

WHITEPAPER

Institutional investors & Climate change

Samenvatting

Dit whitepaper is het resultaat van drie masterclasses die VBDO heeft georganiseerd in 2016/2017 in samenwerking met een brede groep experts en SPIL (Sustainable Pension Investments Lab). De focus van dit paper is klimaatverandering en strategische asset allocatie. Gedurende de masterclasses werd duidelijk dat klimaatveranderingen op uiteenlopende manieren impact heeft op investeringsportefeuilles, zoals fysieke en transitierisico's. Daarnaast kunnen institutionele investeerders zelf een positieve bijdrage leveren aan het tegengaan van klimaatverandering via hun investeringen.

Er is een groeiend aantal instrumenten en data beschikbaar om de carbon- en klimaatrisico's van specifieke bedrijven in kaart te brengen. Echter, er zijn nog veel stappen nodig om institutionele beleggers goede instrumenten te geven om klimaatrisico's te beoordelen binnen de gehele portefeuille en deze te vertalen naar het beleggingsbeleid.

Op basis van de presentaties en discussies gedurende de masterclasses komen we tot de volgende aanbevelingen:

Algemene aanbevelingen

- Klimaatverandering omvat een breed aantal, verschillende onderwerpen; van de energietransitie, carbon bubble tot de aanpassing aan een nieuw klimaat. Voor een succesvolle omgang met klimaatrisico's dienen al deze thema's geadresseerd te worden.
- Individuele beleggers zijn niet in staat om alleen dit onderwerp op te pakken. Samenwerking is nodig tussen asset managers, asset owners, regelgevers, wetenschap, data providers en NGO's.
- Samenwerking is met name nodig bij het ontwikkelen van methodes om klimaatrisico's te beoordelen en opleidingen, maar ook bij het creëren van geschikte investeringen om klimaatverandering tegen te gaan.

Aanbevelingen voor asset owners

- Verandering begint vanaf de top: het bestuur heeft hierin een rol te spelen.
- Geef klimaatverandering een plek op de agenda en waarborg voldoende interne expertise en training om uw rol als asset owner te kunnen vervullen.
- Ontwikkel beleid waarbij zowel de financiële risico's rond klimaatverandering als de maatschappelijke rol van asset owners op dit thema zijn meegenomen.

Aanbevelingen voor asset managers

- Gebruik het volledige instrumentarium dat tot uw beschikking is: van engagement, ESG-integratie, impact investeringen tot het uitsluiten van investeringen.
- Zorg dat u weet welke data nodig zijn om de verschillende instrumenten te faciliteren.

Aanbevelingen voor data en service providers

- Ontwikkel en verzamel data in veelal onderbelichte asset classes zoals staatsobligaties en private equity.

Summary

This whitepaper is the result of three master classes the VBDO organised in 2016/2017 in cooperation with a wide range of experts and SPIL (Sustainable Pension Investments Lab).

The primary focus of this paper is climate change and strategic asset allocation.

During the master classes, it became clear that climate change will impact investment portfolios in a wide range of ways, such as transition and physical risks.

Also, institutional investors themselves can have a positive impact on mitigating and adapting to climate changes through their investing.

There are a growing number of instruments and data available to assess carbon risks in specific companies. However, many steps are needed to make institutional investors fully capable of assessing climate change risks in the portfolio and translating this to sound investment decisions.

Based on the presentations and discussions during the master classes we have come to the following recommendations for the next steps:

General recommendations

- Climate change encompasses a wide range of topics; from the energy transition, carbon bubble, to adaptation to climate change. For a successful policy on climate risks all of these topics need to be addressed.
- All actors have a role to play: asset managers, asset owners, regulators, science, data service providers and NGOs.
- Cooperation is needed to create methodology to assess climate change risks and training, and in creating investment opportunities for climate mitigation.

Recommendations for asset owners

- Change starts from the top: the asset owner has a role to play.
- Give climate change a spot on your agenda and make sure you have enough expertise and training on-board to play your role as asset owner.
- Develop a policy in which both the financial risk perspective as societal role play their part.

Recommendations for asset managers

- Use the tools at your disposal: from engagement, ESG-integration, impact investment to divestment.
- Know which type of data you need to facilitate the different responsible investment instruments.

Recommendations for data-providers

- Provide more data on often overlooked asset classes such as sovereign bonds or private equity.

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A. Introduction

This paper is the result of three master classes the VBDO organised in cooperation with a wide range of experts and SPIL (Sustainable Pension Investments Lab) in 2016/2017. The primary focus of this paper is *climate change and strategic asset allocation*. Its main aim is to share insights, best practices and to discuss next steps institutional investors can take on this topic. By means of this *whitepaper* we provide the main findings of the presentations and discussions of the master classes and an agenda for next steps.

Climate change is increasingly becoming visible on the radar of institutional investors, who acknowledge the relevance of the topic by taking it into account in the development and implementation of their investment strategies. Different developments, such as the Paris agreement, the recommendations on Climate Related Disclosure from the Financial Stability Board (FSB) and the increasing societal debate on the role of the financial sector in mitigating climate change, move financial institutions with a sense of urgency to deal with this topic.

This leads to several questions institutional investors need to address:

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- *What influence will climate change and the energy transition have on society, the economy and investment portfolios?*
-
- *What is the exposure of investors to these risks and opportunities?*
-
- *How can investors mitigate these risks and take on their societal role?*
-

This whitepaper is structured as follows. First, an overview is given regarding the different topics discussed during the master classes and the speakers. Subsequently, the main conclusions are presented, followed by a set of recommendations for the different actors: asset owners, asset managers and data providers.

