TURNING THE TIDE

The urgent need to shift capital flows to climate solutions: a case study of ten fund management companies.

Report #87

SWEDWATCH

Swedwatch is an independent not-for-profit organisation that conducts in-depth research on the impacts of businesses on human rights and the environment. The aim of the organisation is to contribute towards reduced poverty and sustainable social and environmental development through research, encouraging best practice, knowledge-sharing and dialogue. Swedwatch has six member organisations: Afrikagrupperna, the Church of Sweden, Diakonia, Fair Action, Solidarity Sweden-Latin America and the Swedish Society for Nature Conservation. The Church of Sweden and the Swedish Society for Nature Conservation stand behind the report and have participated in developing its recommendations.

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Cover photo: A Kiribati family wading through sea water to collect coral stones to build a wall for protection against flooding caused by climate change. The pacific small island states are identified as amongst the most vulnerable to climate change impacts due to low-lying land area, which salinates ground-water and affects access to food and water.

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Table of Contents

Executive Summary

The finance sector risks undermining the goals and ambitions of the Paris Agreement on Climate Change. If practices are not addressed, the sector may contribute towards a 4–6°C increase in global temperatures by the end of this century, far above the 2°C goal set as the absolute maximum in order to avert disastrous climate change impacts on people and planet. Although Swedish stakeholders are the focus of this study, the findings should be seen as an indication of a challenges that likely exists globally.

This study presents the results from a climate survey and a portfolio analysis of Sweden's ten largest fund management companies, that invest retail and institutional clients' assets in global stock markets. It investigates what actions are taken to bridge the global gap in green investments and fulfil the goals of the Paris Agreement.

Climate change is one of the greatest human rights challenges of our time. Still, the study shows that coal power companies, which remain in the fund management companies' investment portfolios, are planning to expand their capacity. At the same time, renewable power companies' capacities are, based on projections, expected to level out over coming years.

To avoid some of the worst effects of climate change, 195 states committed in 2015 under the Paris Agreement to keep the rise in global temperatures this century well below 2°C and pursue efforts for 1.5°C. The agreement clearly designates an important role to the finance sector. There is a need for investors to direct capital flows to zero-carbon investments, innovation and climate solutions, and to pressure fossil fuel and deforestation industries to transform their business models.

This report compares results from a similar survey conducted by Swedwatch in 2015. Principal findings show that:

- Many investors have increased their climate efforts. There is some progress in the form of increased investments in green bonds from earlier low levels, and some of the investors are preparing to carry out scenario analysis in line with voluntary G20 recommendations. In one instance, climate-induced human rights impacts are being translated into business risk. However, given the urgent need for concrete climate transition results, the ambitions and actions of the fund management companies are not sufficient.

- The investors included in the study have not set any targets for reallocation of capital from investments in fossil production to investments in green finance and climate solutions for mitigation and adaptation. Across the board, climate solutions are almost exclusively found in niche funds, which make up only a fraction of the total investments. Some investors deferred responsibility for choosing to invest in climate solution to clients.

- A majority of the fund management companies state that they are actively engaging with companies, policy-makers and large financial actors in order to, for example, decrease greenhouse gas emissions and encourage better climate

reporting as well as transition to low carbon business models. However, only a handful report concrete targets, timeframes or results from these efforts.

- The fund management companies explain that the reasons for not reallocating substantial capital are that they are protecting the value of their clients' investments, and that climate risks are not considered in today's short-term financial markets. Further, they refer to a current lack of green projects and climate solutions to invest in. Regarding the lack of targets and disclosure on their investments' impacts on climate, forests and human rights, they describe that the challenge is that companies are not measuring and reporting on this.

However, in order to contribute effectively to a swift climate transition by 2020, it is not an option for investors to wait for improved company reporting and substantially increased client demand for green, climate focused fund products. Also, investors are key agents in the Paris Agreement and should take lead in identifying new investment opportunities in green finance and climate-solution focused savings products. If the finance sector awaits public funding initiatives to materialise, there is a risk that the window of opportunity to ensure a stable future is missed.

Swedish and international decision-makers and regulators should redefine climate risk models for the financial sector. Financial stability is a minimum requirement for a sustainable future. However, fund management companies in this study are committed both to international conventions on environment and human rights, and to the fulfillment of the UN Sustainable Development Goals. Consequently, the portfolios' current and future impacts on the climate, forest integrity, and community rights should be addressed and communicated.

New financial risk models need to underline the false sense of security in not acting, which is already leading to devastating consequences for the future of the planet. Ultimately, extreme weather events, deforestation, human suffering and loss of life from climate change impacts are already affecting business activities and economic growth. The study clearly illustrates that the finance sector needs risk models, which reflect this reality.

Already today, the effects of climate change are impacting poor households and vulnerable groups such as children, women and indigenous people. They are being hit the hardest by for example hurricanes, floods, and food insecurity. Even with current temperature increases, climate change is acting as a threat-multiplier to conflict, thereby undermining international efforts for peace and sustainable development.

Two years after the Paris Agreement, rapid progress on its implementation is critical. In order to reach the long-term goal of net zero emissions in the second half of this century, investors need to act now and contribute to a clear global decline in carbon emissions by 2020.

Recommendations

Recommendations to the boards of parent companies of the reviewed fund management companies and asset managers and other investors globally:

- Set ambitious targets for increasing reallocation of capital to investments in green finance and climate solutions for the critical period 2017-2020, in order to reach the goals of the Paris Agreement on climate change.

- Conduct scenario analyses of all investments that include long-term, ambitious 1.5°C scenarios for (i) energy transition, and (ii) physical climate change impacts. Further, assess impacts on climate, forests, and community rights across the entire asset management portfolio.

- Based on the results of the analyses, develop an investment strategy that clearly defines where and when it is:

  (i) meaningful to be investor and use leverage to exert positive pressure;

  (ii) more effective to divest reposibly from securities that are contributing to greenhouse gas emissions, deforestation, or lobbying against ambitious climate policies and regulations.

  In some cases, as an alternative to full divestment, it may be meaningful to retain a small shareholding, in order to maintain leverage.

- Allocate sufficient resources to sustainability and investment departments in order to ensure effective strategy implementation.

- Actively support and promote the incorporation of compulsory finance sector climate measures into national legislation and policy.

Recommendations to fund management company executives, heads of sustainability departments and portfolio managers:

- Take initiative, innovate and create new investment opportunities to reallocate substantial capital to green finance and climate solutions across all investments and fund products. The reallocation should be in line with the goals of the Paris Agreement, not merely responding to client demand.

- Set clear targets and regularly report, disclose and proactively address current and future portfolio impacts on climate, forests, and community land and forest tenure.

- Redesign the risk-return models and other financial models to reflect the results of the thorough analyses and scenarios, and address the short-term nature of financial markets.

- For securities with negative climate impacts where the board has decided to remain as investors, sufficient resources should be allocated for effective and time-bound engagement activities with climate transition goals. Establish strong coa-

litions, apply lobbying and negotiation tactics; and report on both the content of dialogue and outcomes. Identify windows of opportunity, at earliest project stage, to exert leverage on companies and states to halt or redesign large fossil extraction, deforestation or land dispossession projects, which are in pipeline, feasibility and project preparation stages.

- For securities where the board has decided to divest, maximise the signal value of divestment decisions and reallocate capital to investments in climate solutions – not to seemingly 'low-carbon' sectors such as finance or sectors with high sustainability risks such as large hydropower or nuclear power projects.

Recommendations to Swedish and international regulators and decision-makers:

- Introduce compulsory requirements to conduct and disclose results from scenario analysis employing long-term, ambitious scenarios for energy transition, mitigation and adaptation. The requirements should emphasise the human rights aspects of climate change, and go further than Task Force On Climate-related Financial Disclosures' minimum demands on stress-testing investments financial stability.

- Disclosure of current and future portfolio impacts on the climate, forests, and community rights should become mandatory.

- Explore possibilities to encourage the development of new types of low carbon and climate solution products.

Recommendations to climate-conscious retail and institutional clients:

- Require fund management companies and their parent companies to disclose the results of scenarios for the entire investment portfolio on their contributions to:

  (i) The energy transition;

  (ii) Adaptation, forest protection and respect for community rights.

- Demand disclosure of climate targets and progress results.

- Demand that fund companies make fund products which contribute to the climate transition their default offer, not a niche option.

FACT

List of abbreviations

2ii	The 2° Investing Initiative
AODP	Asset Owners Disclosure Project
AUM	Assets Under Management
CDP	Carbon Disclosure Project
CEO	Chief Executive Officer
ESG	Environment, Social and Governance
GRI	Global Reporting Initiative
HLEG	High Level Expert Group on Sustainable Finance
IEA	International Energy Agency
IIGC	Institutional Investors Group on Climate Change
IPCC	Intergovernmental Panel on Climate Change
NGO	Non-governmental Organisation
OECD	Organisation for Economic Cooperation and Development
PRI	Principles for Responsible Investment
SDGs	Sustainable Development Goals
TCFD	Task Force on Climate-related Financial Disclosures
UN	The United Nations
UNEP	The United Nations Environment Programme
UNFCCC	The United Nations Framework Convention on Climate Change
UNGPs	The United Nations Guiding Principles on Business and Human Rights

1. Introduction

Global emissions of greenhouse gases, hereafter referred to as 'carbon emissions', are leading to record-setting temperatures and rising oceans.[1] Over the past 45 years, human-induced climate change has raised the earth's average temperature by 1.7°C. This is 170 times faster than increases caused by natural factors.[2]

The principal cause of climate change is the extraction of fossil fuels such as coal, oil and gas, which are combusted to produce electricity, and cooling and heating for industries, households and transport. However, emissions from deforestation and degradation[3], constitute almost one-quarter of annual carbon emissions.[4] The main drivers behind destruction of forests are found across global supply chains of wood products, and agricultural commodities such as beef, soy and palm oil.[5] Mining and infrastructure development are also driving deforestation – both for clearing of project sites, and opening up previously undeveloped areas to business activities.[6]

Indigenous and local communities – increasingly under threat for defending land rights – are the principal stewards safeguarding a large proportion of remaining forests. There is growing evidence that secure indigenous and community land and forest ownership is key to combating climate change, poverty and hunger, and to preserving cultures and biodiversity values.[7] Land investments by states and private actors are leading to the dispossession of large tracts of community land and forests

from communities, which in turn disrupts sustainable management regimes and leads to further carbon emissions.[8]

The world's changing climate is leading to higher incidences of extreme weather events such as hurricanes and intense heat waves. The increasing global temperatures are also causing more gradual changes in weather patterns. In many parts of the world, the periods and intensity of rainy and dry seasons are changing and becoming unpredictable.[9] These effects of climate change are already being felt by hundreds of millions of people around the world whose lives, livelihoods and businesses activities are impacted negatively. In its 2014 report, the Intergovernmental Panel on Climate Change (IPCC)[10] predicted that if strong actions are not taken to reduce carbon emissions, these impacts will become significantly worse throughout the course of this century.[11]

In 2017, new research underlines the severity of the climate change challenge. Unless carbon pollution is drastically curbed, global sea levels will rise by 1.32 meters by the end of this century, which is 50 percent more than IPCC's previous estimates.[12] Furthermore, because of forest degradation, tropical forests such as the Amazon have already become net emitters of carbon dioxide and are no longer acting as the planet's 'lungs', absorbing greenhouse gases.[13]

FACT

The Paris Agreement

The Paris Agreement on climate change, which has been ratified by 170 of its 197 state parties[14], calls on swift action by states, regulators, companies, the finance sector, and civil society to combat climate change. The agreement has three goals: Firstly, to hold global warming well below a 2°C increase from pre-industrial levels and pursue a target of 1.5°C. Secondly, to redirect financial flows towards low-carbon and climate-resilient investments. The third goal is to increase the resilience of both societies and businesses to climate change impacts. [15]

According to scientific research published in September 2017, and based on updated emissions data, the 1.5°C target is still possible to reach but only with strong and immediate action.[16] One global benefit from staying within the more ambitious target is that more than half of the ice masses in Himalayan glaciers will remain frozen.[17] Provided that global temperature rise can be contained below 1.9°C, the melting and collapse of the Antarctica ice sheet with resulting extreme sea level rises, can be avoided.[18]

Private finance is crucial in climate change mitigation[19] efforts to decrease global net carbon emissions to zero by the second half of this century. Investor capital also needs to be invested in adaptation[20] efforts so that societies become resilient enough to withstand the impacts from existing and unavoidable climate change effects. Asset managers such as the fund management companies in this study, have a key role in the last stage of the investment chain, since they can allocate capital streams towards investments in climate solutions, as underlined by the EU High-Level Expert Group on Sustainable Finance (HLEG).[21]

Villagers in Teraj, Nepal herd their cows through the desert, which once was fertile land. The Koshi River, which originates in the Tibetan Plateau, flooded the area and severely impacted 2.5 million people, leaving them without land for cultivation. Increased temperatures caused by climate change lead to the melting of Tibetan glaciers, the largest mass of frozen fresh water outside the polar regions. This is linked to increased variation in floods and drought patterns.

Without adequate mitigation and adaption measures, climate change impacts will intensify, and both so-called 'rapid-onset' disasters, such as hurricanes, and 'slow-onset' disasters such as long-term droughts, will become more common. Slow-onset disasters have strong and persistent impacts, which enhance livelihoods vulnerabilities such as food insecurity, and lack of access to clean drinking water.[22]

Impacts from unabated climate change would continue to act as a threat-multiplier to security – through increased climate-induced migration and intensifying competition and conflicts over water, food, land and natural resources. This development trajectory would increasingly threaten peace, sustainable development and the enjoyment of basic human rights for all.[23]

This report illustrates how the financial sector is both part of the climate change problem and a key to its adequate address. Today, financial actors are heavily invested in fossil fuel production sectors, high-emitting industries, and in companies that cause and contribute to deforestation and dispossession of communities' lands and forests.

The actions of governments, local actors and the financial system will determine the success of climate change mitigation and adaptation during the critical 2017–2020 period – identified by IPCC as a window of opportunity to address the most fundamental and pressing climate change trends and challenges. If swift and decisive actions are taken by leaders in the financial sector, catastrophic impacts of climate change could still be avoided.

2. Methodology

This study reviews whether investors are reallocating capital to green finance and climate solutions in line with the Paris Agreement, and if they are successfully pushing companies to transform their business models to become low carbon, climate resilient. This report uses the wording 'resilient 1.5°C world' to summarise the Paris Agreement's goals.

In order to reach the goals of the Paris Agreement, fund management companies need to reallocate investments across their entire asset management portfolios. Consequently, the study reviews how the fund management companies are acting across all their investments, not just in niche products such as renewable energy or green bonds funds. Fund management companies invest both retail customers' and institutional investors' capital on global stock exchanges.

Highlighting examples from current investment practices in the Swedish mutual fund industry, this report presents results from a survey of Sweden's ten largest fund management companies: AMF Fonder AB, Danske Capital AB, Handelsbanken Fonder AB, Lannebo Fonder AB, Länsförsäkringar Fondförvaltning AB, Nordea Funds AB SEB Investment Management AB, Skandia Fonder AB, SPP Fonder AB and Swedbank Robur Fonder AB.[24] The results of the 2015 Swedwatch report Is the Gold

Turning to Sand?[25] serves as a baseline from which to identify changes in the fund management companies' climate-focused investment practices. An overview of international norms, and examples of policies and voluntary initiatives provides a point of departure for the results analysis.[26]

For the purposes of this report, the international multi-stakeholder thinktank 2° Investing Initiative[27] (2ii) provided a scenario analysis of investments using its 2°C alignment methodology developed in the course of the Sustainable Energy Investment Metrics project. This was used to complement Swedwatch's research and findings. The results of the 2ii assessment illustrate the extent to which the ten fund management companies' current investments are contributing to the transition to low-carbon energy systems, which is necessary to reach the goals of the Paris Agreement.

The analysis focuses on investments in production of fossil fuels – oil, coal and gas; renewable and other power capacity; and the automotive industry.[28] Due to limitations in available investment data, the analysis is conducted on investments in Sweden-registered funds only. However, since the fund management companies state that there is no difference between their investment strategies in Sweden-registered and other funds, the results should be representative across their entire investment portfolios.[29] The scope of the assessment is limited to the listed equity of the fund management companies. It does not give any information about the alignment of any other managed financial instruments, such as for example private equity or direct investments. For details on the methodology see Annex 1.

2.1 Scope and terminology

The research and analysis in this report highlights climate change impacts from carbon emissions from fossil fuels and industry, and from deforestation.[30] Climate change adaptation and human rights are reviewed with a focus on the rights to life, water, food, livelihoods and security. The study underlines the fact that halting deforestation, and ensuring secure community land and forest tenure, are necessary elements in both mitigation and adaptation efforts.

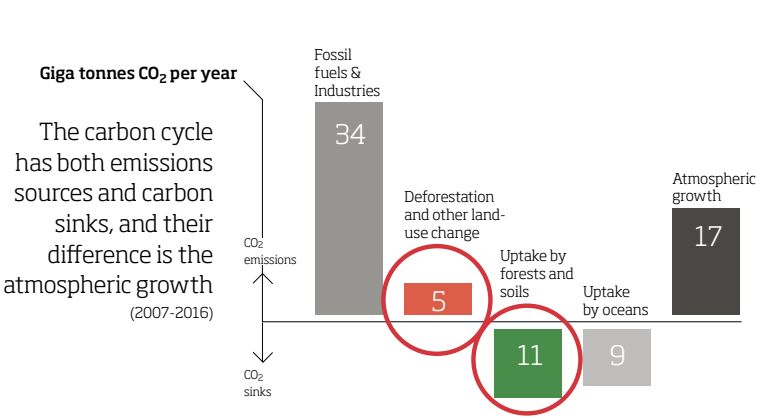


Figure 1. Forests and soils are important for sequestration of CO_2 from the atmosphere. Deforestation and soil degradation result from for example clearing of forests for agriculture and infrastructure projects.

This report refers to the UN Framework Convention on Climate Change's[31] (UNFCCC) two time frames for climate action:

1) 2017–2020:[32] a critical window within which to reverse negative carbon emission trends and invest in adaptation, and

2) 2020–2050: a period when the international community must reduce net carbon emissions towards zero and prioritise adaptation efforts to unavoidable climate change.

The following terms are used to describe the types of climate risks and impacts:

- *Climate-related financial risk*[33] refers to two main categories of risks that may affect investors and their clients:

  1) Physical and reputational risks, which may decrease the value of securities in investment portfolios and damage investor brands. Companies and projects in the real economy may decrease in value when they are negatively impacted by:

  a) the direct effects of climate change, for example rising sea levels and extreme weather events, or

  b) the indirect effects of climate change, such as a decrease in workers' productivity due to food and water shortages and compromised health.

  2) Transition risks (often referred to as 'carbon risks') are expected to affect investors during the transition to a low-carbon, climate-resilient economy. This transition is expected to create investor 'winners', who are able to maximise opportunities created, and 'losers', who are unable to adjust to changes.

- *Portfolio impacts on climate, forests and human rights*

  In discussing the investment impacts on climate change, forests and human rights, this study distinguishes between current impacts and potential future impacts. In some instances, these are referred to as 'impacts on the planet and people' for the sake of brevity.

In presenting and analysing climate investment strategies, metrics and targets, this study makes a broad distinction between 'climate change resistant' strategy elements and '1.5°C contributing' strategy elements. The climate change resistant strategies focus on minimising climate-related financial risks and maximising opportunities during transition. A key assumption in this study is that financial stability is an absolute prerequisite for combating and adapting to climate change and ensuring sustainable development.

