge funds, activists, and so forth. ... The other adverse effect is that of the spreading belief that we can count on corporate leaders to look after the interests of stakeholders, which is shifting energy from the real action, from trying to press governments to take action to protect stakeholders and trying to press companies to stop intervening in politics and channeling this energy to a lot of activism that is trying to go after companies and try to nudge them in one way or another to make commitments that, according to our studies, do not turn out to be meaningful.”

EFFICACY OF SUSTAINABLE FINANCE / ESG / NET ZERO APPROACHES

Many institutional investors commit to deploying sustainable finance or ESG approaches as a way to mitigate climate risks; ESG integration, engagement, divestment, tilting, portfolio decarbonization, disclosure-based approaches (carbon footprinting), Paris-aligned or 1.5 degree investing are some examples. Often this is done to live up to commitments to industry initiatives such as the PRI, GFANZ and IIGCC. And often investors, or their clients, have the expectation that these approaches not only mitigate investment risk, but can also address the underlying societal issues, such as climate change – in other words, that these approaches will contribute to climate action.

This expectation is often implicitly, sometimes explicitly, fueled by those initiatives (e.g.: “accelerating the decarbonization of the economy;” “tools and methodologies needed to turn ... net-zero commitments into action;” “investor action on climate change;” “investment community ... to work towards a net zero and climate resilient future.”⁶).

However, in a series of three articles entitled Does Sustainable Investing Work?, Tom Gosling and Harald Walkate draw conclusions from an extensive literature review to answer the question in the title. They introduce the analogy of the three-stage rocket to explain that sustainable investing approaches should have three levels of effects to achieve systemic change: 1) first order (direct) effects; e.g. a change in a company’s cost of capital; 2) second order (indirect) effects; e.g. a company lowering emissions as a result of the change in cost of capital; and 3) third order, or systemic, effects; e.g. industry-wide emissions decreasing as a result of companies lowering their emissions.

They find some evidence that a small number of sustainable finance approaches can have first order effects. There is also some evidence that sustainable finance approaches can achieve second order effects, although it should be noted that the effects tend to be small and economically insignificant. But there is hardly any evidence that sustainable finance approaches can have third order, or systemic effects. The literature does not discuss systemic engagement given that it is a relatively new phenomenon, but as discussed above it seems unlikely to be any different. Gosling and Walkate conclude that investors who want to effect change should focus on public policy advocacy; on private markets investments where real ‘additionality’ can be found; and on engagement, but should be ‘limitations aware’ – investors should understand the they can encourage corporations to do that is outside of their ‘zone of discretion’, where their capabilities and financial incentives intersect.

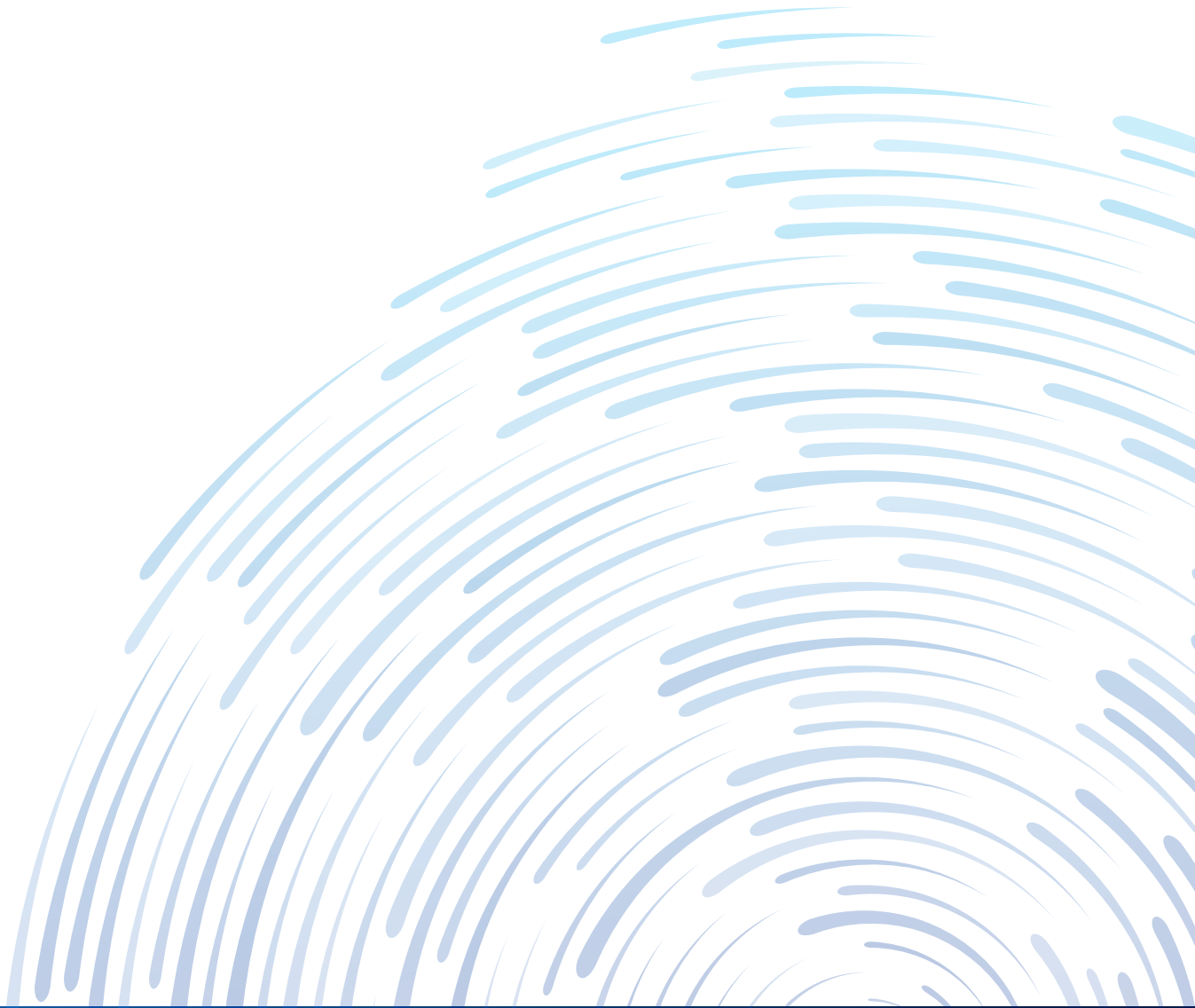
Academic interview: “What can universal owners do? It’s more or less the opposite of ESG. There is a strong evidence base behind this. ESG is a risk management tool, which leads to stock picking in secondary markets, and its impact is truly marginal. Most ESG products around divestment, tilting etc., are pretty useless. They don’t even have the public discourse effect of stigmatizing, that might help shift the conversation, because most ESG funds are quiet about their divesting or the reasons for it. Also there’s a disproportionate focus on reporting. A 2020 study even suggests a negative relationship between reporting and ESG performance. These are the things that are done most but they’re the least likely to have effect.”