B. Overview of the program

Below we provide a brief overview of the content of the master classes including the experts discussing the topic.

MASTER CLASS 1: *Introduction on climate change and institutional investors*

The first master class was held on December 1st 2016. Its aim was to set the scene for the topic and to provide insights into how climate change already impacts and will continue to impact society, economy and investment portfolios. This was done with the help of the following speakers (with a link to the presentation when publicly available):

- **Pieter Boot** | Head of Department Climate, Air and Energy | Netherlands Environmental Assessment Agency (PBL)
- **Martijn Regelink** | Strategy Advisor | DNB
- **Dr. Steffen Hörter** | Global Head of ESG | Allianz Global Investors
- **Ewoud van de Sande** | Allianz Global Investors
- **Jaap van Dam** | Principal Director Investment Strategy | PGGM



Figure 1: First Master class at the Dutch Central Bank.

MASTER CLASS 2: *How to get data on climate risks on portfolio level?*

The second master class was held on January 18th 2017. Its focus was on how an investor can get data and insight into climate risks on a portfolio level. Topics such as carbon footprinting and how to find the right ESG information in different asset classes were covered by the following speakers:

- **Piet Sprengers** | Head Sustainability | ASN Bank
- **Frédéric Hoogveld** | Product specialist Low Carbon investment solutions | Amundi
- **Joris Laseur** | Manager Carbon Team | Sustainalytics
- **Maurice Versaevel** | Investment Strategist | PGGM Institutional Business



Figure 2: Second Master class at a.s.r.

MASTER CLASS 3: *Translating climate change data to risk mitigation*

The final master class was held on January 25th 2017. During this master class experts investigated how data on climate risks and opportunities can be translated into investment policies, investment management and asset allocation. This was done by several speakers with experience in the field of investment management, scenario analysis, ALM modelling and strategic asset allocation.

- **Ridzert van der Zee** | Managing Consultant | Triple A
- **Giel Linthorst** | Programme leader Science-based Targets | Ecofys
- **Maarten Vleeschouwer** | Policy officer | DNB
- **Zoe Knight** | Managing Director, Global Head, Climate Change Centre of Excellence | Global Research | HSBC BANK PLC UK
- **Erik Van Houwelingen** | Board Member ABP and SPIL



Figure 3: *Third Master class at Triple A.*

C. Main findings

During the master classes, different elements of strategic asset allocation and climate change were touched upon. In this section the most significant findings are presented.

1. Risk identification: how climate change impacts society and the economy and therefore your investment?

Climate change itself will have a physical impact on a wide range of sectors and asset classes. It will, for example, have impact on the agricultural sector, energy demands and flood safety.

Figure 4 from Allianz provides an overview of the vulnerabilities of different asset classes in relation to climate change.

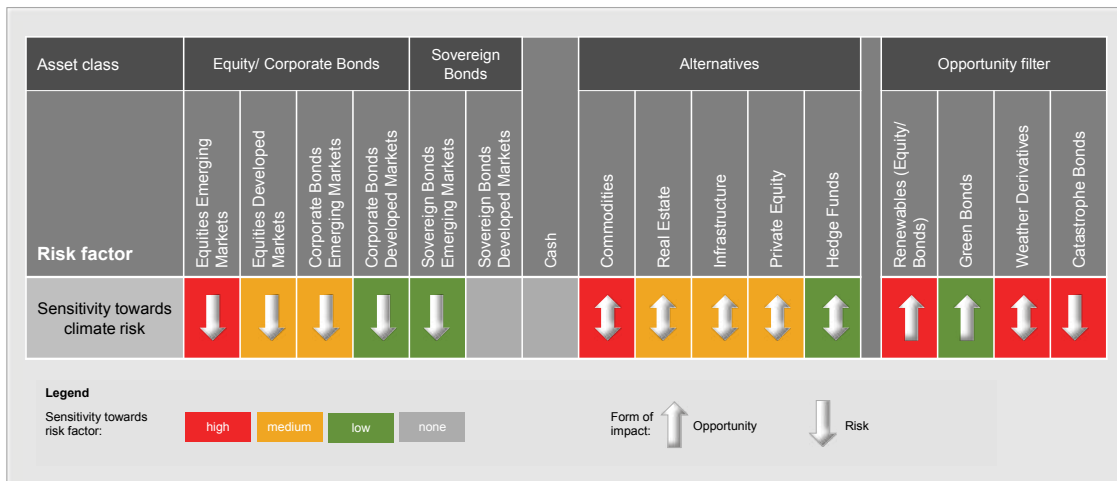


Figure 4: Exposure to physical climate risk. Source: Allianz.

Pieter Boot from PBL clearly demonstrated that besides the physical impact of climate change, the transition to a more sustainable energy system will have a large impact on investment portfolios

as well. To stay aligned with the goals of the 2 degrees scenario this would mean a reduction target for CO₂ of 60% to 85% before 2050 (base-line 1990).