1.5°C contributing strategies go further, and have the combined goal of safeguarding the value of invested capital while also maximising contributions to the transition to a resilient 1.5°C world. Most investors have elements of both strategies embedded in their policies and strategies for sustainable and responsible investments.

3. Climate norms, laws and policies

The Paris Agreement is the first global climate agreement, which defines a clear role for the financial sector in combating climate change. International environmental and human rights norms, as well as the UN Sustainable Development Goals (SDGs) again support investors to act, and to overcome existing challenges. All over the world, governments, courts and regulators are starting to translate the international norms into laws and policies.

3.1 International norms

The Paris Agreement goals are to mitigate climate change by eliminating net carbon emissions to zero by the secound half of the century. As regards climate change adaptation, the agreement underlines that the world needs to increase societies' abilities to withstand and adapt to the unavoidable consequences of climate change, and to foster resilience and low carbon development – without threatening food security. The role of the finance sector is to align financial flows with a pathway towards low-carbon, climate-resilient development, and thus actively finance mitigation and adaptation efforts.

The SDGs define global ambitions to ensure poverty alleviation, food security and global sustainable development. The SDGs focus on combating climate change and its consequences and to protect, restore and ensure sustainable use of forests and other ecosystems. The UN Guiding Principles on Business and Human Rights (UNGPs) highlight how everyone's right to life, dignity, food, health and security are at the core of implementing Agenda 2030[34] – which refers to the action plan for states to come together to realise the SDGs.[35]

The UNGPs[36] clarify that all states have the responsibility to protect its citizens' human rights, and businesses should respect these same rights across all its global business activities. Both the UN Office of the High Commissioner for Human Rights (OHCHR) and the Organisation for Economic Cooperation and Development's (OECD's) Directorate for Financial and Enterprise Affairs underline that investors, including minority shareholders, are responsible for ensuring that the companies they invest in respect human rights. The UNGPs state that a business entity, such as an investor, which exerts leverage over a non-performing company, should ensure that the company is improving its adherence with international norms and conventions within a set time frame. Where states fail to protect human rights, individual investors or joint initiatives should use their leverage to put pressure both on companies and governments.[37]

There are a number of international norms also relevant for financial actors, to ensure that their investments contribute to halting deforestation, secure community land and forest tenure, and protect communities' rights to the social and cultural values of forests. These include the New York Declaration of Forests, the Convention

on Biological Diversity, the High Conservation Values Methodology[38] and guidelines such as the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security[39] ('Voluntary Guidelines on Tenure'), and the Committee on Food Security's Principles for Responsible Investment in Agriculture and Food Systems.[40]

3.2 Challenges facing the financial sector

The greatest challenge for the financial sector to fulfil its key role under the Paris Agreement, is the urgency of the task. The 2017–2020 time frame constitutes a critical window of opportunity for the world to safeguard the Earth's climate and reverse the trend and effects of carbon emissions.[41]

States' mitigation pledges under the Paris Agreement are not sufficient. Their public commitments – if implemented – would still lead to a 2.8°C rise in global temperatures by the end of this century.[42] The financial sector's investments in solutions, such as renewable energy, are insufficient.[43] According to high-level experts behind the collaborative campaign 'Mission 2020'[44], should emissions continue to increase beyond 2020, or even remain unchanged, the goals of the Paris Agreement become almost unreachable, and achieving the SDGs would also be at severe risk. In order to seize the window of opportunity and reverse emission trends by 2020, the financial sector needs to mobilise at least one trillion USD per year for climate action.

Global investments in renewable energy capacity have been higher than investments in fossil fuel generation for five years in a row. However, in 2016 new global investment in renewables fell by 23 percent to 242 billion USD, the lowest total since 2013. This downturn was partly due to the decreasing cost of renewables, but also due to the sharp slowdown of financing of renewables in China, Japan and in emerging markets.[45]

Many investors are – to varying degrees – still investing in the fossil-fuel based economy: 30 percent of the world's top 250 stock-listed companies account for one-third of global carbon emissions.[46] In addition, 35 of the world's 50 most influential companies are campaigning against climate change legislation - actively lobbying against ambitious decarbonisation policies. These include fossil fuel companies such as ExxonMobil and Chevron, energy intensive companies – for example Bayer and Dow Chemical, and electric utility companies focusing on coal-generated energy, such as American Electric Power. The 35 influential companies holding back advances in climate policy also include powerful automotive manufacturers such as Fiat, Chrysler, Ford, BMW and Daimler. The focus of their lobbying efforts is to delay or weaken carbon emissions standards and procedures both in Europe and North America, as evidenced in direct disclosures from the companies themselves or from their trade associations.[47]

Investment portfolios also contain companies whose projects and supply chains drive deforestation and impact on communities' rights to land and forests. Stopping tropical deforestation could provide 30 percent of the required mitigation of carbon emissions in order to keep global average temperature increases in line with the goals

of the Paris Agreement.[48] Communities and indigenous groups that manage forests and lands for agriculture, wild foods and materials, and social and cultural purposes, play an important role in sustainable management and carbon sequestration in forests and soils.[49] Climate solutions in the form of land-based renewable energy projects such as biofuel production, large solar power plants, and hydropower may also impact on land rights, livelihoods and security. These projects need careful due diligence and application of environmental and social safeguards in order avoid negative effects on people and ecosystems.[50]

Short-term financial analyses fail to include climate impacts

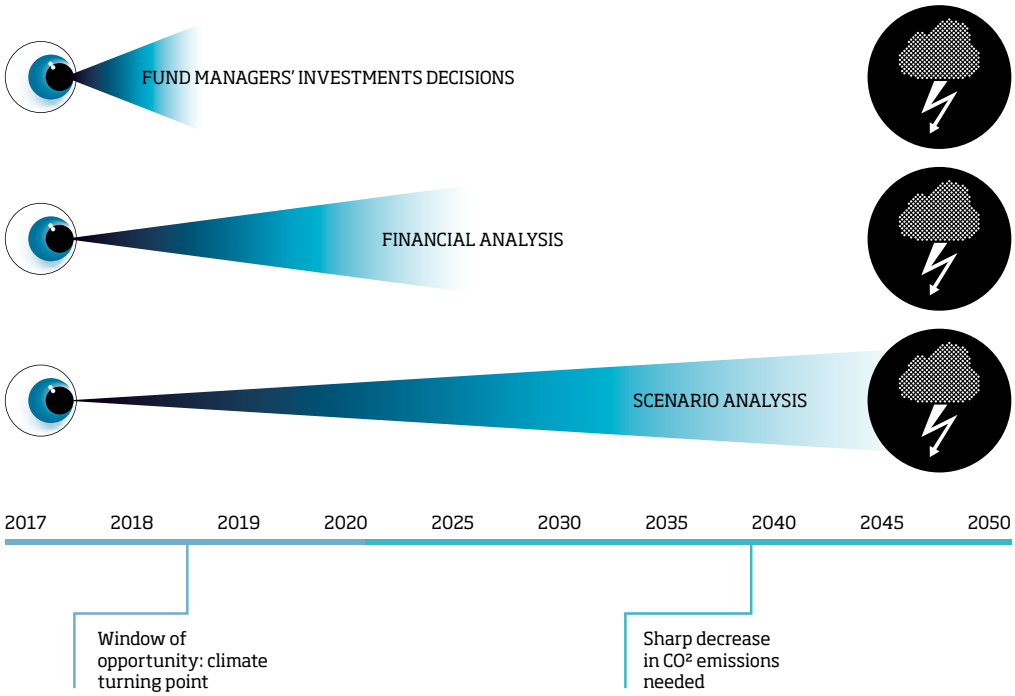


Figure 2: Because of the short time frames of incentives for individual fund mangers and financial models, future climate risks are often times not considered in investment decisions. Scenario analysis with long-term horizons can support investors to act now in order to reach the long-term goals of the Paris Agreement.

One challenge facing financial actors is the short-term nature of global financial markets and financial risk models, which fail to include medium and long-term climate change risks. This is often referred to as the 'Tragedy of Horizons'.[51] The importance of long-term investment strategies, company reporting and scientifically-based climate targets for both companies and investors, which take climate risks into consideration is also highlighted in recent publications.[52]

3.3 Legal and policy initiatives

This section lists a number of important initiatives, which aim to support better climate analysis and disclosure by investors and other financial sector organisations.

The Financial Stability Board of the G20 States established a Task Force on Climate-related Financial Disclosures (TCFD) in 2015. Its final recommendations published in 2017 are aimed at harmonising industry-wide climate-related financial information for actors across the investment chain.[53] The recommendations are underpinned by important financial motivations, and highlight the fact that a number of industries are exposed to financial climate risk (see Table 1). TCFD's conclusion is confirmed by new metrics: 'Carbon Value at Risk' shows that 20 percent of profits generated by global companies are at risk if carbon prices rise as the Paris Agreement will be translated into effective regulations and market mechanisms.[54]

Industries exposed to climate risk

Energy	Transportation	Materials and Buildings	Agriculture, Food and Forest Products
Oil and Gas	Air Freight	Metals and Mining	Beverages
Coal	Passenger Air Transportation	Chemicals	Agriculture
Electric Utilities	Maritime Transportation	Construction Materials	Packaged Foods and Meats
	Rail Transportation	Capital Goods	Paper and Forest Products
	Trucking Services	Real Estate Management and Development	
	Automobiles and Components		

Source: G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures.

There is a recognised need for the financial sector to increase transparency and regularly disclose how climate-related financial risks are affecting their organisations and assets over time. Because of the uncertainty of when and where climate change will start having significant effects on business operations and the value of investments, TCFD recommends investors to use forward-looking scenario analysis, also referred to as 'stress-testing'. This method is used in strategic planning, and ensures that an organisation is prepared for and resilient to a range of different future scenarios for how climate change may affect their investments over coming years and decades. TCFD underlines that the results of the scenario analyses should be used both to improve the organisation's investment strategy, and to inform clients and other stakeholders on how the investor identifies and manages current and future climate risks. [55]

TCFD recommends the use of long-term, ambitious scenarios, and highlight for example the following:

- The climate transition scenario for global energy systems, Greenpeace Advanced Energy [R]evolution, which outlines a transition to renewable energy for all by 2050[56]; and

- The physical climate change impact scenario 'RCP2.6', which is the only IPCC scenario that outlines the path to the Paris Agreement's stated 2°C limit and 1.5°C aim.[57]

Over 100 leaders of large banks, insurance companies and investors publicly stated their support of the TFDC's recommendations.[58] The UK registered, global asset manager Aviva Investors[59] warned over 1,000 of its portfolio companies that during the upcoming Annual General Meetings season, it will vote against businesses that do not report in line with the TCFD recommendations. Aviva Investors further stated that it will consider divesting from companies that consistently fail to disclose information on how climate change impacts on their business models.[60]

Article 173 of the French Energy Transition for Green Growth Act applies to asset management companies. It requires reporting on climate change risks affecting their investments and reporting on how they contribute to the realisation of the ecological and energy transition.[61] The US state of California is considering similar legislation for public pension funds.[62]

The European Commission has set up the High-Level Expert Group (HLEG) on Sustainable Finance to develop a proposal for an EU Sustainable Finance Strategy, in which climate change is one of the key focus areas. In 2017 the HLEG published an interim report with recommendations,[63] and engaged in stakeholder dialogue with decision-makers, the finance sector and civil society.

The Swedish Government introduced a new goal in 2015, which states that the financial system should contribute to sustainable development and that all financial actors should consider environment, social and governance (ESG) factors in their business activities.[64] In 2018, the Swedish Parliament will propose on a number of legislative changes to improve the opportunities for retail clients to investments in sustainable mutual fund products. The proposal includes requirements for fund management companies and other investors to provide product-specific information on which ESG aspects – if any – are considered in their fund management approach.[65]

FACT

Climate litigation

Lawmakers and court systems around the world are transforming key elements of international climate-related norms into legislation and action. Courts are trying cases against states, companies and investors regarding their accountability for climate change impacts on human rights.[66] Below are examples of ongoing legal efforts from South Africa, the USA and the Philippines:

- In South Africa's first, ground-breaking climate lawsuit, judges ruled against the South African Government's plans for a new 1,200 megawatt coal-fired Thabametsi power station in the Limpopo Province.[67] The case focused on the omission to carry out a full climate impact assessment of the project, despite significant anticipated carbon emissions.

- In California, USA, the communities of San Mateo and Marin Counties and Imperial Beach city have filed legal complaints against 37 large fossil fuel companies including Shell, Chevron, Statoil, Exxon and Total.[68] The complaints include the results from 'sea-level rise vulnerability assessments' for the three locations.[69]

- The Commission on Human Rights in the Philippines is currently investigating and gathering lawsuit evidence that 47 coal, cement, oil and gas companies – including ExxonMobil, Chevron, Shell, Rio Tinto and Total – have violated the country's citizens' rights to life, water, food, sanitation, adequate housing and self-determination.[70] The identified corporations are amongst 90 companies globally that have been identified as being responsible for almost two-thirds of carbon emissions since the start of industrialisation. The petitioners state that this means they are also responsible for the increasing occurrence of natural disasters in the Philippines, including Typhoon Haiyan, which killed more than 6,300 people in the country in 2013.

4. Global investor's climate performance

Numerous studies show that leading global investors are starting to address climate-related financial risk. However, considering their critical role in contributing to the climate transition, and also their investments in companies and projects, which drive deforestation and land dispossession, current efforts are not sufficiant to insure adherence to the goals of the Paris Agreements.

The Asset Owners Disclosure Project's 2017 study focused on how the world's fifty largest asset managers with a combined total AUM of forty-three trillion USD, manage the financial impact of climate change on investment portfolios. Almost half of the asset managers in the study are taking tangible action to manage climate-related finacial risks and maximise opportunities presented by the climate transition.[71]

The 2017 World Wildlife Fund study European Asset Owners: 2°C Alignment and Misalignment of Public Equity Portfolios[72] shows that 30 of Europe's major asset owners have started to implement changes to align their investment portfolios with the short-term goal to start the transition to low-carbon energy systems. Almost all actors had cut funding to coal mining. However, many were still investing heavily in coal power and lagged behind on renewable energy investments.

A similar 2017 study by 2ii revealed that the investment strategies of the listed equity and corporate bond portfolios of Swiss pension and insurance companies were aligned with the energy transition scenario for fossil fuel production. However, the planned expansions of renewables power capacity were on a pathway towards a global temperature rise of 6°C above pre-industrial levels by the end of this century.[73]

The Forest 500[74] ranking shows that major global financial institutions and investors continue to be heavily exposed to deforestation risks in projects and company

supply chains, and have not fulfilled their responsibility to conduct due diligence and take resolute action to reverse deforestation trends. The Swedish pension company Alecta[75] and the financial services group Nordea[76] received a low score (2 out of 5) for their efforts to curb deforestation.[77]

Numerous studies by NGOs such as Global Witness, Oxfam and Swedwatch show that investors are contributing to dispossession of community lands and forests in the Global South. Both large-scale concessions and contract farming operations across landscapes are found to have devastating consequences for forest ecosystems, smallholder agriculture, and rights to land, food, livelihoods and self-determination of local communities and indigenous peoples.[78]

FACT

Summary of Swedwatch's 2015 baseline report

The 2015 Swedwatch report titled 'Is the Gold Turning to Sand?' built on growing momentum and interest on the links between savings, climate and the financial sector. The report illustrated the role of the ten largest fund management companies in investing the assets of institutional and retail clients.

The study found that, while a majority of the ten largest fund managers in Sweden had clear climate policies, the lack of transparency hindered Swedwatch from adequately evaluating how the policies were implemented and determining their impact. Based on the fund management companies' own statements, the study concluded that they had not analysed or disclosed climate impacts across their investments; they lacked concrete strategies and targets for decreasing their negative climate impact and increasing their investments in climate solutions such as renewable energy, energy efficiency and adaptation infrastructure.

Three fund management companies stated that climate was integrated across their investment decisions to varying degrees, but only partly described the weighing of climate considerations in either the total ESG analysis and as part of the overall financial analysis. For the remaining seven actors, climate was only considered in niche funds, which constituted a small part of the overall portfolios. Results from analysis of selected equity funds' carbon footprints and fossil reserves were widely diverged amongst fund products, and did not indicate application of any stringent strategies for climate integration into investment decisions.

The study's key recommendations to fund management companies were to analyse and communicate the climate impact of their investments, as well as the portfolio companies' forward-looking climate strategies. Further, Swedwatch recommended that fund managers develop action plans with concrete targets to contribute sufficiently to the climate transition.

The study's recommendations to retail customers were to demand clear climate information from fund management companies, and to require integration of climate considerations across the whole investment portfolios – not just in niche products.

Finally, Swedwatch urged government decision-makers and regulators to introduce formal requirements on fund management companies to disclose the results of their climate analysis and to implement concrete action plans and develop incentive structures

Palm oil plantation in Gabon, West Africa. Agriculture expansion is the largest global driver of deforestation. Carbon emissions from destruction of forests and other land-use change account for one-fourth of total annual emissions.

for green, sustainable investments.

5. Swedish fund management companies & the climate transition

In order to actively contribute to the climate transition, investors can apply a number of different investment strategies and actions. This section presents results and analysis from the survey sent to ten Swedish fund management companies, and from an analysis of their energy investments. Explanations of key concepts, and examples from voluntary investor initiatives are presented in fact boxes below.

The study found that Swedish fund management companies differed in the value of their assets under management (AUM) – the investment value of the capital they are managing on behalf of their clients. The value of Nordea's total AUM was 155 billion USD, which makes it the largest actor in the study. SEB was the second-largest fund management company and manages total assets of 112 billon USD. The third-largest actor in the study was Swedbank, with AUM of 94 billion USD. The values of the remaining seven fund management companies' AUMs were substantially lower, ranging from Lannebo Fonder's 8 billion USD to Handelsbanken with AUM of 59 billion USD.

Nine of the fund management companies in the study are owned by larger banks, savings or insurance companies. Five fund management companies are owned by transnational European banks. The tenth actor in the study – Lannebo Fonder – is an independent fund management company that is not owned by a parent company or group.

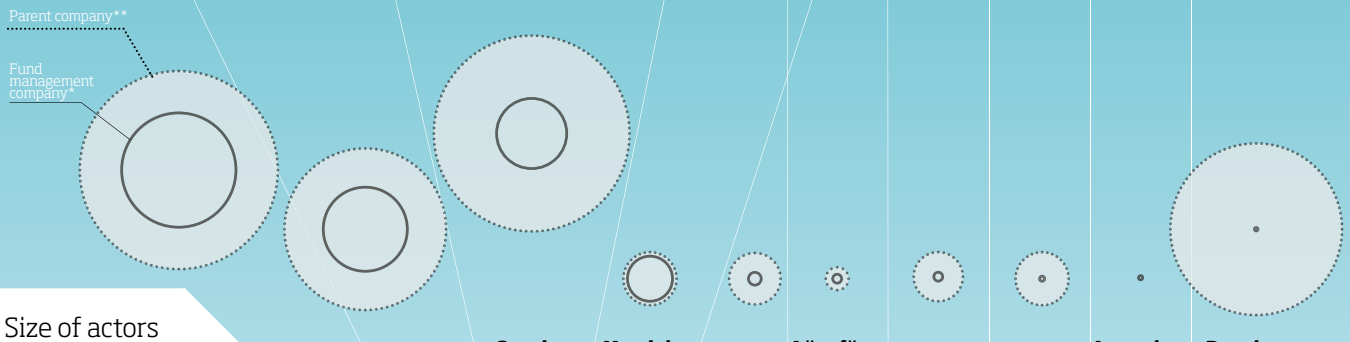
Figure 3, below, illustrates the value of the ten fund management companies' AUM and that of their parent companies. The illustration provides information on the allocation to the main asset classes of public equity, fixed income, property, hedge funds, private equity and other assets. The figure shows each fund management company's balance between actively and passively managed assets, and assets under in-house and external fund management.