6 <https://www.gfanzero.com/>; <https://www.iigcc.org/>

Investor interview: “There’s a disconnect between boards signing up to GFANZ and similar initiatives and the people that are trying to persuade them to take action. The incentives are wrong. The boards want to keep up with the Joneses. Then people put in a lot of caveats to make sure it doesn’t have any teeth. ... Bad incentives are playing an important role. I see it ending up with a lot of ‘alignment’ activity and ending up with the cost of capital argument – for a lot of people it is incompetence, believing that there’s a lot we can do in changing listed equity cost of capital.”

Consultant interview: “You have a chief sustainability officer/CEO saying ‘we’re committed to net zero’. But then you talk to the team under them and they say ‘we have no idea how to do that’. How do you price this?”

Returning to the 3c question above: in sum, it seems institutional investors have a relatively small toolbox when it comes to influencing broader systems: the evidence suggests that sustainable finance/ESG approaches are mostly ineffective at the systemic level, systemic engagement is unproven but unlikely to be deployed or effective at meaningful scale. Institutional investors that are genuinely committed to influencing the system, e.g. accelerating the energy transition, would understand that the best way to achieve this is to ask for – or at least not stand in the way of – public policy.



4. FIDUCIARY DUTY

4a. Is it possible to allow or encourage systemic risk mitigation interventions with the prevailing definition of fiduciary duty?

There appears to be little disagreement that the short answer to this question is “yes”. However, the longer answer should come with a substantial set of qualifications that are not always well understood or acknowledged. The best source for understanding these qualifications is the Freshfields Report, a careful reading of which yields the following set of tests, that can be thought of as a decision tree, and that institutional investors must apply before moving to address systemic risks.

Importantly, the report introduces the term ‘investing for sustainability impact’ (IFSI), and defines two types of IFSI:

- **Instrumental IFSI:** achieving the relevant sustainability impact goal is ‘instrumental’ in realizing the investor’s financial return goals.
- **Ultimate ends IFSI:** achieving the relevant sustainability impact goal, and the associated overarching sustainability outcome, is a distinct goal, pursued alongside the investor’s financial return goals, but not wholly as a means to achieving them.

Freshfields Report – Decision Tree

As a starting point, there should be a credible systemic risk.

The investor then needs to apply the following tests:

1. Is addressing the risk ‘instrumental’ in realising financial return goals?
 - **If yes:** Go to 2.
 - **If no:** Then addressing this risk should be considered a parallel objective – i.e. ‘Ultimate ends IFSI’. Will taking action come with significant financial detriment (i.e., will it hurt returns)?
 - ✓ **If no:** then taking action may be in line with fiduciary duty. Go to 4.
 - ✓ **If yes:** go to 3.
2. This should then be considered a material risk – i.e. ‘Instrumental IFSI’ – and taking action *may* be in line with fiduciary duty. Go to 4.
3. There will be significant financial detriment. Do beneficiaries want the institutional investor to take action?
 - **If yes:** then taking action may be in line with fiduciary duty. Go to 4.
 - **If no:** then generally it will not be in line with fiduciary duty; however, opinions differ on how likely or how successful legal action against the investor may be and the investor may still decide to proceed for other reasons (idealism, ‘intergenerational thinking’). Still, the test of 4 also applies.
4. After conducting these tests, and before moving to take action, the investor will also need to consider the following:
 - direct and indirect costs and risks of pursuing this course of action;
 - the relative likelihood that doing so will help address the relevant sustainability factor so as to reduce the financial risk posed (or realize financial opportunities);
 - the investor’s role in bringing about a given change; i.e. there needs to be a credible basis for understanding the causal connection between the investor’s actions and the relevant outcome;
 - given that these factors are likely to weigh in favor of a decision to foster or join collective investor action aligned with the same goal, the investor should consider whether to act individually or collectively.

In sum, the institutional investor should not only assess whether there is in fact a material systemic risk; it should also consider if it has any risk mitigation tools at its disposal that are likely to be effective, and what the related cost is.

The Freshfields Report has been heralded by many as effectively a green light for institutional investors to move to action on systemic issues, even when this is financially detrimental. The Shareholder Commons said, “The new report shows why investment professionals around the world are legally compelled to prioritize systemic issues such as climate change, inequality, and biodiversity loss over the financial performance of individual companies,” and “fiduciaries have a duty to mitigate systemic sustainability risks using stewardship powers, even when doing so will not cause a particular company to gain in value—and even if it might cause the individual company to lose long-term value— if the potential for positive portfolio value outweighs the risk of loss to the particular investee.”⁷ In a foreword to the report, Al Gore and David Blood say, “this detailed, global legal analysis demonstrates that investors should feel empowered to set impact goals and measure progress against them;” and “investors should make decisions on the basis of risk, return and impact”. Fiona Reynolds, CEO of the PRI, in another foreword said, “A paradigm shift towards investing for sustainability impact is upon us.”