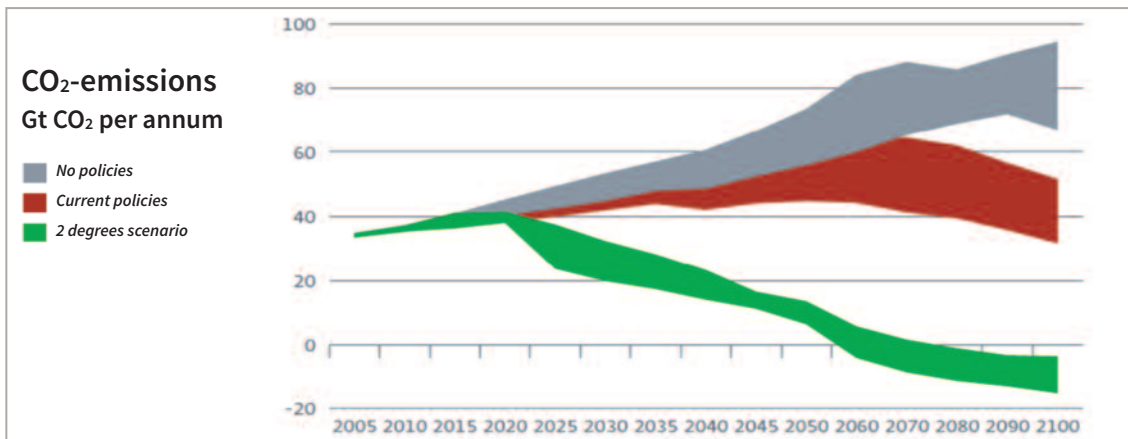


Figure 5: Policy scenarios in relation to Green House Gas-emission. Source: PBL.

Pieter Boot furthermore pointed out that in order to achieve these goals a wide range of instruments will be necessary; ranging from renewable energy, energy efficiency and carbon storage.

There are several pathways in which this transition will lead to an impact on investment portfolios as illustrated by Giel Linthorst (Ecofys) and Ridzert van der Zee (Triple A) in figure 6.

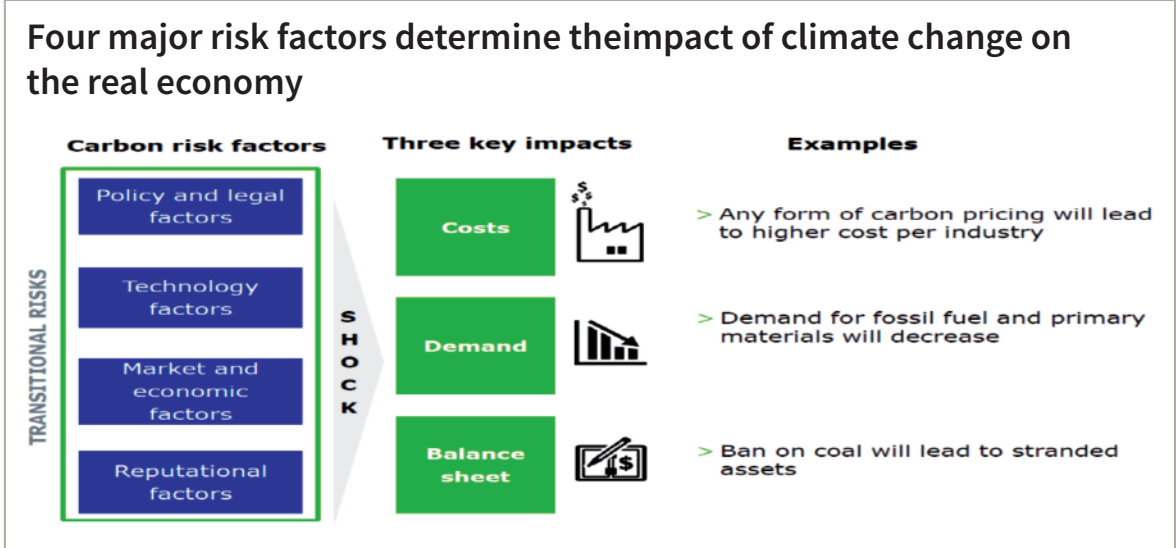


Figure 6: *impacts from climate change transition*. Source: Ecofys and Triple A.

Logically, besides having a negative impact on fossil fuel investments, this transition will also create new opportunities in the field of renewable energy, energy efficiency and other activities which put the energy transition into motion.

Martijn Regelink (DNB) detailed two scenarios in which the Dutch economy can adapt and how this adaptation will impact the Dutch financial sector.