5.1 Scenario analyses

In line with the TCFD recommendations, several companies in the study are preparing to conduct scenario analysis, climate stress testing of their portfolios and disclose the results in future annual reports. Handelsbanken and Skandia had previously conducted an analysis of the alignment of one of their fund products to selected International Energy Agency's (IEA) scenarios for the time period 2017–2022[80]. SPP's assessment included all mutual fund products.

Nordea has assessed the reputational risk and climate change exposure for companies in the oil and gas sector. Danske Bank reports that its analysis found no reputational risks associated with investments in fossil fuel production or high-emitting securities in the current situation.

Size and business models: 10 Swedish fund management companies



Size of actors

Fund management companies AUM

	Nordea	SEB	Swed-bank	Handels-banken	SPP	Länsför-säkringar	AMF	Skandia	Lannebo Fonder	Danske Bank
Total AUM*	155	112	94	59	20	15	15	10	9	8
Parent company AUM**	259	212	256	69	70	35	67	72	n/a	225

*(billion USD 30 June 2017) ** (billion USD 30 Dec 2016)

Asset management***

	Nordea	SEB	Swed-bank	Handels-banken	SPP	Länsför-säkringar	AMF	Skandia	Lannebo Fonder	Danske Bank
Active investing (% of AUM)	99	90	5	69	58	60	>99,5	87	100	79
Passive investing (% of AUM)	1	10	95	31	42	40	<0,5	13	0	21
Inhouse management (% of AUM)	88	99	100	88	100	20	100	78	100	100
External management (% of AUM)	12	1	0	12	0	80	0	22	0	0

***Refers to fund management company AUM

Asset classes***

	Nordea	SEB	Swed-bank	Handels-banken	SPP	Länsför-säkringar	AMF	Skandia	Lannebo Fonder	Danske Bank
Public equity (% of AUM)	21	37	59	59	75	80	83	66	82	65
Fixed income (% of AUM)	29	38	16	28	24	19	17	29	18	35
Other investments* (% of AUM)	48	17	25	13	1	0	0	0	0	0
Property (% of AUM)	0.5	3	0	0	0	0	0	5	0	0
Hedge funds (% of AUM)	1	3	0	0	0	1	0	0	0	0
Private equity (% of AUM)	0.5	2	0	0	0	0	0	> 0.1	0	0

*Mixed strategy fund products such as fund of funds·***Refers to fund management company AUM

Figure 3: Description of the ten Swedish fund management companies, their business models, and the size of their parent companies.[79] The numbers describing the total AUM of the parent companies have been provided by each actor, and reflect their respective interpretations of what constitutes the total asset management portfolio.

FACT

Stranded assets

The global carbon budget[81] defines the maximum amount of carbon that could be emitted into the atmosphere while keeping temperature rises in line with the goals of the Paris Agreement. The concept 'stranded assets' has been coined to describe a future scenario when climate regulations, effective carbon price mechanisms, and market forces could lead to a situation where reserves of oil, coal and gas would no longer be able to generate economic return.[82]

Some experts assert that even if climate regulations were not to be effective, it is possible that socio-political pressures could create a situation where carbon-intensive businesses would loose their social license to operate. If investors and other financial actors delay the identification of stranded assets in their portfolios, and if they do not act to divest and diversify into low carbon investment opportunities, this does not halt climate change itself. If fossil extraction and use continue beyond the limits of the resilience capacity of ecosystems and societies, this will lead to strong negative physical and economic impacts on other assets such as low-lying property or water-dependent industries.[83]

In its survey response, Swedbank quoted Sweden's Financial Supervisory Authority's 2016 report,[84] which concluded that overall, climate change and its mitigation does not pose major new risks for Swedish financial firms or Swedish financial stability. Skandia and SPP have analysed climate-related financial risks of their investments. SPP regularly carries out a so-called stranded assets analysis for its investments. Skandia referred to the results of its insurance parent company Skandia Life's stranded assets analysis. The conclusions are not applicable to the fund management company's investments, but provide background information on how the Swedish finance sector companies are preparing for the climate transition.

The main conclusion of Skandia Life's analysis was that their investment portfolio's exposure to stranded assets risks was below that of large stock market benchmarks, for example MSCI World[85] and MSCI Emerging markets[86]. Important findings were that the energy sector had decreased its shares in the large benchmarks over the last seven years, which had led to all index funds decreasing their exposure to oil and gas companies. The time horizon for when a possible stranded assets scenario could materialise was found to be mostly related to the lack of a global carbon price.

According to Skandia Life's analysis, coal and unconventional oil derived from, for example, oil sands extraction, Arctic oil exploration and deep-sea oil extraction were most at risk of losing value in a situation where a substantial carbon price became the norm. Gas would likely not be affected, since there would be demand for it even in a low-carbon environment. The stock markets in Russia, USA, UK and China were considered to be at highest risk of a stranded assets scenario since they account for around 80 percent of the world's listed fossil fuel reserves. Energy-intensive industries and the automotive sector would be affected by the transition to a low-carbon environment, and would need to prepare for the transition.

Länsförsäkringar's external asset manager – UK-registered Hermes Investment Management – is developing a methodology to assess how climate impacts such as food security, water shortages and extreme weather events will impact the business activities of companies in high-risk regions, which are prone to intense climate change impacts.

FACT

Examples of climate change scenarios for investment analysis

The TCFD presents a number of possible scenarios[87], which investors may select for analysing their investments. So-called 'transition scenarios' show a pathway of societal change over time, which lead to a set limit to global warming. Transition scenarios are typically based on assumptions on, for example, how climate policies will be implemented in the future, and how technologies to limit carbon emissions will be developed and used. 'Physical impact scenarios' are based on global climate models, and forecast how temperature rises, changes in rainfall and drought will develop, and how these may impact on companies and financial markets. TCFD underlines the fact that none of the scenarios proposed, includes a focus on carbon emissions from deforestation.

Energy transition

The IEA scenarios used in the 2ii analysis in this study is of moderate ambition. It also relies to a large extent on the use of nuclear power, which has its own sustainability risks, and carbon capture and storage - which is a technology still in its developing phase, thus not ensured to be able to be scaled at the needed speed and which is also surrounded by controversy. However, due to its global reputation and broad sector coverage, the IEA scenario has been chosen as a benchmark. In the years to come, the development of alternative scenarios should provide better options for conducting the analysis.[88]

One of the energy transition scenario recommended by TCFD, is the 'Greenpeace Advanced Energy [R]evolution'[89]. The goal of the scenario is 100 percent renewable energy and full decarbonisation of the global energy system by the year 2050. The scenario assumes that, in order to reach the goal, global carbon emissions must stabilise by 2020 and then consistently decline. No new nuclear power plants are built under this scenario, and it does not rely on carbon sequestration capacity.

Physical impacts

TCFD highlights the so-called 'RCP2.6' physical climate impact scenario as the only IPCC model that is in line with the Paris Agreement's stated 2°C limit and its 1.5°C aim. This scenario outlines ambitious reduction of global carbon emissions, which would peak around 2020, and then decline on a linear path and become net negative before 2100.

Impacts on human rights and security

Actors such as the Potsdam Institute on climate impact research, are projecting and modelling climate change impacts on human systems. A 2017 report describes the consequences of a business-as-usual scenario across the Asia-Pacific region, with a 6°C temperature increase by the end of this century. The climate change impacts would degrade ecosystems and lead to impacts on all people's rights to livelihoods, food and health. This, in turn, would affect migration dynamics and the potential for conflicts. The report outlines the importance of investments focusing on rapid decarbonisation of the Asian economy, and the upscaling of adaption measures to protect the region's vulnerable populations.[90]

Scenario analysis of fund management companies' energy investments

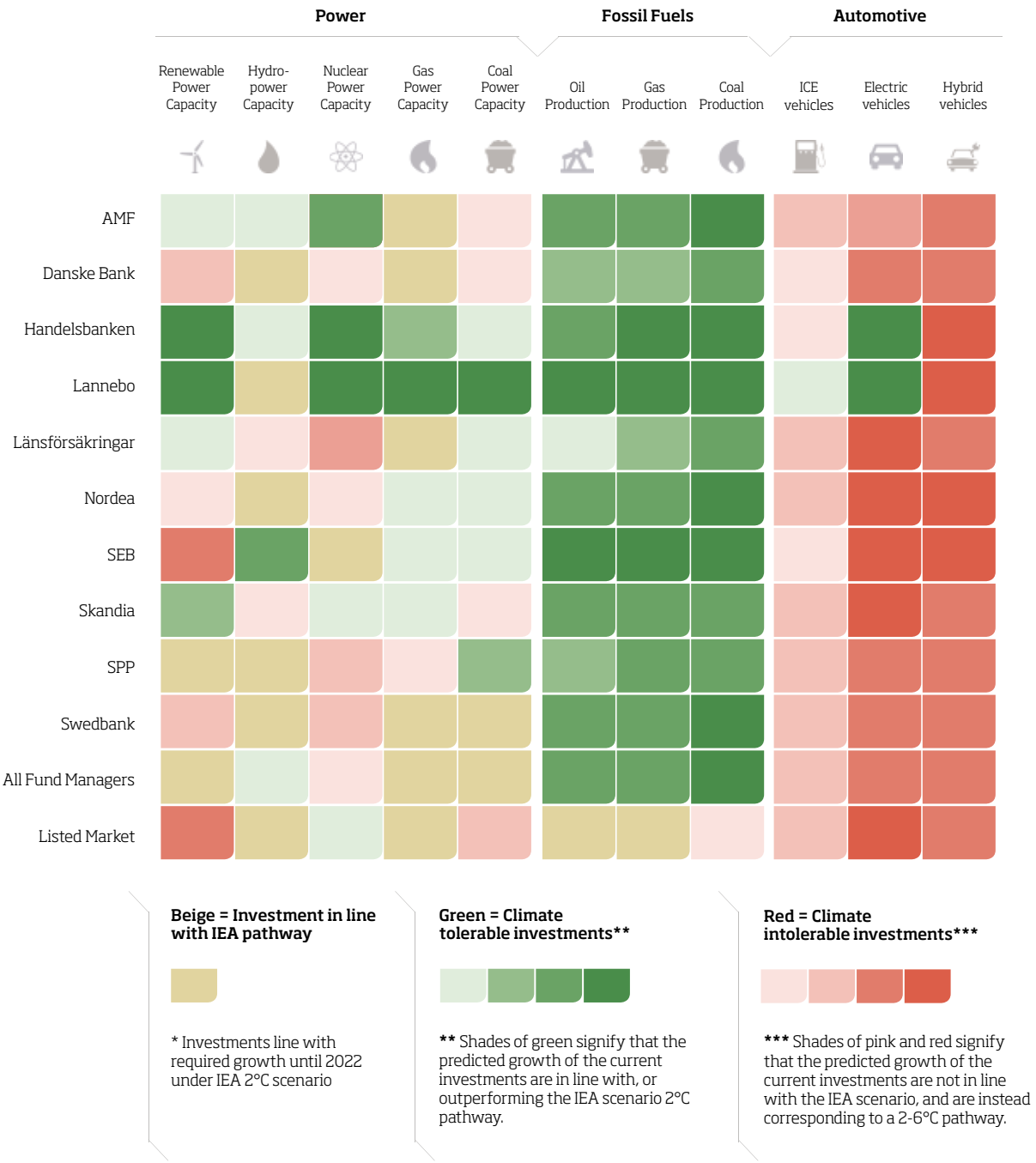


Figure 4. For each of the Swedish ten fund management companies, the figure shows results from a scenario analysis of their current public equity investments in power, fossil fuels and automotive industries. The purpose of the analysis is to determine the extent to which the current investments are contributing to the transition to low-carbon energy systems, and the achievement of the goals of the Paris Agreement. Shades of green indicate climate tolerable investments, red signifies climate intolerable investments, and the beige colour is used to show investments, which are just in line with the climate transition. The analysis was conducted by the multi-stakeholder think-tank The Two Degrees Investing Initiative (2ii) and the following energy transition scenarios were used as benchmarks for comparison: The International Energy Agency (IEA) WEO 2016 450S scenario for power and fossil fuels and the ETP 2017 2DS scenario for the automotive industry.

The 2ii analysis conducted for this study (see figure 4) shows that all ten Swedish fund management companies' current investments in the production of oil, gas and coal are outperforming IEA's scenario in the medium-term, until 2022. When looking at investments in fossil power capacity, six out of ten fund management companies are in line with the trajectory for this scenario for development of low carbon energy systems.

The exceptions are AMF, Danske Bank and Skandia who are over invested in coal power capacity, compared to the scenario. The same is true for SPP's gas power investments. In the automotive sector, all actors except Lannebo Fonder are over invested in traditional combustion engine automobile assets.

The 2ii analysis showed that the portfolios of Danske Bank, Nordea, SEB, and Swedbank were under invested in renewable power capacity. The remaining six actors are aligned with the IEA scenario in 2022, and Handelsbanken, Lannebo Fonder, Länsförsäkringar, and Skandia even outperform the 2°C pathway by the IEA. Danske Bank, Länsförsäkringar, Nordea, SEB, and Skandia are over invested in nuclear power capacity compared to the IEA scenario. AMF, Handelsbanken, and SEB are over invested in hydropower capacity. All actors except Handelsbanken and Lannebo Fonder are under invested in electric car assets, and all ten actors are under invested in hybrid car assets – all in comparison to the IEA scenario.

Growth in coal capacity - listed equity

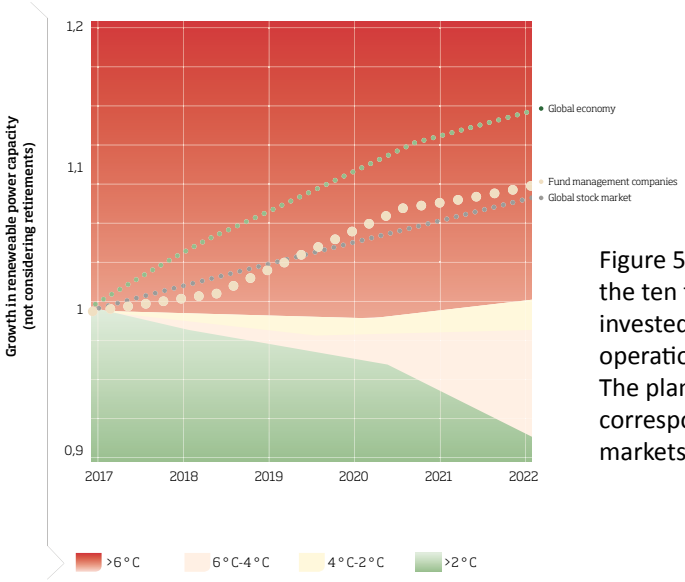


Figure 5. The coal power companies, which the ten fund management companies are invested in, are planning to expand their operations during the period 2017-2022. The planned expansions are compared to corresponding developments in global stock markets and the world economy.

When reviewing coal power companies, which all the ten fund management companies are invested in today, the 2ii analysis shows a negative trend (see figure 5 above). During the period 2017–2022, these coal power companies have plans to expand their operations. If realised, the expansions are consistent with a pathway towards 4–6°C increase in global temperatures, and are higher than the average for similar companies across global stock markets. The 2ii analysis cannot detect whether some companies are planning to retire selected coal plants. This is something that investors could verify with their portfolio companies.

Growth in renewable power capacity - listed equity

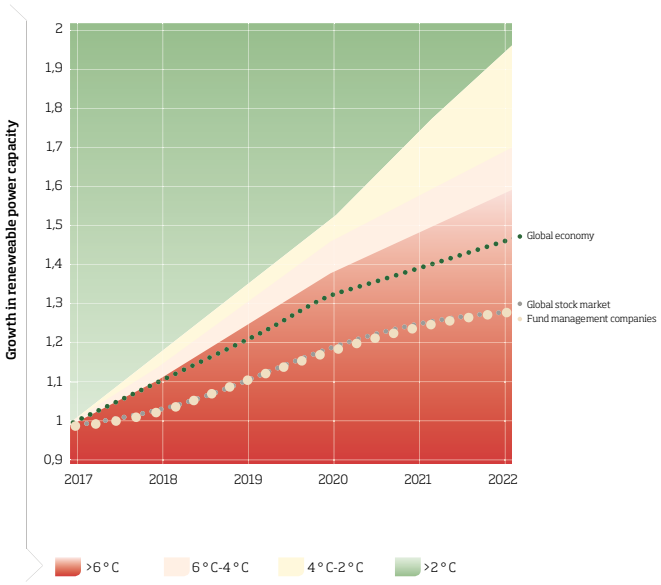


Figure 6. The renewable power companies, which the ten fund management companies are invested in, are planning to expand their operations during the period 2017-2022. The planned expansions are compared to corresponding developments in global stock markets and the world economy.

2ii analysed the planned renewable power capacity expansions by all companies in the aggregated investment portfolio of all ten fund management companies' (see figure 6 above). Towards 2022, the renewable power capacity additions are expected to level out and are roughly in line with the average development of the aggregated global stock markets. The projection shows that by 2022, the ten fund management companies' investments in renewable power would be on a path towards 4–6°C global warming.

ANALYSIS:

Positively, several Swedish actors refer to the TCFD recommendations and are planning to conduct scenario analyses and disclose and report on the results. No actor addressed the necessity to develop scenarios for carbon emissions from deforestation and land use change, nor scenarios, which highlight the need to address human rights impacts of climate change. One exception to this was the example provided by Länsförsäkringar on their external asset managers' test case on how selected companies are affected by food insecurity, water shortages and extreme weather events. However, the human rights angle was not specifically addressed.

The fund management companies' divestment from coal and some other fossil fuel-based companies seems to have resulted in portfolios being largely aligned with the less ambitious IEA scenario during the period 2017–2022, with some exceptions. When looking at coal power capacity, there is a worrying trend in planned build-outs of plants over the next few years.

The results of the analysis of the portfolio alignment of energy investments, indicate that there is a need to increase investments in green assets such as renewable energy and electric and hybrid vehicles. There are also opportunities for targeted and efficient engagement with companies in the automotive industry to help speed up the transition.

It is important to note that if a more ambitious scenario and longer time horizon had been used in the analysis, the results would have been different (see figure 7 below). By 2040, the Greenpeace scenario demands substantial cuts in production of coal, gas and oil, as compared to the IEA scenario. Going forward, the fund management companies need to select long-term, ambitious energy transition scenarios and physical impact scenarios in line with the goals of the Paris Agreement. This may generate different results, and highlight other needed actions.

Comparison between two energy scenarios recommended by TCFD

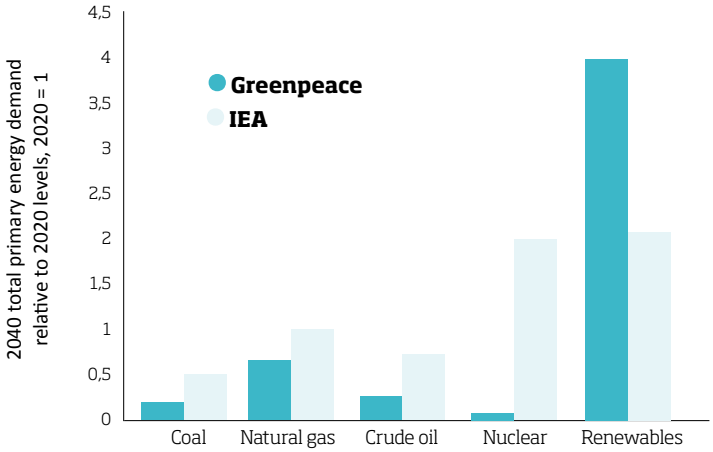


Figure 7. Text: Fossil fuels and nuclear power face a significanty more decisive change to production by the year 2040 under the Greenpeace Advanced Energy scenario, as compared to the International Energy Agency.