These observations are at best incomplete summaries of the report’s findings. And in fact the interviews and literature suggest that the fiduciary tests that have also been enumerated by the Freshfields Report still very much apply and should not too quickly be assumed satisfied.

Commentator interview: “From the [Freshfields] report, the view is broadly that, yes, investors are permitted, arguably required, to pursue positive sustainability outcomes, when portfolio returns are threatened by sustainability risk. There are financial and non-financial goals; some investors have flexibility to pursue sustainability regardless of financial drivers. ... I think we have a reasonable level of confidence on the basic principle that systemic sustainable risk is a legitimate target where it appears the risk impacts the return on their portfolio over the timeframe that’s relevant for them.”

Investor interview: “We use ESG, which is all perfectly aligned with fiduciary duty. But there are some grey areas; pension regulators said it’s ok for trustees to do positive things for the environment, if it is also financially positive.”

Legal commentator interview: “If you ask me if I can take a case to English commercial courts on duty of pension funds to consider systemic risk, or to make decisions on the basis of climate, even if it means short term losses, there’s no way. No way it can be articulated as a legal claim. It would need to have a fairly clear and imminent impact on finances.”

Commentator interview: “If it was desirable for a pension fund for there to be a particular outcome, but physically impossible to bring it about or contribute to it, then manifestly that fund shouldn’t be able to engage in that activity. The thing that makes it very difficult to know what they should be doing – difficulties in identifying goals, is a positive impact goal is in any way contributing to this ultimate goal in protecting assets? Measuring progress towards the goals, will the investors activities have any impact on the companies’ activities?”

Academic interview: [Is it possible to allow or encourage systemic risk mitigation interventions with the prevailing definition of fiduciary duty?] “This is very difficult. First, let’s suppose investors could have impact. Is it a cash flow/NPV maximizing flow aligned with the systemic risk goal? If investors have control, then at some level it’s something they could do. But it’s not obvious that that temperature goal will be reflected in prices – there’s a difference between how markets value stuff and how people value stuff – because of discount rates, because markets don’t care about non-financial impacts, and markets don’t care about economically insignificant populations. Second: if you don’t have control, you face some judiciary problems, because you face costs ... or making lesser returns for clients. So investors need to do stuff that has low costs, i.e.: policy advocacy, engagement, etc. This means a more modest set of objectives for institutional investors.”

Academic interview: “The discussion of efficacy is crucial. It seems to be accepted that these approaches [to address systemic risks] are effective at all. But if you have limited efficacy, if you can’t control outcome through investments, then the question is what costs can we incur knowing that we can achieve little. If you convince yourself that the social optimal outcome is the same as financial outcome, you need to ask yourself if it’s going to work. If it’s a bad attempt and quite costly, it should be avoided. I’m in the camp of ‘it’s likely to be a bad attempt’. So, how can they effectively change the context, recognizing that there are more powerful tools? E.g. enabling corporate innovation, lobbying, genuinely additional capital. That’s all way more modest.”

7 <https://theshareholdercommons.com/freshfields2/>

Tallarita: “Under the existing law, a mutual fund must be managed ‘on behalf of its investors.’ In particular, the law makes it clear that mutual funds must operate in the interest of all classes of investors and that such a duty is violated when the fund acts in the interests of directors, officers, investment advisers, special classes of investors, other mutual funds, or entities engaged in other lines of business.” (p. 563) “If the Big Three overtly pressured energy companies to engage in value-decreasing strategies for the benefit of other companies, it is very likely that investors in their energy-focused funds would flee (and perhaps even take legal action).” (p. 565)

Investor interview: “My off-the-cuff answer is that while the objective of addressing systemic risk mitigation is a good one, fiduciary duty is a challenging tool to effect it. The duty of care and duty of loyalty inherent in at least US/UK fiduciary duty standards asks for acting as a prudent investor and avoiding conflicts of interest. I am not sure how a prudent investor can practically incorporate systemic risk mitigation into decision making on specific investments or on a broader investment strategy. That would be a key question – how does this actually work?”

Legal commentator interview: “There’s the black letter answer and then there’s the ‘applied duties’ answer – what does it mean in practice? With pension funds you’ll see that they accept some form of ESG integration, perhaps underweight companies that are exposed to some sort of risk. Seems more or less commonly accepted now. What is less accepted is the idea of investors removing a root cause of the risk. ESG is an outside-in activity. ... But here we’re talking about an inside-out activity, addressing the source of the risk. Often they will end up saying ‘I can’t do anything about climate change – I have 1 billion AuM and the entire market is 120 trillion.’”

Investor interview: “The risk is for us to be sued; a policyholder would need to show financial detriment. We’re also looking carefully at the backlash in the US.”

Legal commentator interview: “It’s pretty clear under fiduciary duty that if you’re going to do anything to diminish value financially you’re going to have a problem. ... What you’re trying to put on universal owners is more a moral duty, what you feel is right. The whole point of fiduciary duty is that it’s not what feels right to you – then you’re in breach.”

Legal commentator interview: “It’s pretty unlikely that people would take a pension fund to court for breaching fiduciary duty by doing something about climate. On the other hand, people do crazy things. If you take them to court to say ‘you haven’t done enough about it in the long term’, you’re opening the door to someone saying ‘you haven’t done enough to protect me in the short term’. If overnight LGIM said ‘all of our energy portfolios are going to drop all oil and gas’, without written consent by investors and those portfolios lost 70% of their value, frankly, I’d sue them.”

One of the tests in the Freshfields ‘decision tree’ that deserves specific attention is 3: Do beneficiaries want the institutional investor to take action? Here also, the report itself and the interviews suggest that it should not be assumed too quickly that this criterion is satisfied and that what pension funds may have done on this so far is likely insufficient.