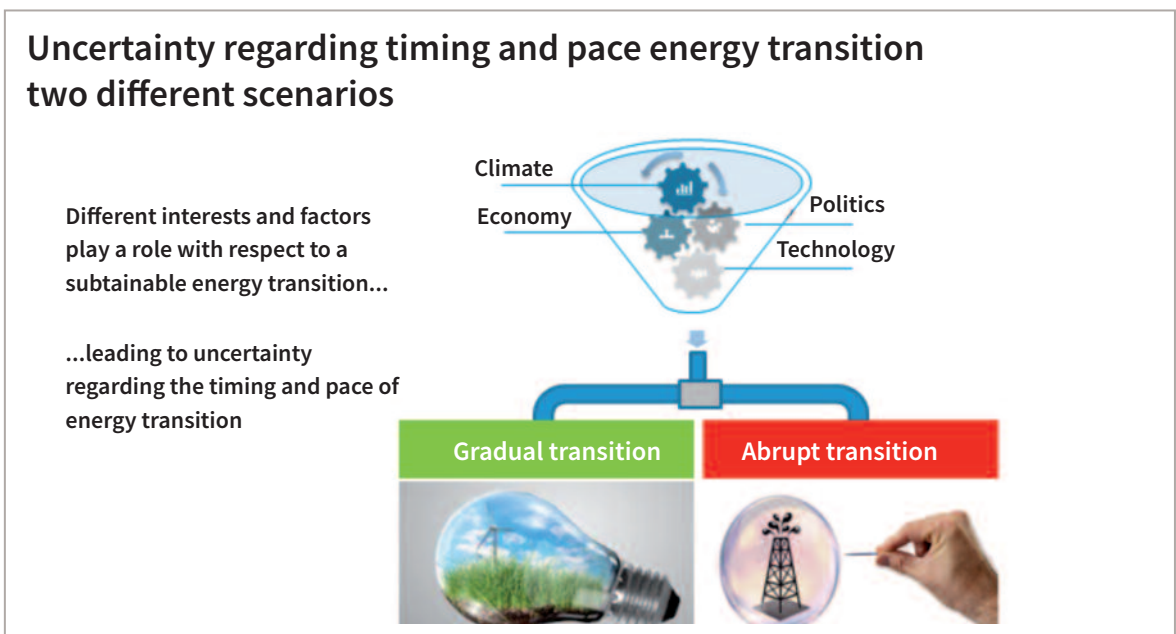


Figure 7: *Scenarios for transition*. Source: DNB.

One scenario is a gradual transition. The gradual transition is facilitated by long-term governmental policies and strong cooperation between the corporate sector, financial sector and governmental agencies. As the transition takes place gradually, financial firms are not financially at risk as they can slowly adjust and steer their portfolio towards carbon neutrality.

The second scenario is an abrupt transition. In this scenario, there is no transition path set out by the government, the financial or the corporate sector.

A period of little action is followed by an abrupt transition that can be triggered by a number of causes. For example, an absence of governmental policies followed by a sudden governmental response on rapidly occurring climate change or a technological breakthrough in renewable energies.

This abrupt transition will especially affect markets and financial institutions for whom it will be hard to react and adapt their portfolios under volatile market conditions.

2. Dual perspectives: institutional investors can act from a financial and societal perspective

As shown in the previous section climate change has a financial impact on the investment portfolios of institutional investors. But not only does climate change have an impact on institutional investors, institutional investors can also have an impact in reducing the impact of climate change. They can,

for example, catalyse climate adaptation and mitigation by channelling their investments from carbon intensive industries to renewable energy and use their influence in nudging companies into a transition process. This is demonstrated in figure 8.

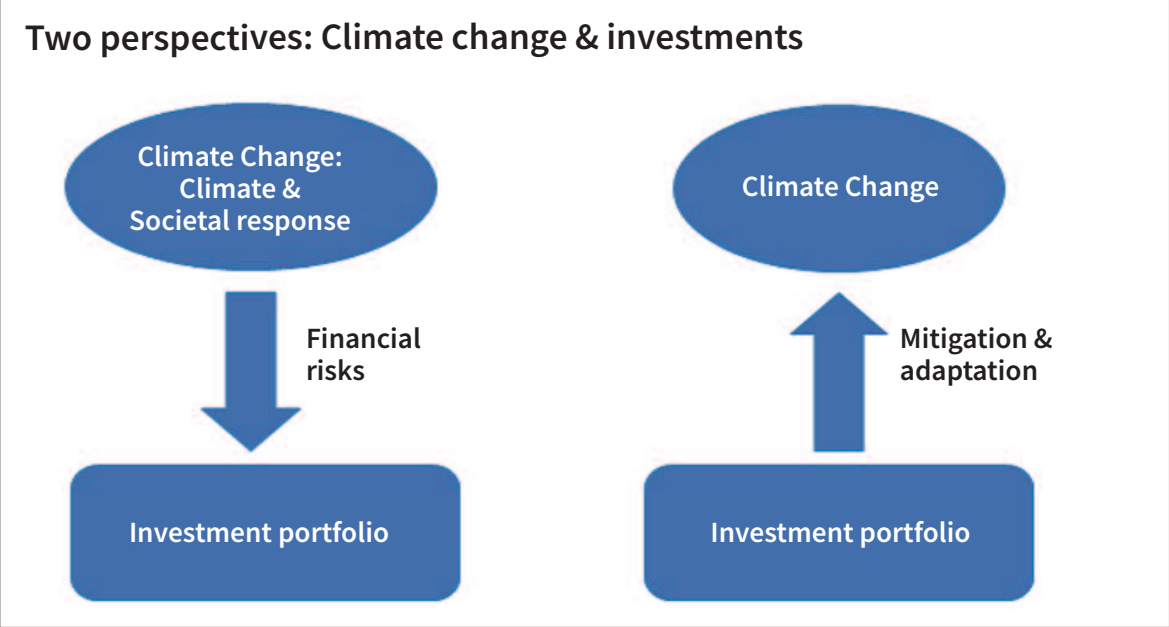


Figure 8: Relation institutional investors and climate change. Source: VBDO.