Source: 2° Investing Initiative (October 2017). Based on International Energy Agency (2016) and Greenpeace (2015).

The 2ii analysis shows that the average global stock market is over invested in coal production, coal power, and traditional combustion engine automobile assets. This is a clear illustration that ambitious, long-term scenarios should be used as the comparison benchmark for investors' investment strategies – not traditional stock-market indexes. It also shows that the entire stock market needs to shift towards low-carbon technologies and thus that investors need to engage with listed companies that act in climate relevant sectors.

Nuclear power and hydropower form part of most fund management companies' investment portfolios. Nuclear power has its own long-term sustainability challenges, and is included in some energy transition scenarios, while being excluded in others. Large-scale hydropower has strong negative impacts on water accessibilities for communities, biodiversity and food security, and views are divided regarding to what extent it should form a substantial part of sustainable energy generation for the future. Small-scale, run-of-the river hydropower has less negative impacts, and are widely accepted as a renewable energy source.

The automotive sector in general is lagging behind the 2°C pathway. Here, there is a need for investors to consider how they should contribute to the transition to sustainable transport systems for the future. Engaging with automotive companies to instigate change in their business model can form part of such a strategy.

A house being swept away by floods in Laos, Southeast Asia. Climate change in Laos is leading to a higher frequency of large rainfall events, which result in devastating floods and landslides.

5.2 Metrics, targets & information to clients

Tonnes of carbon emissions per year, square kilometers of deforested land, or number of gigawatts of solar power capacity developed during a certain period, are examples of metrics and estimates, which describe investment portfolio impacts on people and planet. These metrics and estimates form the basis for investor decision-making and can also be used as information to fund management companies' clients, whose capital is being invested on global stock markets.

FACT

Measuring and reporting on carbon emissions

The Greenhouse Gas (GHG) Protocol[91] provides the most widely used greenhouse gas accounting standards, which companies and other actors apply in order to measure and report their annual emissions. A company's greenhouse gas emissions fall into three types: 'Scope 1 emissions', which refer to direct emissions from a company's business activities, 'Scope 2 emissions' which refer to emissions from purchased electricity and heating, and 'Scope 3 emissions' which refer to companies' emissions from their supply chains and from the life cycle of their products. For companies in the financial sector, such as fund management companies, banks and insurance companies, Scope 3 emissions exist within their investment portfolios.[92] Globally, the great majority of companies' emissions fall under Scope 3.[93]

The Montréal Carbon Pledge[94] is a coalition of actors that have committed to measuring and publicly disclosing the carbon footprint of their investment portfolios on an annual basis.

Many of the members in the Swedish Investment Fund Association have signed the Montréal Carbon Pledge, and the association has developed a standard methodology for measuring and disclosing carbon footprints.[95] The Swedish standard is different from that prescribed in the French Energy Transition and Climate Law, and from the weighted average carbon intensity metrics recommended by TCFD.[96] 'Scope 3' emissions, which constitute the large bulk of global emissions, are not included in the Swedish standard.

The carbon footprint method of measuring and comparing carbon emissions from an investment portfolio or fund product is gaining traction globally. However, the method has a number of weaknesses and limitations and many actors state that it is not adequate in ensuring forward-looking contributions to the climate transition. [97] The TCFD recommends the scenario analysis method; carbon footprints are seen as a tool to be used only during a short transition period, until investor organisations have established their systems for climate stress testing.

Climetrics,[98] an independent fund rating service that aims to help fund managers integrate climate considerations into their investment decisions, published its first ranking of funds in 2017. The ranking method includes forward-looking, impactful criteria and constitutes an important step forward in climate measurement and disclosure for fund products. Currently only a small number of funds are included, and only results from funds with a high ranking of four or five out of a maximum score of five are disclosed.[99]

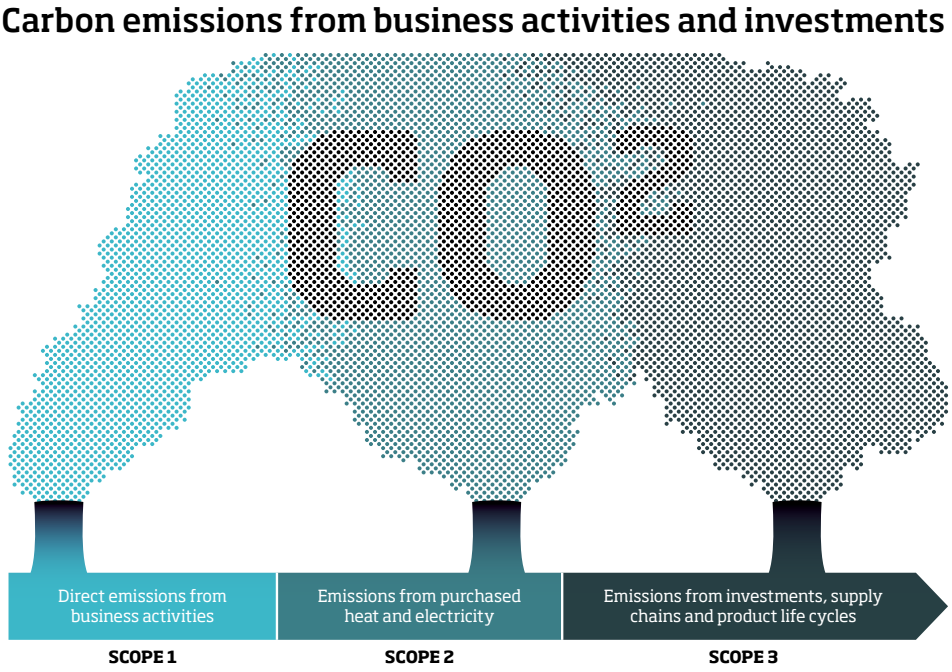


Figure 8. The Greenhouse Gas Protocal gives guidance on how to measure three types of carbon emissions from business activities, investments and supply chains, referred to as 'Scope 1, 2 and 3'.

A majority of the fund management companies reviewed have analysed the share of fossil fuel-based assets in their investment portfolios. This includes, for example, producers and distributors of coal, gas and oil, and companies for which a significant part of their revenue is derived from a fossil fuel value chain.

No actor in the study had set targets for decreasing investments in the fossil fuel sector across their portfolios. Instead, the cut-off limits used for non-investment or divestment were relative, expressed as a percentage of a company's fossil fuel-based revenue. For example, Skandia, Swedbank and Nordea did not invest in companies for which coal production constituted over 30 percent of their annual revenue. Handelsbanken did not invest in securities issued by companies if more than five per cent of their revenue was derived from coal mining for combustion. For companies in coal power generation, the Handelsbanken cut-off limit for investment is 30 percent of the revenue.

Nine out of ten fund management companies measured and disclosed carbon footprints from selected equity fund products. Seven actors focused on scope 1 and 2 emissions only, as outlined in the methodology developed by the industry association the Swedish Investment Fund Association.[100]

SEB and Swedbank went beyond requirements in the agreed sector methodology. For each analysed fund product, SEB estimated and disclosed the scope 3 emissions from companies' supply chains and product life-cycles.[101] Swedbank measures carbon footprints in two ways: Firstly, according to the industry standard, and secondly using a method referred to as 'Scope 1 + First Tier Indirect', which in addition to scope 1 and 2 emissions, also includes direct emissions from companies' direct – first tier – suppliers.

The percent of total fund investments for which carbon footprints have been measured varies between the nine actors. The methodology depends on the availability of data for portfolio companies' emissions, and is only able to include public equity and fixed income investments. Fund products for which data were lacking for more than 25 percent of the holdings were excluded from the measurements.

Swedbank had calculated carbon footprints for 47 of the 78 fund products that comprise its actively managed equity funds and passive index funds. It did not calculate the carbon footprints for mixed-fund, fund-in-fund or fixed income fund classes. Länsförsäkringar measured carbon footprints for approximately 45 percent of its investment portfolio, while Nordea's carbon footprint measurements of all equity funds covered approximately 25 percent of its total AUM. Nordea has assessed selected companies' commitment to the Paris Pledge for Action[102] and to setting science-based targets.[103] Nordea has analysed selected companies' forward-looking company strategies to cut carbon emissions for selected investments, and their preparedness to fulfil TCFD reporting requirements under GRI or CDP.

Swedbank was the only actor in the study that highlighted the importance of the new Climetrics method for measuring both carbon emissions and portfolio companies' forward-looking climate strategies at fund product level.

FACT

Company targets and metrics

A number of international organisations are encouraging companies and investors to set targets and to measure and report on their portfolio's carbon emissions and deforestation across supply chains and throughout the life cycle of products. Below are descriptions of CDP, The Science Based Targets Initiative, and a number of organisations working on deforestation and land tenure impacts.

One of the most crucial initiatives is the UK-based charity organisation CDP. The organization develops methods and encourages companies, cities, states and regions to measure, report and disclose data primarily on climate impacts, but also on other environmental parameters such as the impacts of commodity production on forests and water resources. CDP uses this data to highlight risks, opportunities and impacts, which investors and other decision-makers can use to better manage risk and maximise opportunities. Fund management companies can use CDP's data as a basis for improving financial decision-making and increasing company engagement in the areas of climate, forests and water. CDP's latest survey of 5,600 companies found that 827 investor signatories with 100 trillion USD in assets are currently putting pressure on companies to continue to increase their environmental information disclosure.[104]

The Science Based Targets initiative is equally important for investors and companies. Its overall aim is that by 2020, the practice of setting scientifically based targets for decreasing the climate impacts of operations will become standard practice in the business community. Furthermore, the Global Reporting Initiative (GRI) is moving towards impact measurements in order to meet the need to quantify impacts and align different measuring systems.[105]

Deforestation:

The CDP Forest Programme[106] and the Supply Change Initiative[107], are organisations and platforms that provide information and encourage measurement and reporting on deforestation and degradation in companies' projects and supply chains. Forest 500[108] is an international initiative that has identified 500 key players in global deforestation. It argues that investors, through their financial connections to high forest risk commodities, have the power to greatly reduce deforestation around the world.

Impacts on community land tenure:

The Rights and Resources Initiative – a coalition of organisations working to advance the land and resource rights of Indigenous Peoples and local communities – has developed risk assessment and due diligence tools for the private sector, in order to provide reliable tenure data. Drawing on geospatial data, the tools provide information on current land use, cases of insecure land tenure and conflicts. They also present implementation-ready processes to assist companies and investors to prevent and manage tenure risk at different stages of a project cycle. [109]

Based on many years of field research on the impacts of land investments in the Global South, civil society organisations suggest binding EU regulations for company and investor human rights and client due diligence to prevent far-reaching consequences for local people and the environment. [110] Meaningful company metrics to assess impacts from land investments need to come from proactive assessments, carried out at earliest project planning stages. Examples of relevant information are results from community consultation processes such as Free, Prior and Informed Consent with indigenous communities; Human Rights Impact Assessments, including scrutiny of the risk for corruption; Environmental Impact Assessments and High Conservation Values Assessments of impacts on forests; and contract information on size, nature and conditions of the project. [111]

A majority of the Swedish fund management companies refer to companies' lack of targets and reporting on own climate impacts as a hindrance for investors' ability to report and act on these factors. The transparency and availability of data are even lower for other asset classes such as government bonds,[112] private equity,[113] and mixed strategy fund products such as fund of funds.[114]

The study generated very few examples of assessments regarding deforestation. Of those that had conducted such assessments, only a fraction of the investment portfolios was covered. SPP had conducted an analysis of the palm oil sector, which contains criteria on deforestation, development on peatland, and human rights impacts on local communities. Nordea assesses some companies' forward-looking strategies to cut emissions and decrease deforestation. In the information provided for this study, no actor proffered examples of assessments of impacts on indigenous and community land and forest tenure across investments, despite the fact that secure tenure has been identified as a key factor in safeguarding forests.

No fund management company in the study had set targets to increase investments in climate solutions across their investment portfolio. No actor had developed or

adopted a definition of green climate-solution investments that could be used to measure increased investments over time. Swedbank and Handelsbanken have conducted internal assessments of their investments and policies in relation to fulfilling the SDGs.

FACT

Green finance and climate solutions - definitions and metrics

TheCityUK[115] – the industry-led body for the UK financial sector – defines green finance as "match[ing] sources of funding to new capital and operating expenditures that generate measurable progress towards the achievement of a well-recognised environmental goal". Currently, the two main green finance markets are aligned with the two largest conventional finance markets: debt and equity.[116]

Debt instruments such as green loans enable individuals and businesses to borrow money for capital and operating expenditures that produce measurable progress towards environmental or climate goals. A third, smaller market category within green finance is 'alternative green finance', which is undergoing rapid development. It comprises two types of crowdfunding that are within the scope of the financial services lending and equity. Some green crowdfunding platforms focus on renewable energy and infrastructure projects.

The two Dutch pension managers APG Group[117] and PGGM[118] are working to transform the SDGs into tangible investment opportunities and returns for investors. They have created a new taxonomy for Sustainable Development Investing.[119]

The Global Investor Coalition on Climate Change (GICCC) has started an open online registry, where investors can share examples of their investments in low carbon assets.[120] A taxonomy was also developed, defining 'low carbon investments', for example in the areas of renewable energy, energy efficiency, green bonds, forestry and green buildings.[121]

In the information that the fund management companies provide to their clients, nine out of ten disclose carbon footprints for selected equity fund products. In addition, many of them refer to the general sustainability information available on the industry knowledge exchange platform SWESIF's Fund Sustainability Profile,[122] and the fund information website Morningstar's compounded sustainability rating.[123]

SPP provides additional information to its clients in the form of detailed sustainability ratings for all fund products, access to in-house financial analysts in client meetings, and client seminars on climate and sustainability issues. Länsförsäkringar and SPP provide more detailed reports of content and progress from engagement dialogues.

Nine fund management companies stated that they would recommend a special niche fund product to climate-conscious clients. The tenth actor in the study – Lannebo Fonder – responded that it does not provide investment recommendations to clients.

Lack of climate information on savings products

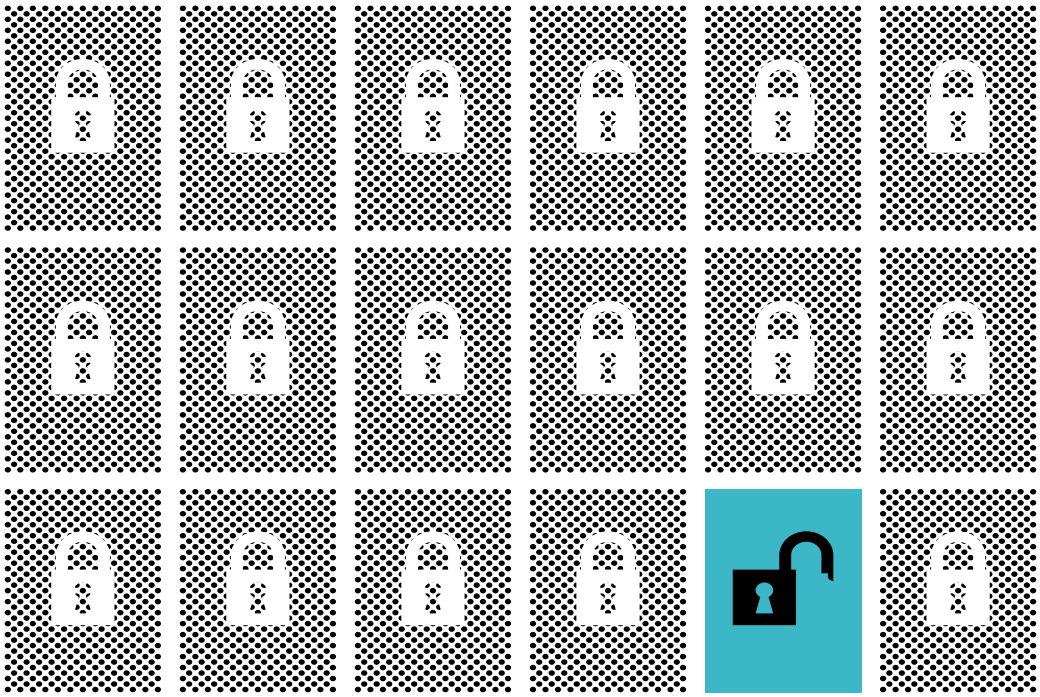


Figure 9. The Swedish fund management companies do not currently disclose information on climate impacts, deforestation and land dispossession across the asset management portfolio. The information available to clients on some fund products is mostly restricted to carbon footprint measurements (scope 1 and 2).

ANALYSIS:

The fact that fund management companies have not set any climate targets for their investments shows a significant weakness in their commitment to contribute to the climate transition. In light of the urgently needed increase in green investments and climate solutions, where the majority of the yearly one trillion USD needs to come from private investors, the lack of targets and the absence of working definitions for this type of investments is especially concerning.

The lack of assessments of companies' forward-looking climate strategies, deforestation and impacts on community land tenure means that negative climate impacts are unmeasured and undisclosed. The blanket use of carbon footprints as the sole metric for climate impacts is not useful as decision-making support for investments, especially for the seven actors in the study who focus solely on scope 1 and 2.

It is possible that the lack of assessments and targets is holding back the contributions of the fund management companies regarding climate transition. One reason given is lack of company targets and reporting. It is clear that a majority of companies on the world's stock markets are not yet providing sufficient and exact information on their climate change impacts. However, in order to fulfil their role under the Paris Agreement, where the years 2017–2020 are crucially important, it is simply not an option to wait until companies start reporting.

The information provided to clients is still only available on some fund products. It represents carbon footprints scope 1 and 2, and is complemented with compound sustainability ratings. This information does not illustrate each fund management company's overall contributions to green finance and climate solutions, and their negative climate impacts in terms of current and future carbon emissions, deforestation and land dispossession. The fact that nine out of ten actors recommend small niche funds to climate-conscious clients, means that the full investment portfolios have not been re-balanced to effectively contribute to the climate transition.

5.3 Divestment & index management

When selling and buying stocks as part of their fund management strategies, many investors follow indexes or benchmarks, which show the day-to-day developments on selected stock exchanges across the world. Investors who apply active fund management strategies, where they select stocks, may decide to divest for climate reasons – fully or partially – from companies or whole sectors, such as fossil fuel production.

FACT

Fossil divestment and greening of indexes

Responsible investors, who are the ultimate owners of fossil fuel assets, are faced with the difficult question of how to act responsibly. Currently, this question does not have straightforward answers. Some investors argue that divestment alone cannot bring about needed changes as long as fossil fuel assets dominate the world economy. Also, stock markets and assets within these sectors are not decreasing in value. Therefore, there is a need to actively engage with the fossil fuel industry and pressure them to revamp their business models towards a stronger focus on renewables.[124]

Many are already divesting from coal, and some investors are divesting from all extractive fossil fuel projects. Others continue to be 'universal owners' or to have a strong emphasis on index funds. Their climate strategy is to instead engage with problematic companies. Some investors use divestment as a tool in engagement dialogues, and threaten to divest after a set time period unless a company embarks on a low-carbon trajectory. The question of engaging or divesting is equally valid for investors in securities, which are linked to deforestation and negative impacts on community land tenure.