Freshfields Report: “The level of AuM committed to sustainable investment approaches has been growing sharply, and there is evidence of a correlation between positive sustainability attitudes and the investment decisions people take in practice. Some of it also seems to confirm that some investors are prepared to risk lower financial returns to pursue sustainability goals.” Nonetheless, “there is good reason to think that many people who say they want sustainability factors to be taken into account expect that to bring about positive changes in the sustainability impact of business activity.” Also, “the precise extent to which people’s sustainability aspirations are related to financial goals, the time period people have in mind, and the level of any trade-off people are prepared to make to pursue sustainability goals, and which ones, and in relation to what portion of their assets, remains unclear. It is likely that there are motivational overlaps and spectrums in terms of strength.” (p. 53) “The studies provide helpful insights on these matters. However, they need to be approached with care. The topic is complex. Attitudes and practice vary between individuals, and between jurisdictions and cultures, and the picture given by the materials is partial. Studies of this sort also have potential limitations, for example in terms of their methodologies and design, question framing, differences of understanding about the concepts involved, and the size and composition of the groups surveyed.” (p. 52)

Gosling: “The challenge for asset owners, however, is obtaining informed consent on a consensus position for the beneficiary population. Surveys that claim beneficiary willingness to sacrifice returns for impact should be treated with caution. First, while impact in a survey is assured, in real life it is not, given the weak connection between investor action and additional impact in the asset classes

that dominate institutional investing. Second, surveys are not always representative of real-life action. Political and consumer choice evidence suggests that while voters and consumers may express environmental preferences, they are often prepared to pay surprisingly little to see them realised.” (p. 2)

Legal commentator interview: “Investors can do everything to address systemic issues but need to have the consent of beneficiaries – they need to accept that it will lead to losses in the short term, they can put this in the master agreement. The reason they don’t do it is that I can’t tell you what that clause looks like – “I will invest in systemic risk interventions” – what would my aunt Bettie think it would mean? The concept is a funky academic one that I think logically and rationally is ultimately right, but also so broad and all-encompassing and uncertain that you can’t reduce it to concrete actions for a particular investor. And not to a concrete action to all universal owners universally.”

Consultant interview: “The implications of fiduciary duty are fairly sensible: if ESG matters from a financial point of view, you’re allowed to do something ‘non-financial’ provided it doesn’t lead to significant financial detriment and all the members agree. That second part of it hasn’t been much used by funds or lawyers – people find it too difficult to get agreement of members.”

Investor interview: “It seems unlikely people are going to voluntarily step up. Think about universal owners and pension funds, they represent a big diversified group of citizens – people who vote in elections. It’s very difficult to get carbon taxes because there’s no political will, so it’s not likely they will be keen to ‘vote’ for a tax through pension schemes. ... They’re spending money on things they’re less good at. That’s the risk of this fuzzier definition of fiduciary duty.”

4b. Is fiduciary duty as currently interpreted a barrier to:

- (1) taking into account climate change or other systemic issues as risk factor?
- (2) taking action to address climate change or other systemic issues?

Also taking into account the comments under 4a., the short answer to both questions is a qualified “no” – i.e., investors can do both as long as they’ve applied the four tests of the Freshfields Report and consider them satisfied. It seems some would like this answer to be an *unqualified* “no” – i.e., for it to be clear that investors should consider these risks and take action, regardless of how material the risk is, what the financial implications or what beneficiaries think about this. Opinions on whether that is desirable vary.

Legal commentator interview: “There are now two reports out there (Loading the DICE and Emperor’s New Climate Scenarios) suggesting that the advice pension funds are getting is wrong. Are they right? Can they diversify away from this? ... They can’t just ignore it. If there is an allegation that they’ve breached their duties, the court wouldn’t just accept that but it’s sobering for someone who wants to stray from this [mainstream thinking].”

Consultant interview: “There are a number of barriers to investors taking action – the perception of fiduciary duty is one of them, but also availability of assets, lack of education etc. My route to convince trustees wouldn’t be to redefine fiduciary duty but break down some of these other barriers.”

Consultant interview: “Fiduciary duty is in practice in my view an impediment to this joined up thinking. What we’re describing is an extension of investment thinking which is to me a pretty important thing if we judge financial institutions by this broader lens. The world needs these financial institutions to play their part, beyond the narrow benefit of beneficiaries.”

Consultant interview: [Regarding systemic engagement] “This is one of the problems – there is a clear logic and rationale, but: does it scale, is it making a difference? Here there is no clear-cut counterfactual for the performance. This wing of fiduciary duty is not totally clear – the numbers vs. narrative tradeoff. Law has to be respectful of a narrative when numbers don’t exist. You have narrative, soft data and you need to get your head around this thing – that’s the fiduciary test.”

Financial Times: “If you have a really chaotic transition, there’s a risk of wider failings within the financial system and economies generally, and therefore that will have a negative impact on all of us – including the savings of individuals in their pensions schemes,” said Faye Jarvis, pensions partner at the law firm Macfarlanes. But suggesting trustees ‘have a duty to minimise climate risk to the financial system as a whole is stretching the concept of fiduciary duty too far,’ she added. ‘In my view, managing this type of risk should be the responsibility of governments, not trustees of pension schemes.’”

Academic interview: “Fiduciary duty to my mind is already a broad enough concept, and leaves enough room as it’s understood, allows financial institutions to make best financial decisions for their beneficiaries by accounting for all risks. I don’t think we need an expanding or updating of the concept of fiduciary duty, e.g. to take into account certain specific risks.”

4c. How is the concept of fiduciary duty shaped / influenced?

The implied question here is likely: “can we update the concept of fiduciary duty to make it unequivocal that institutional investors should address systemic issues?” Commentators are divided on this question.

Legal commentator: “[The concept of fiduciary duty is] hundreds and hundreds of years old, moves very slowly. It’s pretty static. Its application can change and evolve as new operating conditions come into play. It’s a social concept, as social values change it becomes more open to applying in situations where you had not thought it apply.”

Legal commentator interview: “I’m part of a working group that is looking at this – includes a couple of retired judges. I think it’s moving in the direction of “investing for impact”, but there are no court cases yet.”