3. Exposure: measuring the carbon footprint

To understand carbon footprinting, it is important to have a basic understanding of the different scopes from which carbon emission can be estimated (see also figure 9), those are:

- Scope 1: Direct Green House Gas (GHG) emissions
- Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam
- Scope 3: Other indirect emissions

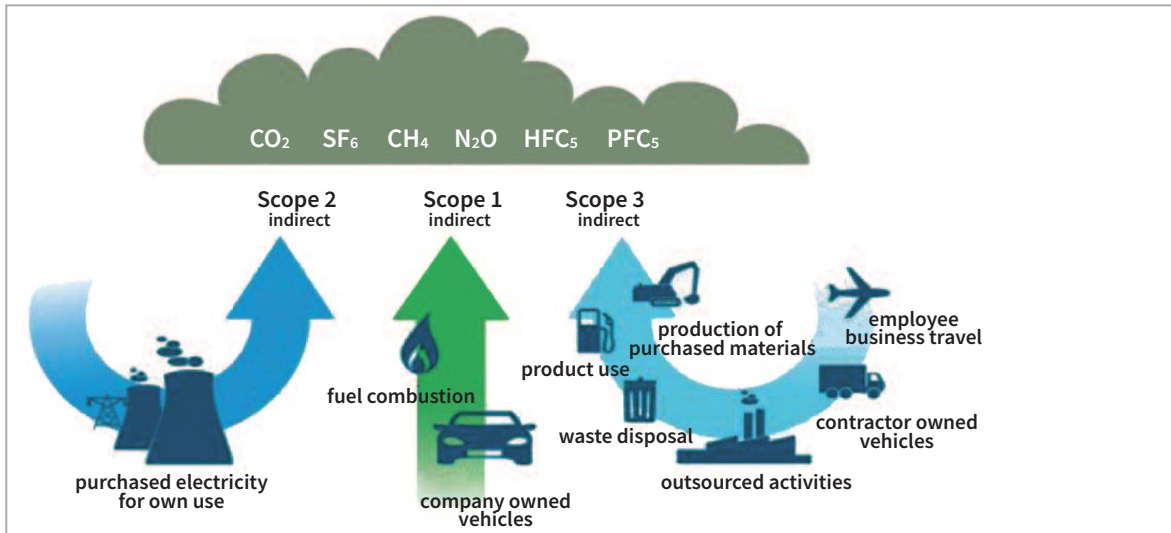


Figure 9: Different scopes of carbon accounting Source: Amundi.

As more and more data is becoming available regarding carbon footprints it becomes clear that carbon exposure is concentrated in specific parts of

the portfolio. For example, figure 10 shows how different sectors have a different attribution to the total carbon footprint of an average pension fund.

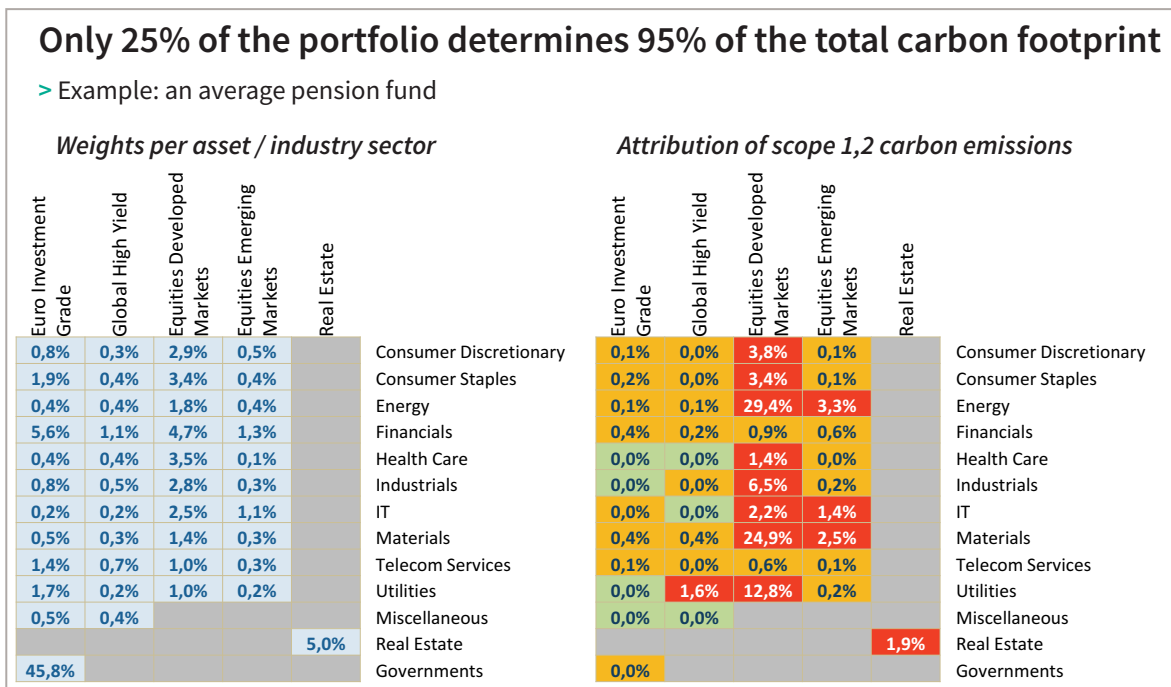


Figure 10: Concentrations of carbon footprint. Source: Ecofys and Triple A.

However, as Joris Lasseur (Sustainalytics) pointed out, important data is still missing and often must be estimated:

- *Not all companies fully disclose carbon information;*
- *Not all asset classes have the same level of disclosure;*
- *Not all scopes are disclosed on the same level;*
- *There are large differences between developed and developing markets.*

It is expected that when demand for more accurate data increases, the quality of the data will improve. Also, methodologies are being developed to align carbon accounting and footprinting. One example of an initiative to align carbon accounting and footprinting is the Platform Carbon Accounting Financials (PCAF), on which Pieter Sprengers (ASN) elaborated and in which a range of Dutch financial institutions cooperate.