One of Sweden's state pension funds, AP7, has developed a screening method to identify companies that are in breach of the Paris Agreement. Where such breaches can be confirmed, the fund will publicly divest from the company.[125] Divestments are made on two grounds: if companies directly oppose the Agreement's implementation in the form of laws and regulations, or if they develop new operations that are not in line with the Agreement's goals.[126]

Through full or partial divestment of fossil fuel-based business activities, capital can be freed up for reinvestment in climate innovation and solutions for the services and infrastructures needed for poverty alleviation and sustainable development. The so-called divestment movement – a network of philanthropic investors and grassroots organisations[127] – argues that as the number of investors who publicly disclose their divestment decisions increases, carbon-based companies and business models will become less socially acceptable. This will create momentum for social change and grassroots action to transform businesses and whole societies towards low-carbon, zero emissions models.

'Passive' investment or 'index management' strategies use stock market indexes as their guiding benchmark. This type of investment management presents both climate risks and opportunities. Many of the global indexes, such as MSCI World[128], contain a large number of companies that represent the full value of stock markets in developed economies. Index management presents opportunities to invest in a large number of companies and to engage with the most climate-problematic companies. At the same time, strict regulations for index funds mean that fund managers are not free to divest and reinvest in low-carbon or climate-solution assets. In response to increasing customer demand for index fund products, asset managers are innovating and 'greening' indexes to a certain extent, while still managing and minimising financial risk.[129]

Eight of the ten actors surveyed stated that they had divested from some, not all, stocks exposed to carbon risk. Most of the divestment targeted coal producers, and some actors underlined that they prioritised divestment from controversial fossil fuel activities such as oil sand extraction. The fund management companies communicate their divestment decisions publicly.

In a first round of divestment in 2016, Länsförsäkringar excluded companies that derived more than 50 percent of their revenue from coal. In 2017, the investment limit was reduced to 20 percent. During 2014–2017 SEB divested from coal extraction and several other fossil fuel-based securities. They estimated the value of their avoided investments in fossil extraction at 2.4 billion USD during the three-year period.

Skandia was the only actor in the study that stated it uses the Paris Agreement as a point of reference in its company screening. AMF stated that is applies positive screening in all fund products, and the non-Swedish equity portfolios are managed against the MSCI World ESG Leaders[130] benchmark. In order to proactively mitigate climate-related financial risks, one fund management company describes how it has reallocated capital mainly to the financial and real estate sectors.

A number of actors in the study highlight their climate-focused niche products, which often have fewer investments in fossil fuel-based, high-emitting industries. Sometimes the niche products also have more investments in green finance and climate solutions. Where the niche funds are actively managed, the fund managers have more frequent dialogue on climate-related issues with the portfolio companies.

The sustainability funds typically represent a small part of a company's AUM, for example Nordea's Star fund range constitutes two percent of the total AUM, and Swedbank's Ethica funds constitute three percent of its total AUM. Handelsbanken state that they manage 39 percent of the value of their AUM in the Criteria range of funds, which are referred to as fossil-free.

Coal mining in India. India's current plans for 370 new coal-fired power stations could, if implemented, single-handedly jeopardise the 1.5°C ambitions of the Paris Agreement. The three stock-listed companies with the highest annual carbon emissions in the world are Russian Gazprom, American Exxon Mobile, and the state-controlled company Coal India.

ANALYSIS:

Through their public information on divestment decisions, the fund management companies are signaling that they do not believe that fossil fuels such as coal and controversial fossil extraction are promising industries for a sustainable future.

The example of screening companies, which are actively lobbying against effective implementation of the Paris Agreement is a promising initiative, which again communicates this investor's commitment to stringent climate regulations.

The investment limits for fossil production and high-emitting industries are relative, not expressed as an absolute target for the full fund management portfolio. Also, it is unclear whether divestment and underweighting is part of a strategy to reallocate capital to climate solutions. Instead, one actor in the study has reallocated capital to investments in financials – an action, which does not contribute to the climate transition.

The investment strategies for green, climate-focused niche products, which cover a small part of the AUM, are not expanded across larger parts of the entire fund management portfolio. Instead, fund management companies are hoping to increase client demand for these products. However, it is unlikely that client demand would increase to a level where it would meaningfully drive needed reallocation of capital streams in line with the Paris Agreement before the critical year 2020. The Paris Agreement's financial goal is a goal for investors to take action on, not for its clients to fulfill.

5.4 Green finance & climate solutions

Maybe the most important role for investors globally is to allocate capital streams to investment in green finance projects such as solar power capacity, forest protection and restauration, or low carbon transport systems. Climate solutions provided by companies and projects can be in the form of flood walls, which can protect cities from rising sea levels, sustainable agriculture with drought and flood resistant crop varieties and new technologies for clean drinking water in areas hit by desertification and salination of the ground water.

FACT

Green finance and climate solutions

The volume of labelled green bond issuance has grown exponentially from 3 billion USD in 2011 to 95 billion USD in 2016. Crowdfunding platforms such as Abundance131 and SunFunder[132] have funded 121 energy projects in the UK, which have provided an average return of 7.4 percent.[133]

Publicly traded companies that are expected to benefit from increased efforts to address climate change trends are those that focus on, for example: green technologies, renewable energy, provision of clean water, zero waste solutions and disease eradication. Unlisted firms, so-called private equity companies, play an important role in the global economy and sustainable development since they provide much of the innovation and

new ideas on societal challenges. Innovation is also high amongst small cap companies, which have much lower stock-listed values than larger, established companies on the stock market.

A number of actors are advocating 'impact investing' that aims primarily to create environmental and societal value. For example, the Dutch financial services company Achmea[134] provides impact investment funds for retail clients.[135] Copenhagen Infrastructure Partners is a Danish-registered fund management company that specialises in long-term investments in renewable energy.[136]

Fund management companies can also engage in public–private partnerships to finance green projects and services, for example under the umbrella of the Green Climate Fund.[137] This fund uses blended finance, meaning that public funds help attract private funds to projects that would normally be too risky for private investors.

In Europe, civil society is currently engaging in dialogue with investors to raise concerns regarding the private financing of public climate and environment funds and projects, as there are weaknesses in the application of environmental and social safeguards in these initiatives. These discussions highlight the lack of transparency and accountability associated with private capital contributions.[138]

Public financing of projects generally does not guarantee sustainability and climate safeguards. Indeed, many of today's destructive business activities such as fossil fuel exploration or agriculture projects, which involve land dispossession and deforestation, are state-owned or carried out under public–private partnership arrangements. States often do not apply adequate environmental and social safeguards when planning larger programmes, or when designing and implementing projects.[139]

No fund company in the study had set targets for increasing investments in climate solutions across the investment universe, and no actor had developed or adopted a working definition for green, climate solution investments.

No fund management company had increased its allocation to private equity holdings, or to companies with smaller market capitalisation in the public equity asset class.[140] These assets have a high potential for innovation and financing of climate solutions such as renewable energy, energy efficiency and other environmental technologies.

SPP has introduced a so-called 'PLUS concept', which is applied across approximately six percent of the total AUM. After divestment from fossil fuel-based, high-emitting assets, capital is reinvested into assets that have low carbon footprints and high sustainability ratings. Up to ten percent of capital is allocated to investments in climate solutions such as water infrastructure, smart grids or electric public transport systems. According to SPP, the PLUS investment strategy is increasing climate transition contribution and the accompanying financial risk as much as possible, while still maintaining a risk level, which is in line with the definition of an index near fund.

While the study was unable to determine whether investments in green climate solution securities had increased overall since Swedwatch research in 2014, a number of fund management companies stated that their investments in green niche fund products and green bonds had increased during the period. A number of actors explained that their role is not to reallocate capital across their fund management portfolios. Instead, they create new, green fund products, which climate-conscious clients may choose to invest in.

Handelsbanken had increased its green bond investments from zero to 790 million USD since 2014. SPP currently has 395 million USD invested in green bonds, while Nordea stated that it had increased its green bond investments to a current value of 700 million USD. The value of Danske Bank's green bond investments is 131 million USD. SEB's Green Bond Fund has an AUM of 108 million USD. These three actors did not provide information on how their green bond investments had increased since 2014.

ANALYSIS:

With the exception of some actors' increased investments in green bonds – where the global market is still under development - the study indicates that Swedish fund management companies' capital allocation to investments in green finance and climate solutions are not in line with the goals of the Paris Agreement.

The information provided to the study does not indicate that the investors are engaged in innovation, in order to create new projects or investment opportunities in climate solutions within the short window of opportunity to transform energy systems, stop deforestation and invest in climate change adaptation.

5.5 Shareholder influence & policy engagement

Fund management companies, and other investors and financial actors globally are powerful stakeholders who can influence companies, decision-makers and clients to take action to fulfil the goals of the Paris Agreement.

FACT

Joint investor initiatives and shareholder influence

Fund management companies and other types of investors have formed coalitions with a range of climate and sustainability-focused goals and purposes, for example The UN Principles on Responsible Investment (PRI),[141] the UNEP Finance Initiative (UNEP FI),[142] The UN Global Compact[143] and the Institutional Investors Group on Climate Change (IIGCC).[144]

Fund management companies also play an important role in climate transition when they maximise their shareholder influence to put pressure on portfolio companies. Engagement goals may be that companies seek to prevent, cease, mitigate and remedy negative impacts of climate change deriving from carbon emissions, deforestation, and impacts on community land tenure in their operations and supply chains. Long-term goals include transforming companies' business models and due diligence systems.

'Aiming for A' is a UK-initiated investor platform for climate action that was initially convened by a group of large investment managers and pension funds to influence companies to contribute to 'strategic resilience for 2035 and beyond'. Currently, the group is undertaking in-depth engagements with large UK-listed extractives and utilities companies. The shareholder resolutions presented at companies' annual general meetings use CDP performance indicators as a benchmark for company improvements.[145]

The Portfolio Decarbonization Coalition is a multi-stakeholder initiative in which members commit to decarbonise their portfolios over time.[146] In its membership commitment format for asset managers,[147] signatories agree to submit a decarbonisation plan detailing how the products they offer to clients are aligned with the transition to a low-carbon economy, as well as how they are reducing the carbon intensity of their portfolios. Importantly, decarbonisation and alignment within the low-carbon economy can be achieved through combinations of capital reallocation and corporate engagement. Finally, the signatory asset managers commit to disclosing the results of their decarbonisation efforts, the volumes of capital in focus, and short- and medium-term predictions of the results of planned efforts.

In order to influence policy-makers and regulators and create a level playing field across the finance sector, fund management companies can participate in policy development dialogues and global climate meetings. Fund management companies can also exert positive pressure on other actors in the investment chain, such as sustainability rating agencies and stock exchanges. Global investors have provided policy inputs at high-level forums such as UNFCCC Conference of the Parties (COPs), including the Paris conference in 2015, and preparation for G20 meetings.

The Swedish fund management companies are exerting their positive leverage by joining global climate initiatives. Nine out of ten actors signed both the CDP investor initiative and the Montréal Carbon Pledge. SPP also signed the more ambitious Portfolio Decarbonisation Coalition commitment, and is a member of the following coalitions: Fossilfritt Sverige,[148] Green Bond Principles,[149] Norway 203040[150] and the Global Opportunities Explorer[151] initiative. Danske Bank, Nordea, SEB and Skandia are signatories to the IIGCC. Nordea is co-chair of the UNEP FI water and finance work stream, which is relevant for climate and sustainable development efforts. In the Swedish arena, a number of actors have been active in a working group under the industry association Swedish Investment Fund Association developing the sector carbon footprint standard.[152] For an overview of membership and active participation in joint investor initiatives, see Annex 2.

The amount of information provided on bilateral and joint company engagement varied between the ten actors in the study. However, data indicates that – as compared to 2014 – the fund management companies are more active in exerting positive pressure on portfolio companies to measure and disclose climate impacts, to set climate targets and to gear their business models towards green, low-carbon models.

In order to assess the success of bilateral engagement dialogue with companies, the survey requested information on concrete results where companies have improved their climate performance. Most actors only provided information on the number and

FACT

Large projects with irreversible impacts on planet and people

A number of individual fossil-based projects, such as the planned Indian company Adani Group's Carmichael coal mining project in the state of Queensland, Australia, are so large that – if implemented – they could increase greenhouse gas levels beyond the goals of the Paris Agreement. The roads and other infrastructure to be constructed for the Carmichael mine, would serve at least another ten planned coal mines. In a scenario where these mines would be built, their joint production could reach 330 million tonnes of coal per year, which is more than the current production from Australia's entire coal sector.

Additional carbon emissions from the mine risk obliterating the Great Barrier Reef with its invaluable biodiversity within fifteen years. Its construction would also cause irreversible impacts on indigenous peoples' traditional territories and sacred sites.

Large-scale land dispossession can lead to irreversible impacts on soils, forests, and communities. Two of Vietnam's largest companies: Hoàng Anh Gia Lai (HAGL) and the Vietnam Rubber Group (VRG), leased extensive land areas to establish agriculture plantations in Laos and Cambodia. State authorities in the two countries approved the land concessions, which overlap with forested land – sometimes inside forest reserves, community land and indigenous territories. Indigenous minority groups in the affected areas have been disproportionally impacted and impoverished. In many cases, the plantations acted as entry points for timber extraction, and have led to severe deforestation. International financial actors such as Deutsche Bank and the International Finance Corporation provided financing for the project.

The combined impacts of increasing carbon emissions, deforestation and displacement of communities, risk leading to increased poverty and household vulnerabilities to the impacts of climate change. Recent research on the economic impacts of climate change on poor households illustrates the need to proactively prevent projects negative climate impacts on livelihoods, in order to ensure inclusive, sustainable development. Investors who identify windows of opportunity at early project planning stages, may use their leverage to alter or halt potentially detrimental projects.

Sources: Dasgupta, S. Mongabay.com. (28 September 2015). Global Witness (2013). Slezak, M. theguardian. (15 August 2017). Jolley, M. A. Al Jazeera News (19 October 2017). Hellegatte, S. Rozenberg, J. nature climate change (5 April 2017). Swedwatch has not screened the fund management companies' portfolios to determine whether they have invested in these companies (Adani Group and HAGL).

focus of engagement dialogues that were being conducted; few reported on specific results (see Annex 3). Länsförsäkringar reported on 25 cases in which companies had improved their climate performance in response to engagement dialogues during 2014–2017. SEB listed 32 cases in which companies had developed credible strategies or set stretching targets to address climate change, and ten cases in which companies had implemented a climate strategy or measures. Swedbank listed a few specific cases and provided general observations about company engagements during 2014-2017:

- Investors' participation in PRI thematic dialogues has increased markedly over the past few years;
- Companies are shifting away from more carbon-intensive oil extraction towards natural gas;
- Routine oil flaring, with high and unnecessary carbon emissions, has reduced;
- All major mining and oil companies and their branch organisations now accept the mainstream climate change science and have policies and procedures to reduce their impacts. Some are even reporting on their lobbying activities;
- Carbon emissions pricing is routinely included in future scenario modelling and project planning;
- Electric vehicle development is now commonplace among automotive firms;
- Entry into renewable energy production is increasing in the utilities and energy sectors faster than ever;
- Across sectors, the levels of company reporting and transparency on carbon emissions, climate strategies, branch organization memberships and climate lobbying activities are increasing year by year. The fastest investor engagement-driven change within companies can be seen in climate lobbying activities.

A number of fund management companies gave examples of how they are attempting to instigate positive change through engaging with other financial actors. Länsförsäkringar has developed a rating system, through which they evaluate their external asset managers on sustainability criteria under the three headings Organisational strengthening; Company engagement, and ESG integration and analysis. Climate is part of the overall assessment, but is not a deciding factor in selecting asset management companies.

SPP has asked its external fund managers to calculate their carbon footprint and also whether they had signed the Montréal Carbon Pledge. While most have submitted the results of their carbon footprint analyses, very few have responded that they are signatories to the pledge. SPP described two other initiatives in which they have attempted to influence financial actors. Through PRI, a letter was sent to 62 global banks asking them to disclose climate-related information in line with TCFD recommendations. The banks were asked not to supply capital for carbon fossil fuel production or supply, and to redeploy capital into low-carbon investments. SPP also submit-

ted a letter to the US Securities and Exchange Commission on investors' need for the disclosure of material carbon asset risks in oil and gas sectors.

Swedbank states that it is increasing its scrutiny of external asset managers for multi-asset funds, and pursuing efforts to better integrate ESG factors in alternative assets. The practice of filing, co-filing, supporting and voting on resolutions at companies' annual general meetings is gaining traction, and four actors shared specific examples of issues raised to company boards in recent years. The "Aiming for A" joint shareholder resolutions, in which SEB and Nordea participated, constituted successful examples where large extractives companies agreed to disclose their climate strategies and the results of stress tests.[153]

Half of the fund management companies in the study stated that they had engaged with policy-makers and regulators, for example by signing climate change appeals to G7 and G20 governments, and providing inputs to the HLEG consultation process. For details, see Annex 4.

ANALYSIS:

The Swedish fund management companies have increased their membership in important joint initiatives such as the CDP. A majority of the fund management companies have signed the Montréal Carbon Pledge, and will continue to disclose the results from their carbon footprint measurements. Only one actor is a member of the more meaningful and ambitious Portfolio Decarbonisation Coalition, where investors commit to decarbonising their entire investment portfolios.

The information shared by the fund management companies on their engagement efforts with companies and financial actors, do not detail climate transition goals, time frames and strategies. Few results from such efforts are reported.

The fund management companies' engagement with policy makers and financial actors is primarily in the form of one-off meetings and signing letters. The only exception is the process where Swedish actors developed the sector standard for carbon footprint measurements. This standard is different from internationally prescribed methods.

6. Analysis and conclusions

The results of the study show that all ten companies have taken significant and incremental steps compared to the baseline results from 2014. However, a large gap remains between their current climate efforts and the strong leadership and decisive action needed by the finance sector within the short window of opportunity 2017–2020, as outlined in the Paris Agreement. If investors shoulder this responsibility, the rise in global temperatures can be contained to 1.5°C. Human suffering, ecosystem destruction and financial instability may be tempered, and worst-case scenarios of catastrophic consequences avoided.

Several Swedish actors are part of innovative developments and are actively engaging with companies, policy-makers and other, larger financial actors. By being proactive, and allocating more resources to innovation and engagement, Swedish fund management companies and their parent companies in the insurance and banking sectors will increasingly act as change agents in the international arena.

The study highlights the need to analyse and address all aspects of climate change and go beyond the focus on mitigating carbon emissions from the fossil fuel industry. The integrity of forest ecosystems, secure community land tenure, poverty alleviation and adaptation are all part of the climate challenge, and need to be addressed in financial sector analyses and strategies.

Fund management companies and their parent companies need to act now, and remain committed over coming decades, in order to reach the long-term goals of the Paris Agreement. Ambitious targets to increase investments in green finance and climate solutions should be set promptly. Investors should assess and estimate their current impacts on climate, forests, and community land tenure. The use of scenario analysis, which employs ambitious, long-term scenarios and outline pathways to a resilient 1.5°C world, must become a minimum standard for responsible financial actors. The results of these analyses will provide a clear, strategic direction for the climate efforts of the investor organisations.

Based on the results of the analyses, an investment strategy should be developed and communicated, which elaborates on how the investor emphasises the following elements:

a) Full or partial divestment from assets which are fossil-based, high-emitting, or contributing to deforestation, impacts on community land and forest tenure, and human rights;

b) Reallocation of investments to green finance, climate solutions, adaptation and poverty alleviation;

c) Targeted, effective and streamlined engagement efforts and joint investor actions that are properly resourced, based on a likelihood to succeed, and have clear, time-bound targets;

d) Piloting and innovation of models and methods for climate analysis, investment approaches and engagement.

6.1 Reallocation to climate solutions

According to the information provided by the fund management companies in this study, key actions towards instigating a decisive shift have not been taken. No actor has set targets and developed a working definition for investments in green finance and climate solutions. In cases where fund management companies have divested from assets with negative climate impact, such as coal or high-emitting industries, it is not clear that capital has been reallocated to green finance and climate solutions.