Legal commentator interview: “What your and our projects are testing is ‘does the law lead you beyond that’ – it seems the conclusion is that we are moving beyond that. The thing that changes the dial is how you look at a legal rule – is it something that needs to be applied on a single case, or in a collective, societal context. They are collective action problems – they can only be tackled by collective action; everyone derives a benefit but no individual can say they contributed to it. Courts will be applying theories of change and how we’re applying fiduciary duties; this has an individualistic aspect, but you need to look at the investors as agents in a collective endeavor, and can contribute to a societal goal that is important to the investor. Participation in Climate Action 100+ completely moves the dial – getting Shell that kicks someone off their board comes within grasp, because you’re pooling your actions and sharing the cost. I think this is where the law is going. ... But it creates a very high bar both in terms of determining that these systemic risks actually hit pension funds, and determining whether the solutions are likely to be effective.”

Legal commentator interview: “Do you need the risk story for universal owners to act? You do, it’s ultimately a matter of law; the scope for a pension fund’s moral position is defined by law. The moral underpinning is that people need a pension. But that doesn’t mean they can go off and tackle climate change. So does this create incentives to inflate the risk story? Absolutely. There is definitely a hidden agenda with Loading the DICE – it’s not very hidden.”

Investor interview: “I hesitate to push for changes to fiduciary duty that may not match the level of generality or intervention that most applications of fiduciary duty correspond to – i.e., if systemic risk is society- or planet-wide, how does that get factored into individual investment decisions?”

Academic interview: “It’s probably somewhat flexible. E.g. compare to the days when slave ownership was considered normal; when you have widely accepted societal norms, this will be reflected, and it will be expected asset owners incur some costs in avoiding these harms. You could envisage getting to a point where the societal view on e.g. diversity and inclusion is that it’s just something you need to do, so we don’t go after people for making some costs on these issues. ... But I find it quite unlikely that we’ll have this fundamental reframing of fiduciary duty, which is people putting trust in you with their property; where you have adaptations or extensions it will have to be pretty strongly embedded in social conventions, and don’t see this kind of change coming because NGOs are asking for it.”

Legal commentator interview: “What you’re looking for with [fiduciary duty requiring investing for] systemic risk is to leapfrog and I don’t think it will work.”

The concept of fiduciary duty is always evolving, as it should reflect societal thinking about fiduciary relationships. But while fiduciary duty may evolve in the direction of institutional investors being expected to better explain how they’re thinking about impacts of systemic risks as well as their potential actions to mitigate these risks, courts would still set high bars in terms of the narrative about these risks and what investors can realistically do about them.

In other words, it doesn't seem very likely that fiduciary duty would effectively become a *carte blanche* for pension funds to address systemic issues without considering how well they are placed to contribute or how effective the contribution would be, or by assuming that beneficiaries will be supportive of this regardless of the financial outcomes.

Interestingly, to sum up this section, the Freshfields Report, even though it has been welcomed as the green light for investors to prioritize impact above financial returns and move to action on climate change, actually makes a powerful case for governments acting.

Freshfields Report: “Facilitating ultimate ends IFSI [i.e. where there is financial detriment] raises a particular question about how best to achieve outcomes aligned with core social values and the role of institutional investors in that. The answer has potential implications, financial and otherwise, for beneficiaries, wider society and future generations. It may be possible to place a monetary value on some sustainability outcomes in trying to balance these needs. Certainly, many have financial implications. However, the value of positive sustainability outcomes ultimately rests in the life that depends on them and is not solely financial. These issues need to be addressed by the relevant societies through a political process. It is not realistic to expect institutional investors to resolve them on their own.” (p. 16)

Freshfields Report: “From an economic perspective, the case for policy intervention tends to be viewed through the lens of ‘market failure’. Market failure describes a situation where the result of individuals acting rationally in their financial or material self-interest is not consistent with a rationally optimal outcome for the group. The market failure framework is a powerful and extensively used theoretical tool for deciding when intervention is needed and certainly provides a justification for intervention in relation to some sustainability challenges. However, even markets have their limits; it may not be ‘failure’ that prevents market delivery of a desirable outcome, but the fact that it is not fully within the capacity of a market to do so. ... Other reasons why policy intervention might be needed include: • the challenge of balancing the social implications of pursuing or not pursuing overarching sustainability outcomes, since these raise questions of justice that need to be resolved through political processes (for example, should beneficiaries’ financial returns ever be put at risk?) ... • the systemic nature of many sustainability challenges, making some degree of coordination and cooperation necessary to address them... • the fact that institutional investors often operate through legal entities (such as companies) that have been constituted and defined by law, the characteristics of which can therefore only be changed by law, and the fact that some benefit from public fiscal or other support, making them, and what activities are within their capacity, partly the product and concern of public policy.” (p. 127)

In addition, while the report lists several pages of options for policymakers who would like to facilitate IFSI, the report explicitly states these are “possibilities for consideration, not recommendations”, and also points out:

Freshfields Report: “If policymakers wish to encourage ‘ultimate ends IFSI’, legal changes will be required. In approaching this, policymakers face difficult and politically sensitive decisions ... They may also need to consider how to ensure that any new discretions are not abused and how to provide reassurance that institutional investors will not be exposed if they pursue ultimate ends IFSI and there is underperformance in spite of their good faith management efforts.” (p. 136/137)

On balance, it can be concluded that while fiduciary duty is always evolving, it is exceedingly unlikely that it will evolve – through change in social preferences, leading to court cases, to updating of laws and regulations – to require institutional investors to undertake ‘ultimate ends IFSI’ without regard for their agency to act, or for financially detrimental outcomes.

5. RISK MITIGATION INTERVENTIONS / PUBLIC GOOD INTERVENTIONS / HEDGING

5a. Is there a link to be made between identifying / measuring risks and desire / ability to contribute to funding solutions / public good interventions or other (systemic) risk mitigation interventions?

This is exactly what various stakeholders have been trying to do in recent years: put different arguments on the table to persuade investors that systemic issues pose risks, or will have adverse impacts on investments, and that they are in their 'sphere of relevance and influence' (i.e. issues that are material to institutional investors and that they can exert some influence on), or that the sphere of relevance and influence should be expanded for them to cover systemic issues.