An important outcome of the discussion was that society and institutional investors do not have the time to wait for the data to become perfect. Therefore, it is important to use the existing tools and try to improve these while working and experimenting.

Furthermore, before starting to make a carbon footprint of the portfolio it is important to decide what the goal of this investigation will be. It could be financial risk mitigation, but also reducing carbon emission by engagement or impact investments. It also depends on which asset classes will be investigated. The goal, asset class and sector determine if scope 1, 2 and/or 3 should be taken into account. For example, for a sector with an extensive supply chain and which is outsourcing large parts of its production, scope 3 could be more important, especially in relation to engagement. For exclusion of the worst performers in the energy production sector scope 1 could be more relevant.

4. Translating data to risk management

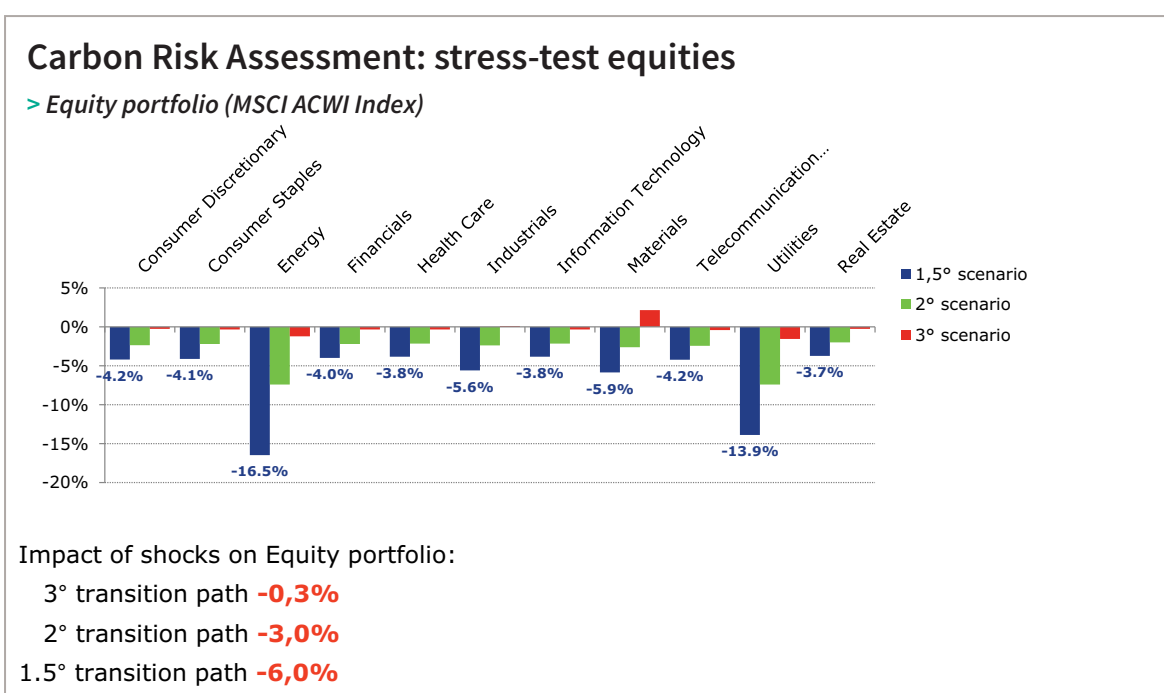


Figure 11: Carbon risk assessment equities. Source: Ecofys & Triple A.

Although methodologies are still in development, the first results indicate that carbon risk is financially material on the portfolio level. Figure 11 illustrates how, reasoned from the MSCI ACWI Index, carbon-related risks to the equity portfolio can be incorporated. From the image (figure 11), we learn that, aside from the materials sector in a 3 degrees scenario, all other sectors are negatively impacted within the three scenarios.

The carbon impacts are seemingly evident for the equity portfolio and the same applies to sovereign bonds. Figure 12 illustrates how the carbon related risks affect a sovereign bonds portfolio. The image shows that within the three described scenarios, the value of different sovereign bonds all lose value, although in varying degrees.