When fund management companies divest from problematic assets, capital should be reinvested into green assets or climate solutions, not into 'carbon-neutral' sectors such as financials. Reallocation to nuclear power, large hydropower or financial companies with negative sustainability records may in fact worsen the social and climate performance of the overall investment strategy.

All investors need to reallocate larger capital streams to responsible investments in climate solutions in order to bridge the green financing gap. The size of the AUMs of both the fund management companies themselves and of their larger parent companies indicates their potential contributions to redirecting investment flows towards low-carbon transition. Considering the dire consequences of climate change and the clearly designated role for the finance sector under the Paris Agreement, it can no longer be considered reasonable for fund management companies to only respond to slowly growing consumer demand. The fund-by-fund approach needs to be replaced with clear targets and active innovation to find climate solutions to invest in.

In order to create new investment opportunities, fund management companies should diversify beyond public equity, exploring opportunities to invest in, for example, innovative private equity and small companies. New investment products should be designed in partnership with other public, private and local stakeholders. As an example, in the growing investment area of sustainable, climate-smart cities, there are opportunities to invest, on a system-wide level or in parts, in for instance green property, mobility, water and sanitation, waste recovery, renewable energy, and energy efficiency.

There is a need to revisit the dominant perception of risk in relation to green finance and investments in climate solutions. The principal, imminent risk today is that climate change impacts on ecosystems, societies and people, will stifle economic growth, including in promising emerging markets. In index fund management, the tracking error indicates risk when not investing in fossil production or high-emitting industries. In reality, the risk of losing value in one's assets by investing in line with global stock market indexes may be far greater. It is expected that climate induced financial risks and opportunities will change, some of them quite rapidly, due to fast leaps in technology, innovation, regulations and societal change.

Many fund management companies in the study are active in important bilateral company engagement, shareholder action, and joint initiatives to influence other companies, other financial actors and decision-makers. Some results have been forthcoming from these efforts, but it is still unclear whether the fund management companies are stringent enough in their targets and time frames, and if the efforts

are well resourced and likely to succeed. Considering some of the companies' political influence and sometimes intense lobbying activities against climate regulations and carbon prices, it may be necessary to step up engagement efforts. Fund management companies may wish to design matching pro-climate lobbying strategies, and join forces with government representatives in order to increase the pressure on for example the fossil industry or influential commodity companies with deforestation risks in their supply chains.

Proactive - not reactive - shareholder engagement is the only meaningful approach to stop or modify projects with irreversible climate impacts. Investors should demand that companies disclose their project pipelines, and identify windows of opportunity to exert leverage during feasibility and project planning stages.

6.2 Disclosing impacts on planet and people

It is a basic requirement that fund management companies safeguard clients' assets during the climate transition, and financial stability is a prerequisite for a resilient 1.5°C world. The fund management companies in the study indicate that they are not facing imminent climate-related financial risks. Similarly, according to one actor's analysis, their brands are not threatened by investments in fossil fuel industries. In order to continuously track how investment portfolios are exposed to climate-related financial risk, it is necessary for fund management companies to follow TCFD's recommendation to conduct stress tests using scenarios with long-term horizons. The results of these analyses should be disclosed to clients.

Fund management companies in this study are committed both to international conventions on environment and respect for human rights, and to the fulfilment of the SDGs. Consequently, clients should also be informed about the portfolio's current and future impacts on the climate, forest integrity, community land and forest tenure and human rights.

Currently only results from carbon footprint analyses, and compound sustainability ratings, are made available to clients. In fund sustainability ratings such as SPP's sustainability rating for companies, Morningstar's globe rating and SWESIF's sustainability rating, there is a substantial component of financial and economic sustainability. Large parts of investment portfolios remain unscrutinised, and the range of different climate impacts and risks has not been disclosed to clients.

The current lack of information on risks and impacts across portfolios constrains consumer power. It also hampers a much-needed evidence base for the transformation of societies and business to low-carbon, climate-resilient models. It is also important that improvements are implemented by all fund management companies, and that climate-positive investment strategies do not become a niche market for only a few fund management companies. If climate conscious clients gravitate towards responsible fund managers, and consumer pressure is not directed to less responsible actors, there is a risk that a strong, sector-wide climate response will not materialise.

In addition to the results from scenario analyses, the following are examples of portfolio-wide analyses where results should be made available to clients:

- The Climetrics climate analysis of mutual funds, which is forward-looking and more relevant and useful than carbon footprint measurements, should be carried out across the entire investment portfolio.
- Deforestation across projects and supply chains.
- Impacts on community tenure rights.
- Access to water and food, superimposed on data on extreme weather events and changes in weather patterns in different geographic investment regions. This type of analysis will both measure how businesses can be affected and show how they can take responsibility locally to contribute to climate adaptation and respect for human rights across their supply chain.

In cases where metrics are not available, investors should continue to engage with companies and demand better data. However, considering the urgency of taking action, investors cannot wait until a majority of companies provide solid data. Instead, investors should engage in innovation and partnerships with academia, think tanks and civil society organisations in order to develop the necessary methodologies to provide sufficient decision-making support.

6.3 Policy and legislation

EU and Swedish policy-makers should develop compulsory, sector-wide regulations for conducting scenario analyses and disclose portfolio climate impacts. It is important for investors to be required to measure and disclose both climate-related financial risk, and current and future impacts on climate, forests, land tenure and human rights.

Policy-makers and legislators should draw on the current momentum in the TCFD and HLEG policy processes, in which a number of Swedish actors are actively engaged. The upcoming stress tests can be used as an entry point for dialogues that go beyond sustainability departments to involve boards, CEOs and investment departments.

In all policy processes, care should be taken to avoid lengthy consensus processes that involve a risk of delays in action and lowest-common-denominator outcomes. Encourage the sector to take action, innovate and fine-tune on the way towards a resilient 1.5°C world and ensure civil society inputs into policy processes.

Annex 1: Scenario analysis energy investments

The data and scenario sources for the analysis provided by 2° Investing Initiative (2ii) are shown below. For more information about the model and the methods of calculation, see www.transitionmonitor.org.

Sources for the data and scenario analysis

Automobile data is from July 2017 and provided by WardsAuto/AutoForecastSolutions. Power data is from July 2017 and is provided by GlobalData. Oil, gas and coal production data is from July 2017 and is provided by GlobalData. When linking asset data with companies, the data is used by the data providers mentioned above and, where possible, enriched with company data from Bloomberg. All financial data, as well as identification numbers for linking company data with financial instruments, are sourced from Bloomberg. The decarbonisation pathways for other sectors are from the Science-Based Targets Initiative, which bases its methodology on the International Energy Agency (IEA) scenarios.

The IEA does not provide figures for each year; thus, the values in between are calculated using a linear interpolation. The scenarios for the energy and power sector come from the IEA's World Energy Outlook 2016. Because this report does not include scenario information for the automotive sector, the related data is taken from the sister report of the World Energy Outlook, the Energy Technology Perspective report. Benchmarks for the electricity sector are determined regionally and applied in relation to the regional exposure data and then aggregated, weighted according to the regional exposure of the portfolio. All other results are global.

Allocation Rules

For the analysis, the following allocation rule has been applied to equity portfolios: The analysis is based on the ownership percentage of companies and their subsidiaries, with respect to all outstanding shares of the companies. This approach reflects the fact that the shares represent ownership ratios.

Scope of the analysis

The analysis focusses on the assessment of the listed equity and does not include any other instruments (e.g. private equity, direct investments, etc.).

Nuclear power capacity

Nuclear capacity is the subject of controversy, and even though it is carbon neutral on one hand, it is also environmentally harmful. In the standard analysis 2ii displays an overexposure to nuclear capacity in the heat map as 'green' and an underexposure as 'red'. However, in this analysis nuclear capacity is displayed vice versa.

Disclaimer

All information and data provided by 2ii is purely for informing purposes and does not provide any investing recommendation neither request to buy or sell any position, investment or fund. 2ii does not take any responsible for the accuracy and completeness of the underlying asset level and financial datasets. However, 2ii undertook all appropriate measures to ensure that the information provided in this report was correct and up to date, 2ii does not assert that the information is comprehensive and accurate and thus assume no liability for errors or omissions. Crucially, it is not possible to 'validate' or verify the portfolio data submissions by the fund managers. Despite performing the analysis, 2ii does not support nor contradict the message of the report / interpretation of the results. It solely provided the data analysis and provided feedback to ensure the correct interpretation of the results by Swedwatch and thus is not responsible for the statements made in this report.

Annex 2: Joint investor initiatives

	Signatories/collaborative platforms	Participated in the Swedish Investment Fund Association's working group on carbon footprint methodology
AMF	CDP / Montréal Carbon Pledge / PRI	Yes
Danske Bank	CDP / IIGCC / Montréal Carbon Pledge / PRI	No
Handels-banken	CDP / Montréal Carbon Pledge / PRI	Yes
Lannebo Fonder	PRI	Yes
Länsför-säkringar	CDP / Montréal Carbon Pledge / PRI	Yes
Nordea	CDP* / CDP Carbon Action / IIGCC / Montréal Carbon Pledge / PRI**	Yes
SEB	CDP / EFAMA*** / IIGCC / Montréal Carbon Pledge / Paris Pledge for Action / PRI / Sida Swedish Investors for Sustainable Development (Working group on Sustainable Cities)	Yes***
Skandia	CDP / Montréal Carbon Pledge / PRI	Yes
SPP	CDP / Fossilfritt Sverige / Global Explorer / Green Bond Principles / Montréal Carbon Pledge / PRI / Sida - Swedish Leadership for Sustainable Development & Swedish Investors for Sustainable Development / The Portfolio Decarbonisation Coalition ***	Yes
Swedbank	CDP / Montréal Carbon Pledge / PRI	Yes

** Member of CDP Water Advisory Council*
*** Member of CDP Water Advisory Council*
****Board member*

Annex 3: Engagement with companies and financial actors

AMF	**Joint company and sector engagement:** On-going PRI engagement with 126 companies to measure and dis close at least scope 1 and scope 2 greenhouse gas emissions.
DANSKE BANK	**Joint company and sector engagement:** On-going PRI engagement on oil and gas exploration in off-shore Arctic. On-going PRI engagement on no-go commitments from extractives companies in oil, gas and mining relating to exploration of operations in UNESCO natural World Heritage Sites.
HANDELSBANKEN	**Bilateral dialogues, results and joint company and sector engagement:** Handelsbanken has had approximately 200 engagements - bilateral and pooled during the period. Most of them are still on-going. **Shareholder action:** Handelsbanken filed three climate change related resolutions, on the following topics: - Methane emissions. - Palm oil. Lead on two CDP resolutions with two companies on carbon reporting. *Results:* Not successful, sold out the companies.
LANNEBO	–
LÄNSFÖRSÄKRINGAR	**Joint company and sector engagement:** Engaged with 192 companies on climate-related issues in 2016. *Results:* In total, 25 climate-focused engagements had generated tangible results. One example of an on-going proactive engagement is with 15 emerging market companies on climate and water risks. *Results:* To date, four targeted companies have responded well to the engagement efforts, including one Brazilian logging and pulp and paper company, and one Mexican food producer. **Engagement with other financial actors:** Länsförsäkringar evaluates external asset managers on sustainability criteria under the three headings Organisational strengthening, Company engagement, and ESG integration and analysis. Climate is part of the overall assessment, but is not a deciding factor in selecting asset management companies.
NORDEA	**Bilateral dialogues:** Nordea encourages all companies where ESG analysis is conducted, to set targets for carbon reduction, and increased use of renewable energy. *Results:* Improvements are not tracked in a way which is possible to present. 450 dialogues with companies in the Stars funds (represent two percent of AUM) including climate focus during the period 2014-2017.

Joint company and sector engagement:
PRI engagement on climate lobbying targeting Rio Tinto, Chevron, and BHP.

Signed CDP letter on Water engagement sent to 23 companies in 2016.

Signed IIGCC investor letter sent to 67 companies on EU climate policy positions.

Shareholder action:
Nordea supported 49 climate change related resolutions. Provided information on all proposals. Co-filed the resolution in the "Aiming for A" initiative in 2016, requesting that companies stress test their business strategies against the Paris Agreement 2°C or less scenarios.

Results:
Rio Tinto: 99.16% votes in favour.
Anglo American: 96.25% in favour.
Glencore: 98.07% in favour.

SEB

Joint company and sector engagement:
Participated in company dialogues conducted under PRI and CDP:
- PRI engagement with palm oil companies to achieve no deforestation, no conversion of peat lands, no exploitation, and respect for indigenous peoples' rights (25 companies)
- Carbon emissions from European utility sector (14 companies)

Company engagements through Hermes, which included a total of 146 environmental objectives.

Results:
- In 32 cases, companies had developed a credible strategy or set stretching targets to address the concern.
- In 10 cases, companies had implemented a strategy or measures to address the concern.

Shareholder action:
Through Hermes, SEB participated in the "Aiming for A" coalition, which submitted resolutions to the AGMs of the companies, Total, Anglo American, Glencore and Rio Tinto.

Results:
- Total's Board of Directors committed to climate reporting requirements, and to publicly disclose its climate strategy in a 2°C scenario.
- Anglo American, Glencore and Rio Tinto committed to further action on climate change.

SEB co-filed a climate-focused shareholder resolution at the Chevron AGM.

Results:
The company established an internal working group to examine what climate information it might be able to disclose.

SEB voted in support of five climate-related resolutions during 2014 – 2017.

SKANDIA

Bilateral dialogues:
Engagement with 16 mainly US-based utilities companies to align company strategies with the 2°C target.

Results:
Majority of companies committed to climate action despite weak government commitment.

Joint company and sector engagement:
Leading investor in on-going PRI engagement on carbon footprint disclosure with 125 companies.

Results:
One of two companies, where Skandia was lead has committed to in crease climate-related disclosure. Preliminary estimates from August 2017, indicate that at least 10-15% of the targeted companies have committed to reporting carbon footprints.

Collaborative engagement on oil and gas exploration in the Arctic, coordinated by Mirova.

On-going collaborative engagement with 10 companies on alleged opposition to climate change mitigation.

On-going collaborative engagement with 40 companies on norm breaches related to climate change, including rainforest destruction, land grabbing and illegal logging.

Results:
Some improvements in increased climate disclosure, new or more ambitious targets, and increased use of renewables.

SPP

Bilateral dialogues:
Bilateral contacts focusing on climate change with 67 companies during the period 2014-2017.

Results: Not detailed.

Letter in 2015 to 77 European oil, gas, utilities, and materials companies encouraging them not to lobby against climate and energy policy development.

Results: Not detailed.

On-going engagement with palm oil companies on no deforestation, no conversion of peat lands, no exploitation, and respect for indigenous peoples' rights.

On-going joint project with Statoil on implementation of TCFD recommendations in the oil and gas industry.

Joint company and sector engagement:
2016: CDP letter sent to the following number of top European non-reporters on: Climate Change (42); Forest Programme (27); Water Programme (23); and all on-disclosing companies targeted in CDP's Climate programme.

PRI engagement on methane emissions with companies in oil and gas industry.

Shareholder action:
Voted on 2 climate change related resolutions, both on
- Statoil: Divestment from operations in tar sands, Canada.

Engagement with other financial actors:
- 2016 letter to all external fund managers asking them to calculate their carbon footprint and if they had signed the Montréal Carbon Pledge.

Result:
- A majority has sent in results of their carbon footprint calculations.
- Very few have replied that they are Montréal Carbon Pledge Signatories.

- PRI letter sent to 62 global banks asking them to disclose climate-related information in line with TCFD recommendations; not to supply capital for carbon fossil production or supply; and redeploy capital into low-carbon investments.

- 2016: Letter to the US Securities and Exchange Commission on investors' need for disclosure of material carbon asset risks (CAR) in oil and gas sectors

SWEDBANK

Bilateral dialogues, results and joint company and sector engagement:

Climate change related topics have been raised with around 300 companies in bilateral meetings by analysts 2014-2017.

Reaching approximately 200 companies through participation in three on-going joint UN PRI thematic engagement initiatives on climate change (disclosure, methane and power generation).

Example of result, concluded PRI engagement:
- Improved climate disclosures by shale oil extraction companies, and production of a guide for further investor engagement with carbon emissions focus.

Shareholder action:

Voted in support of 37 climate change related resolutions.

Highlighted the following examples:
- Occidental Petroleum: Climate change assessment report, methane emissions and flaring targets.
- Exxon: Report on impacts of climate change policies, report on methane emissions.
- Chevron: Report on transition to a low carbon economy, Recommended independent Director with environmental expertise. Etc.
- Glencore: Approve the strategic resilience for 2035 and beyond.
- BP: Approve the strategic resilience for 2035 and beyond.
- Royal Dutch Shell: Strategic resilience for 2035 and beyond.

Annex 4: Engagement with policy-makers and regulators

	Actor	Examples of engagement with policy-makers and regulators
1	AMF	N/a
2	Danske Bank	• Signed letters to G20 and G7 leaders calling for support for the Paris Agreement and its implementation in 2015, 2016 and 2017.
3	Handelsbanken	N/a
4	Lannebo Fonder	N/a
5	Länsförsäkringar	• Signed letters to G7 and G20 governments calling for support for the Paris Agreement and its implementation. • Signed an initiative to encourage greater sustainability focus in credit ratings together with PRI, seven credit rating institutes, and 111 other investors. As a result, in 2016 one agency developed a model for integration of sustainability factors in credit ratings.
6	Nordea	• Co-chair of UNEP FI Water and Finance work stream; • Attended UNFCCC COP 22; • Responded to HLEG questionnaire as part of stakeholder consultation; • Signed letter to G7 and G20 governments calling for continued support for the Paris Agreement; • Signed European Financial Roundtable letter to G20 leaders calling for formal acceptance of the TCFD recommendations; • Supported development of European Financial Roundtable cases studies, and expressed full recognition of the importance to tackle climate change and play a role in supporting Europe's transition to a low-carbon economy.
7	SEB	• Responded to HLEG questionnaire as part of stakeholder consultation; • Participated in two meetings with the Swedish Minister of Financial Markets and Consumer Affairs on regulatory constraints for sustainable investments, and on possibilities and challenges for the financial sector in relation to Agenda 2030. • Met with Swedish Government-appointed expert on frameworks for Green Bonds; • Signed investor letter to G7 and G20 governments on climate change; • Responded to HLEG questionnaire as part of stakeholder consultation.
8	Skandia	• Engaged with Swedish Departments of Finance and Foreign Affairs on possibilities for increased investments in green bonds.
9	SPP	• 2015 PRI investor letter supporting the Paris Agreement; • As a board member of the Norwegian Norge 203040 initiative, engaged with Ministry of Finance and the government expert committee for green competitiveness; • Part of a trade delegation to Japan, where climate change was discussed with the Japanese Ministry of Economy, Trade, and Industry and other leading politicians and financial industry representatives; • Contributed as a speaker at a Bloomberg - Oxford University conference on stranded assets; • PRI investor letter urging G20 to stand by Paris Agreement and drive its implementation.
10	Swedbank	• Signed 2017 PRI letter to G7 and G20 governments to put climate change on their finance minister's agenda and support the Paris Agreement; • Ad hoc regulator dialogues through PRI, CDP, and norms and engagement service providers.

Endnotes

1 Intergovernmental Panel on Climate Change. Climate Change 2014, Synthesis Report. 2014. https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf, retrieved 12 November 2017.