A way that this could be visually rendered is with the institutional investor sitting on a small island surrounded by an ocean of systemic issues, separated by a narrow stretch of sand. These boundaries are not clearly defined, so what comes into the sphere of relevance and influence needs to be assessed on a case by case basis, and can evolve over time. The boundaries of this sphere can expand – e.g. the institutional investor can wade into the ocean and look into, for example, the materiality of climate change risk and decide that it is relevant, or even that it should try to influence the issue. But also systemic issues can 'wash up onto the beach': they can be pushed into the sphere of relevance and influence.

The various arguments for both of these forces – to encourage institutional investors to wade into the ocean, or to allow systemic issues to wash up onto the beach – can be summarized as follows:

EXPAND INTERPRETATION OF FIDUCIARY DUTY

This is discussed at length under question 4 above: many people consider fiduciary duty to be a barrier to institutional investors taking action on systemic issues, and would like to see the concept expanded for it to allow, or even require, action. This would clearly expand the sphere of relevance and influence for institutional investors, but as also discussed it is unlikely for fiduciary duty to evolve so far as to depart from the four tests in the Freshfields Report, let alone for it to require 'ultimate ends IFSI' without regard for investors' agency or financially detrimental outcomes.

DISCOUNT RATES SHOULD BE LOWER

As discussed under question 1b above, the reason why many issues don't enter into the sphere of relevance is that they will likely have impacts far in the future, and investors use discount rates to value future impacts in today's dollar terms, which essentially shrinks their relevance. This is also one of the central arguments of the book "Climate Shock – The Economic Consequences of a Hotter Planet" by Wagner and Weitzman.

Tallarita: "Finally, index funds likely discount the distant future at a much higher rate than what most experts believe is the correct social discount rate for climate damage. The consensus among experts is that society should discount future climate damage at a rate between 1% and 3%. By contrast, the stock market discount rate is 7% or higher. Although we have little evidence on how the market discounts climate mitigation investments, it is plausible that this rate is much closer to the 7% average stock market rate than to the social discount rate. As a result, index funds massively underestimate the social value of climate mitigation and have very weak incentives to invest in it." (p. 518)

Academic interview: “Generally we tend to underestimate future risk. ... Cash flows that are 15 years out aren’t modelled at all. There are reasons why we hyperdiscount future things; if we hyperdiscount cash flows we probably hyperdiscount risks. So it’s not necessarily that the models are wrong but that we hyperdiscount it.”

While this is undoubtedly true, this cannot be easily corrected – there is no central authority that can simply tell institutional investors to adjust their discount rates. And even if it were corrected, it wouldn’t give investors additional agency to address the root causes of systemic issues.

PLANETARY IMPACT = ECONOMIC/INVESTMENT IMPACT

This is the argument that a number of recent reports have made, including Loading the DICE. The argumentation of Loading the DICE is not very strong; amongst other claims it argues that economic and investment impacts will be catastrophic because planetary impacts will be catastrophic and that all mainstream economists, all climate models and virtually everyone in the investment chain (pension funds, investment consultants, regulators) are underestimating these economic impacts, while a Minsky Moment (a sudden revaluation of assets as investors adjust expectations about future policies) is virtually inevitable. However, as argued above, especially under question 1b, there are various reasons why planetary impacts will not by definition have a negative effect of equal size on economic systems or assets that institutional investors are exposed to, and why the massive and sudden policy response needed to trigger a Minsky Moment seems improbable.

INVESTORS ARE SHORT-TERMIST / SHOULD EXPAND TIME HORIZONS

While intuitively there’s something to this argument, the books Missing the Target (Mark J. Roe) and Winning Investors Over (Baruch Lev) argue persuasively that financial markets are not as short-term oriented as is often claimed, and do in fact to a large extent factor in long time horizons. There is also a difference between having a long time horizon and being able to predict the future – even if institutional investors would adopt longer horizons it wouldn’t allow them to know with more precision what physical or transition risks this would present, or what to do about them.

Consultant interview: “The issue they’re having is that the models tell them ‘very small losses’. The big issue is the time horizon. No one is predicting a huge amount of transition or physical risk in the next 5-10 years. That’s the time horizon that banks manage their portfolios, from risk management perspective. From a strategy perspective – yes they’re thinking about it but it doesn’t feed into risk models. There is nothing out there that tells them otherwise.”

Regulator interview: “We looked at time horizons and concluded you don’t need to extend the capital horizons provided you have good risk management in place enabling institutions to look beyond their normal horizons. If you do that in a meaningful way, this will flow into the ‘capital windows’. Nothing to suggest there would be such a big change that capital requirements would substantially rise.”

USE BETTER SCENARIOS, INCORPORATE TIPPING POINTS

The report “The Emperor’s New Climate Scenarios” (University of Exeter, Institute and Faculty of Actuaries, IFoA) argues that “development of realistic qualitative and quantitative climate scenarios is required: financial institutions should be encouraged to develop plausible qualitative and quantitative scenarios alongside regulatory ones. A simple quantitative approach could be to use a reverse stress-testing approach based on a ruin scenario of 100% loss of GDP at a certain temperature limit. This should be supported by robust internal debate around assumptions, development of appropriate investment beliefs around climate-related risks, and opportunities to foster ownership of assumptions and mitigate risk of group think. This should include developing thinking on ways in which climate change may realistically evolve based on current emissions and warmings.”⁸ In the foreword, Professor Tim Lenton says, “My hope is that this will spur a further acceleration of activity towards net zero in financial services.” The IFoA presidents say, “We also hope this more realistic assessment of risk will act to further catalyse the collaboration and investment into solutions that is required to ensure these risks don’t materialise.”

8 <https://actuaries.org.uk/media/qeydewmk/the-emperor-s-new-climate-scenarios.pdf>

Academic interview: “But again, [even if your scenario finds risks/impacts] what do you do about it? Investors probably figure ‘if it’s really bad and we can’t do anything about it we’ll deal with it when it happens’. The scenarios are also so varied that there isn’t one central solution that all scenarios recommend.”