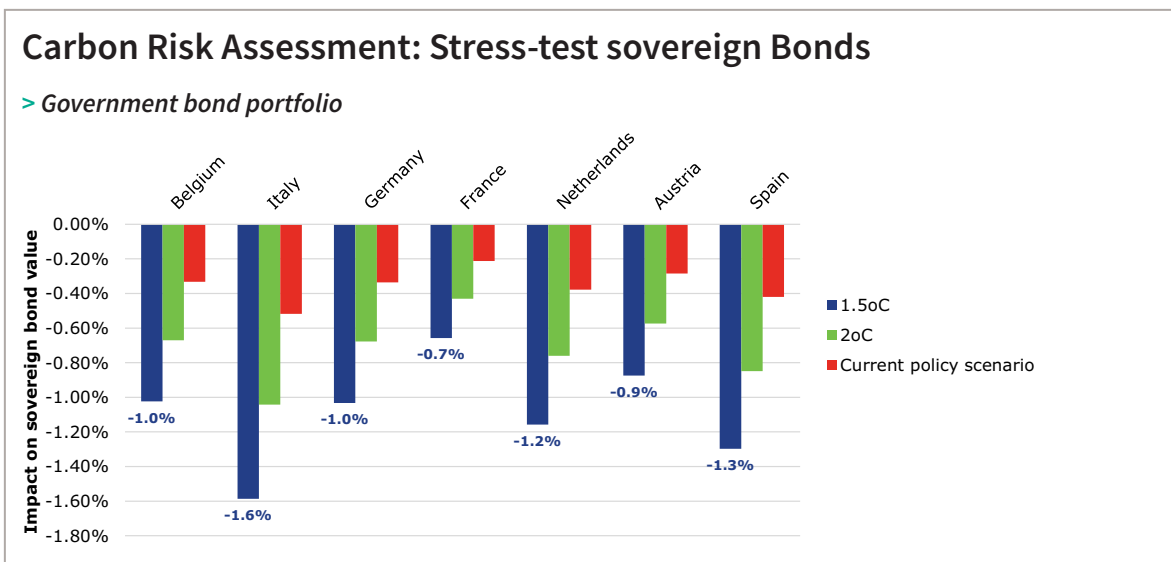


Figure 12: Carbon risk assessment sovereign bonds. Source: Ecofys & Triple A.

D. Recommendations

General recommendations

1. Change of perception: from risk driven to value driven

Currently, the financial sector is taking first steps into combatting harmful carbon emissions but to proceed further a general change of perception is needed to increase effective carbon emission mitigation.

The traditional financial perspective (risk, return, cost) is insufficient to act effectively on this matter. Therefore, a more comprehensive, societal value driven framework is needed to internalise the necessity of dealing with carbon emissions through investments.

2. All actors have their role to play

Not only investors have to act to minimize the effects of climate change and promote the energy transition, but also governments, central banks, companies and civil society organisations have to take their responsibility. All actors should work together in a precompetitive environment and even then, it remains unclear whether or not the 2 degrees target will be met (let alone the 1.5 degree target).

European investors are ahead on this topic compared to other investors. They should demand that their non-European asset managers take climate change into account. In this way, the influence of European investors reaches beyond Europe.

3. Cooperation on training, tools and development of a roadmap

The financial sector has just started to take a look into climate change, becoming aware of its impacts and started to measure and act upon it. It is a complicated topic as it concerns knowledge of climate change, investment management, scenario planning and transition management. This cannot be done by large investors alone and also not by the financial sector alone.

An important next step would be to develop a joint roadmap for the Dutch financial sector which tackles the following topics:

- A joint methodology for carbon accounting;
- Development of stress-testing tools on climate risks;
- Joint engagement strategy in cooperation by Eumedion and international platforms;
- Developing the market for impact investment in relation to climate change.

Recommendations for asset owners

1. Change starts from the top: the role of the asset owner

For an asset owner, such as a pension fund, it is important to develop insights into how climate change will impact the portfolio; what the options are to mitigate the risks (and react on opportunities), and in which role the asset owner wants to play to catalyse climate mitigation.

To formulate this vision both training and specific expertise are needed, as this is a relatively new topic at the board level. Besides training, it is

important to start experimenting on how to cope with these risks as there are not any fixed and standardised methodologies yet available, for example, when analysing the risks in developing market portfolios.

Several options are on the table for asset owners; developing their own methodologies which are carefully integrated and aligned to their own investment processes (see figure 13), and also buying off-the-shelf low-carbon products.

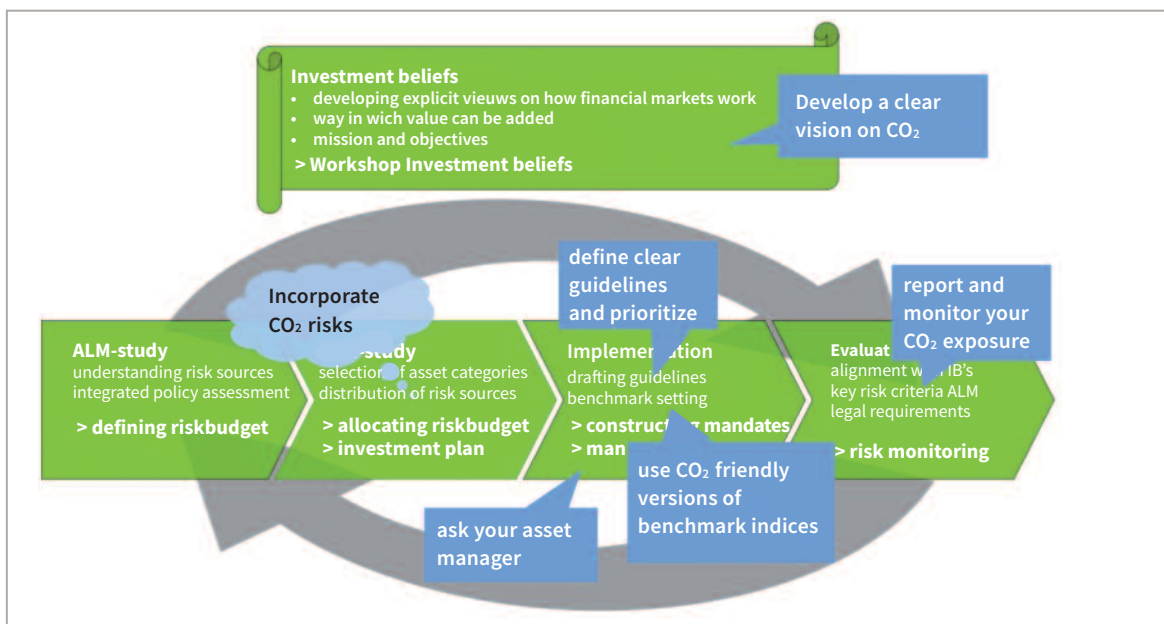


Figure 13: Integration in investment processes. Source: Ecofys & Triple A.