2 Gaffney, O., Steffen, W. The Anthropocene Equation. The Anthropocene Review 4/1 (2017):53–61.

3 Land use, land use change and forestry (LULUCF) represents a greenhouse gas inventory sector, which includes emissions and removals of greenhouse gases resulting from direct human-induced land use, land-use change and forestry activities. This report focuses on the role of forests in storing carbon, and on the emissions resulting from deforestation and degradation. Adapted from: http://www.ipcc.ch/ipccreports/tar/wg2/index.php?idp=132 and http://iopscience.iop.org/article/10.1088/1748-9326/aa836d, retrieved 28 November 2017.

4 United States Environmental Protection Agency. Global Green House Gas Emissions Data. ND. https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, retrieved 12 November 2017. Mahowald, Natalie M., et al. “Are the impacts of land use on warming underestimated in climate policy?.” Environmental Research Letters 12.9 (2017): 094016

5 CDP. Revenue at Risk: Why Addressing Deforestation Is Critical to Business Success. December 2016. https://www.cdp.net/en/reports/downloads/1328, retrieved 12 November 2017.

6 Sonter, L.J., Herrera, D., Barrett, D.J., Galford, G.L., Moran, C.J., Soares-Filho, B.S. Mining Drives Extensive Deforestation in the Brazilian Amazon. Nature Communications 8/1 (2017). https://www.nature.com/articles/s41467-017-00557-w, retrieved 12 November 2017; Yale School of Forestry and Environmental Studies, Global Forest Atlas, Mining and Extraction. ND. https://globalforestatlas.yale.edu/land-use/mining-extraction, retrieved 12 November 2017.

7 Oxfam International, International Land Coalition and Rights and Resources Initiative. Common ground, Securing land rights and safeguarding the earth (2016). https://www.oxfamamerica.org/static/media/files/GCA_REPORT_EN_FINAL.pdf, retrieved 20 November 2017.

8 Oxfam International. Custodians of the Land, Defenders of Our Future, A new era of the global land rush. (2016). https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/land_rights_en_final.pdf, retrieved 28 November 2017.

9 Intergovernmental Panel on Climate Change. Climate Change 2014, Synthesis Report. 2014. https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf, retrieved 12 November 2017.

10 Intergovernmental Panel on Climate Change. Homepage. http://www.ipcc.ch/, retrieved 1 November 2017.

11 Intergovernmental Panel on Climate Change. Climate Change 2014, Synthesis Report. 2014. https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf, retrieved 12 November 2017.

12 Nauels, A., Rogelj, J., Schleussner, C., Meinshausen, M., Mengel, M. Linking Sea Level Rise and Socioeconomic Indicators under the Shared Socioeconomic Pathways. IOP Science. 26 October 2017. http://iopscience.iop.org/article/10.1088/1748-9326/aa92b6/meta;jsessionid=F624BF1BF1516B17AA06B26B85AB5B06.c1.iopscience.cld.iop.org, retrieved 12 November 2017.

13 Baccini, A., Walker, W., Carvalho, L., Farina, M., Sulla-Menasche, D- Houghton, R.A. Tropical Forests Are a Net Carbon Source Based on Aboveground Measurements of Gain and Loss. Science 358/6360 (2017):230–34. http://science.sciencemag.org/content/358/6360/230, retrieved 12 November 2017.

14 Website. United Nations Framework Convention on Climate Change. Paris Agreement - Status of Ratification. http://unfccc.int/paris_agreement/items/9444.php, retrieved 20 November 2017.

15 Wei, D., Cameron, E., Harris, S., Prattico, E., Scheerder, G., Zhou, J. The Paris Agreement: What is Means for Business. (2016) We Mean Business, New York

16 Millar, R. et al. Emission Budgets and Pathways Consistent with Limiting Warming to 1.5 °C. Nature Geoscience 10 (2017):741–47. https://www.nature.com/ngeo/journal/v10/n10/full/ngeo3031.html, retrieved 20 November 2017; Carrington, D. Ambitious 1.5C Paris Climate Target Is Still Possible, New Analysis Shows. The Guardian, 18 September 2017. https://www.theguardian.com/environment/2017/sep/18/ambitious-15c-paris-climate-target-is-still-possible-new-analysis-shows, retrieved 20 November 2017.

17 Kraaijenbrink, P.D.A., Bierkens, M.F.P., Lutz, A.F., Immerzeel, W.W. Impact of a Global Temperature Rise of 1.5 Degrees Celsius on Asia's Glaciers. Nature 549 (2017):257–60. https://www.nature.com/articles/nature23878, retrieved 20 November 2017.

18 Slezak, M. Sea Levels to Rise 1.3m Unless Coal Power Ends by 2050, Report Says. The Guardian, 26 October 2017. https://www.theguardian.com/environment/2017/oct/26/sea-levels-to-rise-13m-unless-coal-power-ends-by-2050-report-says, retrieved 20 November 2017; Nauels, A., Rogelj, J., Schleussner, C.-F., Meinshausen, M., Mengel, M. Linking Sea Level Rise and Socioeconomic Indicators under the Shared Socioeconomic Pathways. IOP Science, 26 October 2017. http://iopscience.iop.org/article/10.1088/1748-9326/aa92b6/meta;jsessionid=4B50C844C9D96E97983455727D411535.c1.iopscience.cld.iop.org, retrieved 20 November 2017.

19 The term ‘climate change mitigation’ refers to human interventions to reduce greenhouse gas emissions, or to enhance their uptake by for example soils, forests or oceans. Adapted from: United Nations Framework Convention on Climate Change. Homepage. Glossary of climate change acronyms and terms. http://unfccc.int/essential_background/glossary/items/3666.php, retrieved 20 November 2017.

20 ‘Climate change adaptation’ is a term, which describes how natural and human systems adjust in order to response to actual or expected climate change effects, which manages and mitigates negative impacts and maximises positive opportunities. Website. Adapted from: United Nations Framework Convention on Climate Change. Homepage. Glossary of climate change acronyms and terms. http://unfccc.int/essential_background/glossary/items/3666.php, retrieved 20 November 2017.

21 European Commission. Interim Report - Financing a Sustainable European Economy. no. July, 2017, pp. 1–72, https://ec.europa.eu/info/sites/info/files/170713-sustainable-finance-report_en.pdf, retrieved 28 November 2017.

22 Landsea. BRAC. Issue Brief, Land Tenure as a critical consideration for climate change-related displacement in slow-onset disaster zones. (June 2017). http://prizecoalition.charity.org/wp-content/uploads/2017/05/HPC_CollaborativeIssueBrief_Landesa_BRAC_053117.pdf, retrieved 26 November 2017.

23 Burrows, K., Kinney, P.L. Exploring the Climate Change, Migration and Conflict Nexus. International Journal of Environmental Research and Public Health 13 (2016):443. http://www.mdpi.com/1660-4601/13/4/443/pdf, retrieved 20 November 2017.

24 Hereafter, the ten fund management companies are referred to by their abbreviated names: AMF, Danske Bank, Handelsbanken, Lannebo Fonder, Länsförsäkringar, Nordea, SEB, Skandia, SPP, and Swedbank.

25 Arounsavath, F. Blir guldet till sand? En rapport om fondförvaltning utan klimatmål. Swedwatch. February 2015. http://www.swedwatch.org/wp-content/uploads/2015/02/72_klimatrapport_150211_enkelsidig.pdf, retrieved 12 November 2017.

26 Pavel Kirjanas, project officer at the Asset Owners Disclosure Project, which is part of the UK based responsible investment organisation ShareAction (www.shareaction.org) has provided research and expert input to the sections referring to norms and voluntary initiatives. ShareAction coordinates the European Responsible Investment Network, which brings together organisations that are committed to a sustainable investment system.

27 Nicolaus Hagedorn, analyst at 2ii, conducted the portfolio alignment analyses of the fund management companies’ energy investments. Two Degrees Investing Initiative. Homepage. http://www.2degrees-investing.org/#!/, retrieved 12 November 2017.

28 The 2ii analysis used the International Energy Agency (IEA) WEO 2016 450S scenario for power and fossil fuels (see https://www.iea.org/media/publications/weo/WEO2016Chapter1.pdf for more details on this scenario) and the ETP 2017 2DS scenario for the automotive industry (see http://www.iea.org/publications/freepublications/publication/EnergyTechnologyPerspectives2017ExecutiveSummaryEnglishversion.pdf for more details on this scenario). In the future, the 2ii modelling method will be able to apply any energy transition scenario, including scenarios with time horizons beyond 2022. For more information on the Sustainable Energy Investment Metrics and its ongoing fine-tuning and development, please refer to: Climate Alignment Pilot Test. Homepage. http://www.transitionmonitor.com/en/home/, retrieved 20 November 2017.

29 The ten actors have varying proportions of their total AUM managed in Sweden-registered funds. This ranges from 95-100 percent of investments in Sweden-registered funds for AMF, Danske Bank, Lannebo, Länsförsäkringar, Swedbank, and SPP; to 90 percent for Skandia, 76 percent for Handelsbanken, and 33 percent for Nordea. SEB has not disclosed this information.

30 Le Quére, C. et al. Global Carbon Budget 2017. Earth System Science Data. 2017. https://www.earth-syst-sci-data-discuss.net/essd-2017-123/, retrieved 20 November 2017; http://www.globalcarbonproject.org/carbonbudget/17/files/GCP_CarbonBudget_2017.pdf, retrieved 20 November 2017.

31 UN Framework Convention on Climate Change. Homepage. http://unfccc.int/2860.php, retrieved 12 November 2017.

32 UN Framework Convention for Climate Change. Pre-2020 Ambition, Quantified Emission Limitation or Reduction Commitments by Developed Countries. ND. http://unfccc.int/focus/mitigation/pre_2020_ambition/items/8165.php, retrieved 12 November 2017. UN Framework Convention for Climate Change. Mitigation – Nationally Appropriate Mitigation Commitments or Actions by Developed Country Parties. ND. http://unfccc.int/focus/mitigation/items/7223.php, retrieved 20 November 2017.

33 The two categories of risk used in this report are summarised from risk taxonomies proposed in the following three documents: Task Force on Climate-related Financial Disclosures. Final Report, Recommendations of the Task Force on Climate-related Financial Disclosures. (29 June 2017). https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf, retrieved 26 November 2017. Asset Owners Disclosure Project. AODP Climate Risk Management Best Practice Methodology. http://aodproject.net/wp-content/uploads/2012/03/Asset-Owners-Climate-Change-Best-Practice-Framework-v27.pdf, retrieved 28 November 2017. Bowen, A., Dietz, S. The Effects of Climate Change on Financial Stability, with Particular Reference to Sweden. Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. 2016. http://www.fi.se/contentassets/df3648b6cbf448ca822d3469eca4dea3/climat-change-financial-stability-sweden.pdf, retrieved 20 November 2017.

34 United Nations Sustainable Development Knowledge Platform. Transforming our World: The 2030 Agenda for Sustainable Development. https://sustainabledevelopment.un.org/post2015/transformingourworld, retrieved 20 November 2017.

35 Shift. Respect for Human Rights: Creating a Holistic Framework for Business Contributions to the SDGs. (May 2017). https://www.shiftproject.org/resources/viewpoints/holistic-framework-business-respect-human-rights-sdgs/, retrieved 26 November 2017. Business & Human Rights Resource Centre. Danish Institute for Human Rights. Institute for Human Rights and Business. International Corporate Accountability Roundtable. Oxfam International. Shift. An open letter to United Nations Secretary-General António Guterres and United Nations Private Sector Forum 2017 Participants. (13 September 2017). https://www.businessrespecthumanrights.org/https://www.shiftproject.org/resources/viewpoints/open-letter-human-rights-sustainable-development/, retrieved 26 November 2017.

36 United Nations Human Rights Office of the High Commissioner. Guiding Principles on Business and Human Rights, Implementing the United Nations "Protect, Respect and Remedy" Framework. 2011. http://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf, retrieved 24 November 2017.

37 United Nations Human Rights Office of the High Commissioner. Letter: Request form the Chair of the OECD Working Party on the Responsible Business Conduct, 27 November 2013. http://www.ohchr.org/Documents/Issues/Business/LetterOECD.pdf, retrieved 24 November 2017; Gillard, T., Bijelic, B., van Lindert, E., Global Forum on Responsible Business Conduct: Due Diligence in the Financial Sector: Adverse Impacts Directly Linked to Financial Sector Operations, Products or Services by a Business Relationship, Investment Division of the OECD Directorate for Financial and Enterprise Affairs, 26–27 June 2014. http://mneguidelines.oecd.org/global-forum/GFRBC-2014-financial-sector-document-1.pdf, retrieved 24 November 2017.

38 High Conservation Value Resource Network. Common Guidance for the Identification of High Conservation Values. 2013. https://www.hcvnetwork.org/resources/folder.2006-09-29.6584228415/cg-for-hcv-identification/at_download/file, retrieved 20 November 2017.

39 Food and Agriculture Organization of the United Nations, Committee on World Food Security. Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security. 2012. http://www.fao.org/docrep/016/i2801e/i2801e.pdf, retrieved 20 November 2017.

40 Food and Agriculture Organization of the United Nations, Committee on World Food Security. Principles for Responsible Investment in Agriculture and Food Systems. ND. http://www.fao.org/fileadmin/templates/cfs/Docs1314/rai/CFS_Principles_Oct_2014_EN.pdf, retrieved 20 November 2017.

41 Figueres, C. et al. Comment: Three Years to Safeguard Our Climate. Nature, 28 June 2017. http://www.nature.com/news/three-years-to-safeguard-our-climate-1.22201, retrieved 20 November 2017. The COP resolved to strengthen the existing technical examination process on mitigation during 2016–2020. The technical examination process explores high-potential mitigation policies, practices and technologies with significant sustainable development co-benefits that could increase the mitigation ambition of pre-2020 climate action (see http://unfccc.int/resource/climateaction2020/tep/index.html for more details on this process); UN Framework Convention for Climate Change. Pre-2020 Ambition, Quantified Emission Limitation or Reduction Commitments by Developed Countries. ND. http://unfccc.int/focus/mitigation/pre_2020_ambition/items/8165.php, retrieved 20 November 2017.

42 Shroeders. Climate Progress Dashboard forecasts global warming of more than 4°C. http://www.schroders.com/en/insights/economics/climate-progress-dashboard-forecasts-global-warming-of-more-than-4c/, retrieved 28 November 2017.

43 Figueres, Christiana, et al. “Three years to safeguard our climate.” Nature News 546.7660 (2017): 593.

44 Revill, Chloe, and Harris Victoria. 2020 The Climate Turning Point. http://www.mission2020.global/2020 The Climate Turning Point.pdf, retrieved 28 November 2017.

45 Frankfurt School, UNEP Centre. Global Trends in Renewable Energy Investment 2017. http://fs-unep-centre.org/sites/default/files/publications/globaltrendsinrenewableenergyinvestment2017.pdf, retrieved 20 November 2017.

46 Reuters. Top 250 Firms Emit Third Of CO_2; Few Have Strong Goals To Cut: Study. 31 October 2017. http://www.reuters.com/article/us-climatechange-companies/top-250-firms-emit-third-of-co2-few-have-strong-goals-to-cut-study-idUSKBN1D00ZJ, retrieved 20 November 2017.

47 Influence Map. Corporate Carbon Policy Footprint: Physical Carbon Emissions May Be Only Part of the Picture - Introducing the 50 Most Influential. September 2017. https://influencemap.org/site/data/000/299/CPF_Report_Aug_2017.pdf, retrieved 20 November 2017.

48 CDP. CDP Climate Change Report 2017, United Kingdom Edition. https://b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/002/772/original/UK-edition-climate-change-report-2017.pdf?1508938994, retrieved 25 November 2017.

49 Ding, H. Veit, P.G., Blackman, A. Gray, E. Reytar, K, Altamirano, J.C. Hodgdon, B. Climate Benefits, Tenure Costs, The Economic Case For Securing Indigenous Land Rights in the Amazon, WRI.ORG, October 2016. http://www.wri.org/sites/default/files/Climate_Benefits_Tenure_Costs.pdf, retrieved 12 November 2017.

50 Hunsberger, Carol, et al. “Climate change mitigation, land grabbing and conflict: towards a landscape-based and collaborative action research agenda.” Canadian Journal of Development Studies/Revue Canadienne d’Études du Développement 38.3 (2017): 305-324.

Business and Human Rights Resource Centre. Investor Briefing : Renewable Energy Impacts on Communities Managing Investors’ Risks and Responsibilities. no. April, 2017, https://business-humanrights.org/sites/default/files/Investor%20briefing%20-%20Renewable%20energy%20-%20Apr%202017.pdf, retrieved 28 November 2017.

51 Bank of England. Homepage. Breaking the tragedy of the horizon - climate change and financial stability, speech by Mark Carney. (29 September 2015). http://www.bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx, retrieved 25 November 2017.

52 Two Degrees Investing Initiative. Tragedy of the Horizon: About the Project. ND. http://www.tragedyofthehorizon.com/, retrieved 20 November 2017; Two Degrees Investing Initiative. The Long-Term Risk Signal Valley of Death: Exploring the Tragedy of the Horizon. 2015. http://www.tragedyofthehorizon.com/Tragedy_of_the_Horizons_Project_Briefing_Note-2dii_and_The%20Generation_Foundation.pdf, retrieved 20 November 2017; Two Degrees Investing Initiative. All Swans are Black in the Dark: How The Short-Term Focus of Financial Analysis Does Not Shed Light on Long Term Risks. 2017. http://www.tragedyofthehorizon.com/All-Swans-Are-Black-in-the-Dark.pdf, retrieved 20 November 2017; Two Degrees Investing Initiative. The Long and Winding Road: How Long-Only Equity Managers Turn Over Their Portfolios Every 1.7 Years. 2017. http://www.tragedyofthehorizon.com/The-Long-and-Winding-Road-v1.pdf, retrieved 20 November 2017; Two Degrees Investing Initiative, Hit and Miss: About TCFD Disclosure Guidance for Financial Institutions. 2017. http://www.tragedyofthehorizon.com/Hit-and-Miss-About-TCFD-Disclosure-Guidance-for-Financial-Institutions.pdf, retrieved 20 November 2017.

53 Task Force on Climate-related Financial Disclosures. Final Report, Recommendations of the Task Force on Climate-related Financial Disclosures. (29 June 2017). https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf, retrieved 26 November 2017.

54 Schroders. How Rising Carbon Prices Could Cut Company Profits. ND. http://www.schroders.com/en/about-us/corporate-responsibility/sustainability/climate-progress-dashboard/carbon-var/, retrieved 20 November 2017.

55 Task Force on Climate-related Financial Disclosures. The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities. (June 2017). https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Technical-Supplement-062917.pdf, retrieved 26 November 2017.

56 Greenpeace international. Global Wind Energy Council. Solar Power Europe. Energy [R]evolution, A Sustainable World Energy Outlook 2015, 100% Rene-

wable Energy for All. 2015. http://www.greenpeace.org/international/Global/international/publications/climate/2015/Energy-Revolution-2015-Full.pdf, retrieved 12 November 2017.

57 University of Cambridge. Symon, C. Climate change: Action, trends and implications for businesses. (September 2013). https://www.cisl.cam.ac.uk/business-action/low-carbon-transformation/ipcc-climate-science-business-briefings/pdfs/briefings/Science_Report__Briefing__WEB_EN.pdf, retrived 26 November 2017.

58 Medland, D. Banks And Insurers Support Task Force Recommendations On Climate-Related Financial Disclosure. Financial Times. (29 June 2017). https://www.forbes.com/sites/dinamedland/2017/06/29/banks-and-insurers-support-task-force-recommendations-on-climate-related-financial-disclosure/#25e6bb205c0e, retrieved 28 November 2017.