Regulator interview: “Scenario analysis: everyone both agreed it’s the only tool we have to look forward in the future, but equally has many challenges and limitations, important to bear those in mind. I think there’s a general understanding that scenarios are just scenarios and don’t reference all risks, but sometimes the caveats get lost. For pension funds, what I gather from different reports is that funds are relying on advice from investment consultants who don’t necessarily have the full picture, maybe more the headline. ... It’s really complex, we’re all on a journey, the science is improving, translating that into scenarios that can be used by financial institutions is hard and complex and everyone needs to improve their ability to do that – also for regulators to understand financial risks. It’s quite nuanced: what’s the advice for pension funds? Repricing of assets? Divestment?”

Stern, Stiglitz, Taylor: “This does not mean that each model should try to capture everything. Meeting the climate challenge will require large structural transformation, and standard aggregative models are of only limited use in guiding such transformations.” (p. 54)

While scenario analysis is undoubtedly a good tool – perhaps the only tool – we can use to understand climate-related risks, it seems there’s some disappointment that applying scenario analysis (as recommended by TCFD in 2015) hasn’t resulted in institutional investors declaring vast exposures to climate risk, which might then have prompted them to significantly step up contributions to climate action. This has led some to conclude that the scenarios that are used in the analysis, including those recommended by regulatory groups such as NGFS, must be incorrect or incomplete. One frequent grievance is that scenarios do not take into account tipping points that would likely accelerate or exacerbate the effects of climate change.

To a certain extent, the use of rigorous scenario analysis should certainly be promoted and scenarios used should be scrutinized to ensure they reflect possible future pathways in some detail. However, one should not fall in the trap of viewing it as a panacea that will once and for all allow institutional investors to realize their vast risk exposures and trigger massive action to reduce it – scenarios are not a crystal ball. Also, it should be considered that scenarios look at the 2050 or 2100 economy only through a climate lens and disregard all other potential developments that may have similar or larger impacts on investments (also known as tunnel vision). In other words, to someone who’s solely focused on climate action these scenarios paint a very stark picture of risk and losses, but to someone who needs to determine investment strategies it’s just one of many factors that need to be assessed for materiality.

In sum, regardless of how detailed the scenarios used may be, expectations about what they will yield in terms of institutional investor action should be modest.

BENEFICIARIES WANT IMPACT

As discussed under questions 4c and 4d, this argument is also often made with a view to spurring institutional investors into action. After all, if pension fund boards can be persuaded that their beneficiaries want them to address systemic issues regardless of the financial implications, this would satisfy a large part of the fiduciary duty test and they can consider this a mandate for action.

However, as discussed above, research that purportedly demonstrates that beneficiaries want their pension funds to address systemic issues often suffers from severe limitations. In fact, often beneficiaries don’t appreciate the real trade-offs between financial returns and impact that are required, don’t understand the agency that their pension funds have in doing something about these issues (e.g. that divestment and engagement have very limited efficacy at a systemic level), or are in fact not prepared to sacrifice returns in real life even if they suggest in survey responses that they are (socially desirable responses).

To sum up, and answer question 5a: certainly this link can be made in theory, but in practice all the arguments that can be brought to bear to persuade institutional investors that risks exist and are within their sphere of relevance and influence are unlikely to withstand scrutiny. To the extent that the arguments do hold water, they will likely only change the perception of risks or the willingness to act at the margins.

5b. Can funding solutions be considered a form of risk management? Can we make the argument that contributing to funding for solutions / public good interventions reduces risk exposures?

The literature and interviewees barely comment on this question. However, positioning the funding of solutions as a *literal* form of investment risk management or insurance seems unlikely to work. The costs for institutional investors of contributing to the solutions (assuming this would require concessional rates of return) would be greater than the benefits they derive from the reduced risk exposure (i.e.: concentrated costs, diffuse benefits).

It might work if it is positioned as a 'planetary insurance policy' that would be structured to provide mostly market-rate returns (e.g. using blended finance tools), and that would cap potential losses.

Stern, Stiglitz, Taylor: "Climate investments provide a form of partial insurance. Just as investments whose returns are positively correlated with income require a return in excess of the safe return, it is desirable to make investments with a negative correlation even when the returns are less than the safe rate of return." (p. 47)

Gosling: "An alternative approach would move away from trying to apply sustainable investing techniques of uncertain efficacy across the entire portfolio towards identification of a modest portion of the portfolio, say 5%, that was applied to genuine impact investing. Impact investing could include provision of discretionary capital, for example to hard-to-finance blended finance projects or provision of early stage venture capital for high risk climate solutions. Some fiduciaries may in good faith conclude that such investments represent a reasonable "insurance policy" to lessen the risk of climate change. Given the risk of climate tipping points and non-linear development of climate damages, it might be argued that it is worthwhile to facilitate even small reductions in emissions as these could, depending on where the tipping point occurs, have outsize impact on the tail risk." (p. 2)

Advocacy group interview: "Can you isolate certain groups in finance who pay into a pot? A global fund type thing, but in finance. Almost like a premium. Or like an insurance. ... That pot is then funding the Global South for example, would need a mandate for climate mitigation/adaptation, would need thrashing out. The sectors that otherwise can't attract private capital. Needs to be an organization respected by finance so they can trust that the money will be used in the right way, e.g. 25% education, low lying countries, low income countries, etc. It would be a premium (cost) but with a potential return. The justification could be: *we're mitigating systemic risk for you or *it's just issues that need addressing."

5c. What other risk mitigation interventions can be considered / structured?

As argued elsewhere in this report, almost certainly the best intervention to mitigate this societal or investment risk is public policy. However, private capital can be mobilized to support public (governments, development banks) interventions. For this solution, see question 5e.

5d. What hedging approaches are available to mitigate these risks and what are their costs?

As discussed under question 2d, few hedging options are available and for those that are available the costs are considered prohibitive.