2. Way forward: For individual pension boards

We encourage pension boards to include climate change as a regular agenda item during board meetings, at a minimum of twice per year.

A frequent discussion of this theme is deemed necessary to monitor relevant (inter)national developments and assess the progress the fund is making. We advise pension boards to consult with society in general about the formulation and/or adaptation of the climate change related policy by means of a multi-stakeholder dialogue. The results of this dialogue can be used to set a

strategic direction, on which to base policy decisions and to absorb the knowledge of selected experts within, for example, academia, NGO's, politics, pension funds, insurance firms, banks or multinationals.

Aside from external consultation, climate change is also to be addressed internally. Climate change targets can be set-up to demonstrably set objectives for asset managers and to measure the actual progress the pension is making.

Recommendations for asset managers

1. Use engagement as well as divestment

The investor is capable of engaging with an investee company to address its sustainability performance with the attempt to positively alter relevant carbon-related policies. The engagement trajectory can have different forms.

For example, bilateral (direct interaction with the holding), collaborative (by cooperating with other parties, or by joining a platform such as the PRI), during the Annual General Meeting (by addressing carbon-related issues directly to the board in a public setting) and by voting (on agenda items during the AGM). The intention of this strategy typically is to improve the sustainability performance of the holding on the long-term.

Therefore, it stands opposite to divestment, which is a short-term strategy where the investor withdraws its invested capital from the holding because it does not agree with its strategic course or the investee company lacks in performance. When an investor divests from a carbon intensive company, the negative externalities of its business are less likely to be diminished when compared to engagement. However, as a last resort, the investor can divest from a company when engagement has failed.

2. ESG integration and impact investments

The investor can embed carbon considerations into its policies and decision making processes. By integrating carbon considerations into both, the investor unlocks the potential to create a sustainable impact. The largest Dutch pension fund, ABP, presents clear examples of what results ESG integration can bring forth (figures 14 and 15):

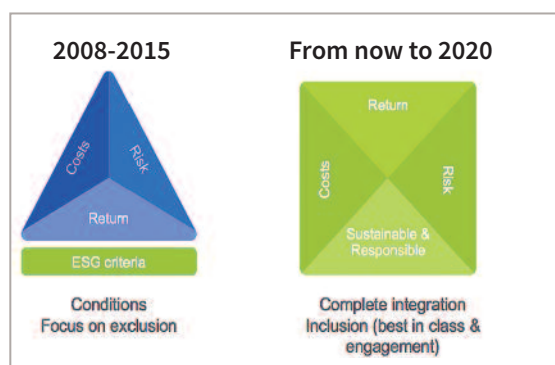


Figure 14: ESG factors fully embedded into the Responsible Investment policy. Source: ABP

The image on the left shows that, aside from conventional investment decision criteria such as costs, risk and return, ESG criteria are also taken into account. The image on the right portrays the current policy in which there is a full ESG integration. Sustainable and responsible factors are fully embedded into the policy.

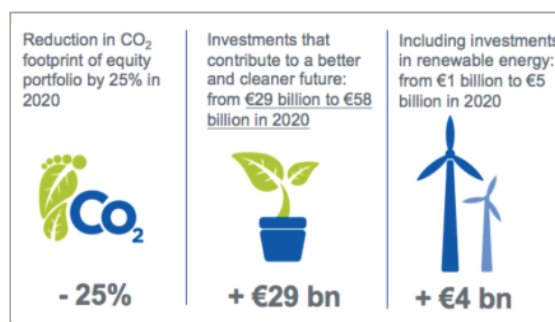


Figure 15: The impact of ESG factors being integrated in policies and decision making processes.

Source: ABP.

The image above shows the actual consequences of ABP's targets on ESG integration. CO₂ emissions are reduced through the equity portfolio and renewable energy investments increase from 1 to 5 billion.

3. Mitigation

Institutional investors possess a set of responsible investment instruments to address the challenges posed by climate change. The implementation of these instruments can potentially lead to climate change mitigation, e.g. by exercising engagement. An investor can engage a company on its carbon intensity and steer it to more sustainable results. Moreover, the implementation of responsible investment instruments can also lead to risk mitigation at the portfolio level. For example, when companies are more resistant to climate change shocks, they can better deal with enforced climate regulations or fines due to environmental misconduct and the risk of bankruptcy diminishes.

Recommendations for data providers

1. Provide more data on often overlooked asset classes such as sovereign bonds or private equity

To date, most of the research on carbon risks have focused on the asset classes public equity and corporate bonds. That does not mean that other asset classes are unexposed to climate risks. For example, sovereign bonds, real estate, private equity and commodities are also exposed to climate risks. However, to act on these risks more data is needed by data providers. Data providers have the capacity to illustrate to asset owners and asset managers how all asset classes have a risk related to carbon emissions. Therefore, an important next step for data providers is to fill these gaps and illustrate what these risks look like.

2. Stimulate companies to disclose more climate and carbon information

At present, there is room for improvement on climate risks disclosure by companies. Also in relation to disclosure on scope 1, 2 and 3. As data providers frequently interact with companies, there is an abundance of interaction that creates room for triggering companies towards more disclosure.

Moreover, data providers can neutrally reflect on a company's actual carbon performance and directly make a comparison with relevant peers, as to hold a mirror to companies which likely trigger them.

Acknowledgements

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