5e. What would investors be willing to pay and/or accept in terms of concessional returns to have access to these public good/risk mitigation interventions?

Given their liability-driven investment mandates, institutional investors will likely not accept concessional returns on public good investments, at least not at any meaningful scale. If the investment can credibly be presented as insurance, or risk mitigation, then investors might be willing to consider some of the concessional return as ‘insurance premium’, but this would likely require demonstrating that there is in fact a credible and material risk for the investor and that the investment will be instrumental in addressing it which, as discussed above, will be far from straightforward.

Therefore, especially for investments in nascent technologies and in developing countries that do not yet provide market-rate returns, we cannot assume that investors will be willing to invest at concessional rates. In other words, these investments would require government or philanthropic support.

CPPIB article: “We are already a considerable investor in renewables and clean energy. The competitive landscape for these assets has transformed over the last few years. A combination of these technologies being de-risked and competitive with conventional generating assets has increased corporate appetite for green power and attracted a lot more capital to an asset class where grid infrastructure and permitting still constrain the supply of new projects.”

Stern, Stiglitz, Taylor: “The transition to zero carbon will be particularly R&D intensive; it will be particularly dependent on networks; many green investments are capital intensive, and capital market imperfections limit the ability of households, small companies, and poor countries to make what would otherwise seem to be efficient investments; and the co-benefits of phasing out fossil fuels for health are very strong.” (p. 37/38)

Advocacy group interview: “Blended finance: it’s not our thing, but if there are people willing to provide concessional capital, government/NGO/MDB sponsored – why wouldn’t we. Asset owners should encourage governments to do this, not make concessional investments themselves.”

Academic interview: “What can investors do to contribute? Pension funds can make investments. Of course with a sound return. ... This brings us to the role of governments – they can create incentives, provide carrots & sticks. ... People who want project finance will go to wherever they can get the money. There will always be money that doesn’t care about climate change who will be willing to fund things.”

Investor interview: “I don’t think we’ll ever get to the position where we make investments to a reasonable scale purely on the basis of non-financial considerations, or on the basis of the long term. Because doing something for the long term is usually negative in the short term.”

In sum, answering questions 5a-5e: as argued above, the ‘systemic risk – fiduciary duty’ framing, and offering public good investments as a *literal* insurance policy, is unlikely to persuade institutional investors to make these investments at scale, especially if this involves concessional rates of return.

But turning solutions for climate change or other systemic issues into investable options that meet institutional investors’ risk and return requirements aligns with their mandate of making investments that allow them to meet their obligations to clients and beneficiaries. In other words, approaching solutions in this way obviates the need to demonstrate investment risk, and makes the discussion about whether or not fiduciary duty allows addressing these risks moot.

To be sure, this is easier said than done, and there are also constraints in creating these public good investments at scale.

For this research project a case study was developed on this type of ‘public good investments as insurance policy’, analyzing how much private capital might be mobilized and what it would take in terms of public sector capital and interventions to mobilize it.

As of this writing there are discussions with the World Bank and Columbia Center on Sustainable Investing about the possibility of publishing this case study separately and organizing a discussion around it in order to assess the viability of public good investments as insurance policy.

APPENDIX A – LITERATURE

(In parentheses how publications are referenced in the text above.)

[An alternative approach to sustainable investing?](#) Tom Gosling, 2023 (unpublished) (“**Gosling**”)

[Asset Managers as Regulators](#), Dorothy S. Lund, 2022 (“**Lund**”)

[Can investors save the planet? NZAMI and Fiduciary Duty](#); Tom Gosling and Iain MacNeil, 2023

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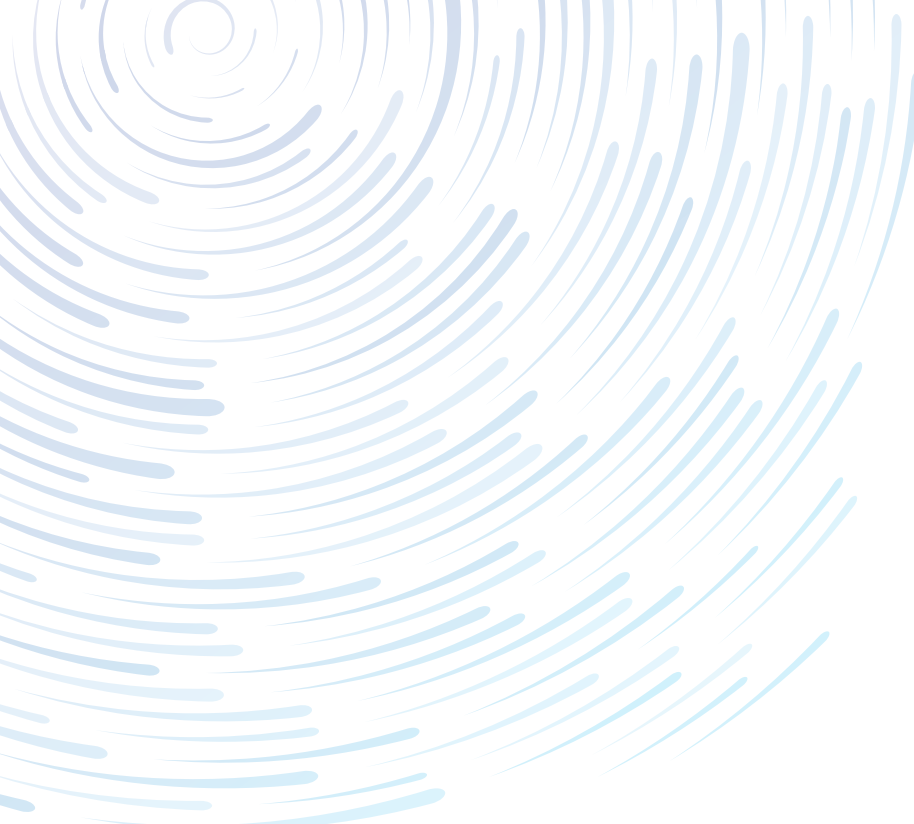
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