59 Aviva Investors. Homepage. https://www.avivainvestors.com/en-gb/media/about-us/for-todays-investor.html, retrieved 28 November 2017.

60 Mooney, A. Aviva Investors demands greater climate change disclosure. Financial Times. (20 July, 2017). https://www.ft.com/content/69daf7c6-67e3-11e7-9a66-93fb352ba1fe, retrieved 28 November 2017).

61 Principles for Responsible Investment. French Energy Transition Law: Global Investor Briefing. 2016. https://www.unpri.org/download_report/14573, retrieved 20 November 2017.

62 Association Française de la Gestion Financière. Energy Transition for Green Growth Act Application of Article 173 to asset management companies: Professional Guide. 2016. http://www.afg.asso.fr/wp-content/uploads/2017/07/Rectoverso_LTE_art_173_ENG.pdf, retrieved 20 November 2017.

63 EU High-Level Expert Group on Sustainable Finance. Financing a Sustainable European Economy: Interim Report. 2017. https://ec.europa.eu/info/sites/info/files/170713-sustainable-finance-report_en.pdf, retrieved 20 November 2017.

64 Swedish Government. Hållbar finansmarknad. http://www.regeringen.se/artiklar/2016/12/hallbar-finansmarknad/, retrieved 20 November 2017.

65 Swedish Government. Proposition 2017/18:5, Bättre förutsättningar för fondsparande och hållbara val. 21 September 2017. https://data.riksdagen.se/fil/BCA8396B-6048-4B3F-BDD6-B8B9305586A4, retrieved 20 November 2017; Swedish Government. Bättre förutsättningar för fondsparande och hållbara val. http://www.regeringen.se/rattsdokument/proposition/2017/09/prop.-2017185/, retrieved 20 November 2017.

66 Nachmany, M., Fankhauser, S., Setzer, J., Averchenkova, A. Global Trends in Climate Change Legislation and Litigation. Grantham Research Institute on

Climate Change and the Environment. 2017. http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2017/04/Global-trends-in-climate-change-legislation-and-litigation-WEB.pdf, retrieved 20 November 2017.

67 Khan, T., How Climate Change Battles Are Increasingly Being Fought, and Won, in Court. The Guardian, 8 March 2017. https://www.theguardian.com/environment/2017/mar/08/how-climate-change-battles-are-increasingly-being-fought-and-won-in-court, retrieved 20 November 2017; Savannah Environmental. Thabametsi Power Station: Climate Change Study and Palaeontological Impact Assessment. June 2017. https://cer.org.za/wp-content/uploads/2016/07/Thabametsi-Final-Summary-Report-Jun17.pdf, retrieved 20 November 2017.

68 Paddison, L., Exxon, Shell and Other Carbon Producers Sued for Sea Level Rises in California. The Guardian, 26 July 2017. https://www.theguardian.com/sustainable-business/2017/jul/26/california-communities-lawsuit-exxon-shell-climate-change-carbon-majors-sea-level-rises, retrieved 20 November 2017.

69 Sher Edling LLP. Press Room. ND. https://www.sheredling.com/press-room/, retrieved 20 November 2017.

70 Wang, U. Philippines Climate Case Could Find Fossil Fuel Companies Violate Human Rights. Climate Liability News, 5 October 2017. https://www.climateliabilitynews.org/2017/10/05/philippines-climate-change-human-rights/, retrieved 20 November 2017.

71 Asset Owners Disclosure Project. Global Climate Index 2017, Rating the World's Investors on Climate Related Financial Risk. (2017). http://aodproject.net/wp-content/uploads/2017/04/AODP-GLOBAL-INDEX-REPORT-2017_FINAL_VIEW.pdf, retrieved 28 November 2017.

72 WWF European Policy Office. Godinot, S. Vandermosten, J. European Asset Owners: 2°C Alignment and Misalignment of Public Equity Portfolios. (June 2017). https://wwf.fi/mediabank/10023.pdf, retrieved 26 November 2017.

73 Two Degrees Investing Initiative. Thomä, J. et al. Out of the fog: Quantifying the alignment of Swiss pension funds and insurances with the Paris Agreement. (October 2017). http://www.transitionmonitor.com/wp-content/uploads/2017/10/2ii_Fog_v0.pdf, retrieved 26 November 2017.

74 Global Canopy Programme. (2016). Forest 500. https://forest500.org/, retrieved 28 November 2017.

75 Alecta. (n.d.). Det här är Alecta. https://www.alecta.se/om-alecta/det-har-ar-alecta/det-har-ar-alecta/, retrieved 28 November 2017.

76 Nordea. (2017). Nordea at a glance. https://www.nordea.com/en/about-nordea/who-we-are/nordea-at-a-glance/, retrieved 28 November 2017.

77 Global Canopy Programme. (n.d.). Financial Institutions. https://forest500.org/rankings/financial-institutions https://forest500.org/rankings/financial-institutions, retrieved 28 November 2017.

78 Global Witness. On Dangerous Ground, 2015's Deadly Environment: The Killing and Criminalisation of Land and Environmental Defenders Worldwide. (2016). https://www.google.se/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjIjbi2quLXAhUCGZoKHe3UDj8QFggmMAA&url=https%3A%2F%2Fwww.globalwitness.org%2Fdocuments%2F18482%2FOn_Dangerous_Ground.pdf&usg=AOvVaw2dvpjoKGGPcgrRlMixcfOB, retrieved 28 November 2017.

Oxfam Australia. Banking on shaky ground, Australia's big four banks and land-grabs. (2017). https://www.google.se/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&cad=rja&uact=8&ved=0ahUKEwiphpzJqeLXAhVGAZoKHeuaAkAQFghKMAQ&url=https%3A%2F%2Fwww.oxfam.org.au%2Fwp-content%2Fuploads%2F2017%2F02%2FBanking-on-Shaky-Ground-School-Resource_eBook-1.pdf&usg=AOvVaw3vRMgEi8BSwzqUbmPwlYAF, retrieved 28 November 2017.

Arounsavath, F. Swedwatch. Smokescreens in the supply chain, the impacts of the tobacco industry on human rights and the environment in Bangladesh. (30 June 2016). http://www.swedwatch.org/wp-content/uploads/2016/12/bat_81_15aug_ensida_uppdaterad_version_160816.pdf, retrieved 28 November 2017.

Arounsavath, F. Swedwatch. Silent approval, The role of banks linked to the crisis faced by Borneo's indigenous peoples and their forests. (7 March 2017). (https://www.google.se/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjWy7CdqeLXAhVIOpoKHVfnAg8QFggmMAA&url=https%3A%2F%2Fwww.naturskyddsforeningen.se%2Fsites%2Fdefault%2Ffiles%2Fdokument-media%2Fsilent_approval_borneo_full_report.pdf&usg=AOvVaw1NUYv4ugkm16MNH8oMj4AY, retrieved 28 November 2017.

79 The numbers have been provided by each actor and converted to USD using the following exchange rates: For AUM of fund management companies: https://de.exchange-rates.org/Rate/SEK/USD/30.06.2017. For parent companies: https://de.exchange-rates.org/Rate/SEK/USD/30.12.2016.

80 The scenarios used were International Energy Agency (IEA) WEO 2016 450S scenario for power and fossil fuels (see https://www.iea.org/media/publications/weo/WEO2016Chapter1.pdf for more details on this scenario) and the ETP 2017 2DS scenario for the automotive industry (see http://www.iea.org/publications/freepublications/publication/EnergyTechnologyPerspectives-2017ExecutiveSummaryEnglishversion.pdf for more details on this scenario).

81 Le Quére, C. et al. Global Carbon Budget 2017. Earth System Science Data. 2017. https://www.earth-syst-sci-data-discuss.net/essd-2017-123/, retrieved 20 November 2017; http://www.globalcarbonproject.org/carbonbudget/17/files/GCP_CarbonBudget_2017.pdf, retrieved 20 November 2017.

82 Carbon Tracker. Stranded Assets. (2017). https://www.carbontracker.org/terms/stranded-assets/, retrieved 28 November 2017.

83 Generation Foundation. Stranded Carbon Assets, Why and How Carbon Risks Should Be Incorporated in Investment analysis. (2013). https://www.google.se/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwj8lPC8p-LXAhWlApoKHQeXBwAQFggmMAA&url=https%3A%2F%2Fwww.genfound.org%2Fmedia%2F1374%2Fpdf-generation-foundation-stranded-carbon-assets-v1.pdf&usg=AOvVaw1WPksmL41F7t1weaGMNM34, retrieved 28 November 2017.

84 Bowen, A., Dietz, S. The Effects of Climate Change on Financial Stability, with Particular Reference to Sweden. Grantham Research Institute on Climate Change and the Environment, London School of Economics and Political Science. 2016. http://www.fi.se/contentassets/df3648b6cbf448ca822d3469eca-4dea3/climat-change-financial-stability-sweden.pdf, retrieved 20 November 2017.

85 MSCI. (2017). MSCI World Index - USD. https://www.msci.com/documents/10199/149ed7bc-316e-4b4c-8ea4-43fcb5bd6523, retrieved 28 November 2017.

86 MSCI. (2017). MSCI World Index - USD. https://www.msci.com/documents/10199/149ed7bc-316e-4b4c-8ea4-43fcb5bd6523, retrieved 28 November 2017.

87 Task Force on Climate-related financial Disclosures. Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures. (June 2017). https://www.fsb-tcfd.org/publications/final-implementing-tcfd-recommendations/, retrieved 28 November 2017.

88 Two Degrees Investing Initiative. Thomä, J. et al. Out of the fog: Quantifying the alignment of Swiss pension funds and insurances with the Paris Agreement. (October 2017). http://www.transitionmonitor.com/wp-content/uploads/2017/10/2ii_Fog_v0.pdf, retrieved 26 November 2017.

89 Greenpeace international. Global Wind Energy Council. Solar Power Europe. Energy [R]evolution, A Sustainable World Energy Outlook 2015, 100% Renewable Energy for All. 2015. http://www.greenpeace.org/international/Global/international/publications/climate/2015/Energy-Revolution-2015-Full.pdf, retrieved 12 November 2017.

90 Asian Development Bank. A Region At Risk: The Human Dimensions of Climate Change in Asia and the Pacific. 2017, https://www.adb.org/sites/default/files/publication/325251/region-risk-climate-change.pdf, retrieved 28 November 2017.

91 Greenhouse Gas Protocol. What Is GHG Protocol. http://www.ghgprotocol.org/about-us, retrieved 28 November 2017.

92 Greenhouse Gas Protocol. Corporate Value Chain (Scope 3) Accounting and Reporting Standard - Supplement to the GHG Protocol Corporate Accounting and Reporting Standard. http://www.ghgprotocol.org/sites/default/files/ghgp/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf, retrieved 28 November 2017.

93 Greenhouse Gas Protocol. Corporate Value Chain (Scope 3) Standard. http://www.ghgprotocol.org/standards/scope-3-standard, retrieved 28 November 2017.

94 Principles for Responsible Investment. About the Montréal Carbon Pledge How to Sign the Pledge : Toronto Atmospheric Fund. 2017, http://montrealpledge.org/wp-content/uploads/2017/11/MontrealPledge_A4-Flyer-2017.pdf, retrieved 28 November 2017.

95 Fondbolagens förening. Guidance for Fund Management Companies ' Reporting of Funds ' Carbon Footprints. 2016, http://fondbolagen.se/PageFiles/7581/Vägledning för CO2-redovisning 160502_ENG.pdf, retrieved 28 November 2017.

96 Task Force on Climate-related Financial Disclosures. Implementing the Recommendations of the Task force on Climate-related Financial Disclosures. (28 June 2017). https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Annex-062817.pdf, retrieved 28 November 2017. The weighted average metrics is applied by actors such as the Netherlands-based insurance and asset management company NN Group: Carbon footprint disclosure, Analysis of carbon footprint of NN Group's Proprietary Assets. (August 2017). https://www.nn-group.com/nn-group/file?uuid=9fd9114c-aa84-408c-821c-aac24aaabe00&owner=8258d08b-0e63-4493-8cb4-6ae2ce7187e3, retrieved 28 November 2017.

97 Sustainable Investment Team. "How Rising Carbon Prices Could Cut Company Profits." Schroders, 2017, http://www.schroders.com/en/insights/economics/a-fifth-of-company-profits-at-risk-from-rising-carbon-prices/, retrieved 28 November 2017.

98 CDP. Climetrics: The Climate Impact Rating. http://www.climetrics-rating.org/, retrieved 28 November 2017.

99 Centre for Social and Sustainable Products. Your SRI: Socially Sustainable Investments. https://yoursri.com/, retrieved 28 November 2017.

100 Swedish Investment Fund Association. Homepage. http://fondbolagen.se/en/, retrieved 28 November 2017.

101 SEB Group. Carbon Report. 16 May 2017. https://sebgroup.com/siteassets/om_seb/fondbolaget/koldioxidrapporter/ethos_aktiefond.pdf, retrieved 20 November 2017.

102 University of Cambridge Institute for Sustainable Leadership. Paris Pledge for Action. http://parispledgeforaction.org/, retrieved 28 November 2017.

103 Science-based Targets. Homepage. http://sciencebasedtargets.org/, retrieved 20 November 2017.

104 CDP Worldwide. CDP. https://www.cdp.net/en, retrieved 28 November 2017.

105 Business Call to Action, and Global Reporting Initiative. Measuring Impact. How Business Accelerates the Sustainable Development Goals. 2016, pp. 1–44, https://www.globalreporting.org/resourcelibrary/Meassuring Impact_BCtA_GRI.pdf, retrieved 28 November 2017.

106 CDP Worldwide. Deforestation Is a Real Business Risk. https://www.cdp.net/en/forests, retrieved 28 November 2017.

107 Forest Trends. Commercial Agriculture Drives at Least Two-Thirds of Tropical Deforestation. http://supply-change.org/#remove, retrieved 28 November 2017.

108 Global Canopy Programme. Forest 500. 2016, https://forest500.org/, retrieved 28 November 2017.

109 Rights and Resources Initiative. Private Sector Risk Analysis Tools. http://rightsandresources.org/en/work-impact/strategic-initiatives/private-sector-risk-analysis/#sthash.gMAmls37.SEiTzhjR.dpbs, retrieved 28 November 2017.

110 Global Witness. Friends of the Earth Europe. Regulating Risk, Why European investors must be regulated to prevent land grabs, human rights abuses and deforestation. (4 November 2016). https://www.globalwitness.org/documents/18640/Global_Witness_Regulating_Risk.pdf, retrieved 29 November 2017.

111 De Schutter, O. International Corporate Accountability Roundtable. Global Witness. Tainted lands, Corruption in Large-scale Land Deals. (15 November 2016). https://www.globalwitness.org/documents/18677/Tainted_Lands_Report_FINAL.pdf, retrieved 29 November 2017.

112 Investopedia. Government Bond. ND. https://www.investopedia.com/terms/g/government-bond.asp, retrieved 20 November 2017.

113 Investopedia. Private Equity. ND. https://www.investopedia.com/terms/p/privateequity.asp, retrieved 20 November 2017.

114 Investopedia. Funds of Funds. ND. https://www.investopedia.com/terms/f/fundsoffunds.asp, retrieved 20 November 2017.

115 TheCityUK. TheCityUK: About. https://www.thecityuk.com/about-us/, retrieved 28 November 2017.

116 TheCityUK, and Centre for Climate Finance & Investment. Growing Green Finance. 2017.

117 APG. APG Is Committed to a Good and Affordable Pension, Now and Later. https://www.apg.nl/en, retrieved 28 November 2017.

118 PGGM. Pension Management: For Your Management and Tailor-Made Communications. https://www.pggm.nl/english/what-we-do/Pages/Pension-management.aspx, retrieved 28 November 2017.

119 Kruse, Claudia. "APG's Claudia Kruse on Linking HLEG with the UN Development Goals." Response Global Media Limited Company, https://www.responsible-investor.com/home/article/hleg/, retrieved 28 November 2017.

PGGM, and APG. Sustainable Development Investments: Taxonomies. 2017, https://www.apg.nl/pdfs/SDI Taxonomies website.pdf, retrieved 28 November 2017.

120 Global Investor Coalition on Climate Change. Low Carbon Investment Registry Introduction. http://globalinvestorcoalition.org/introduction/, retrieved 28 November 2017.

121 Global Investor Coalition on Climate Change. Low Carbon Investment Registry: Taxonomy of Eligible Investment. 2015, http://globalinvestorcoalition.org/wp-content/uploads/2015/10/LCI-Registry-Taxonomy_3rd-Release_211015.pdf, retrieved 28 November 2017.

122 SWESIF. Hållbarhetsprofilen. http://www.swesif.org/hallbarhetsprofilen/, retrieved 20 November 2017.

123 Morningstar. Morningstar Sustainability Rating. (22 September 2016). https://corporate1.morningstar.com/Morningstar-Sustainability-Rating-Methodology-2/, retrieved 20 November 2017.

124 Oxford Martin School. Programmes Carbon Investment. https://www.oxfordmartin.ox.ac.uk/research/programmes/carbon-investment, retrieved 28 November 2017.

125 Fouche, Gwladys. "Swedish Pension Fund Sells out of Six Firms It Says Breach Paris Climate Deal." Reuters. (28 November 2017). https://www.reuters.com/article/us-germany-emissions/german-cities-call-on-merkel-to-release-diesel-pollution-funds-idUSKBN1DS1HJ, retrieved 28 November 2017.

126 The Seventh Swedish National Pension Fund. Sustainability Report 2016. p. 139, https://www.ap7.se/app/uploads/2017/09/Sustainability-report-2016.pdf, retrieved 28 November 2017.

127 FossilFree. Homepage. https://gofossilfree.org/, retrieved 28 November 2017. 350.org. Homepage. https://350.org/about/, retrieved 28 November 2017. DivestInvest. Homepage. http://divestinvest.org/, retrieved 28 November 2017.

128 MSCI. MSCI World Index - USD. 2017, https://www.msci.com/documents/10199/149ed7bc-316e-4b4c-8ea4-43fcb5bd6523, retrieved 28 November 2017.

129 So-called first-generation green indices exclude selected financial sub-sectors, such as coal production, and engage with individual companies. More ambitious second-generation or 'beta indices' for equities use techniques such as 'tilting', which involves overweighting towards companies doing well on decarbonisation, and investing in private equity or small cap companies that are driving the climate transition. There is an ongoing debate in the investor community about how impact focused index fund products are in reality, and to what extent higher risk should be accepted in order to maximise climate benefits. Adapted from: Harris, D. The London Stock Exchange's David Harris on how HLEG can support current investment trends. responsibleinvestor.com. (4 September 2017). https://www.responsible-investor.com/home/article/the_london_stock_exchanges_david_harris_on_how_hleg_can_support_current_inv/, retrieved 28 November 2017.

130 MSCI. MSCI World ESG Leaders Index. https://www.msci.com/documents/10199/db88cb95-3bf3-424c-b776-bfdcca67d460, retrieved 28 November 2017.

131 Investment, Abundance. Invest for a Rainy Less Polluted Day. https://www.abundanceinvestment.com/our-products, retrieved 28 November 2017.

132 Sun Funder. Financing Solar beyond the Grid. http://sunfunder.com/, retrieved 28 November 2017.

133 TheCityUK, and Centre for Climate Finance & Investment. Growing Green Finance. 2017. https://www.thecityuk.com/assets/2017/Reports-PDF/Growing-Green-Finance.pdf, retrieved 28 November 2017.

134 Achmea. Hoe Gaan We Om Met Onze Financiele Reserves? Robin Fransman Zoekt Het Uit. Bekijk de Video. https://www.achmea.nl/Paginas/default.aspx, retrieved 28 November 2017.

135 Achmea. Impactbeleggingen. https://www.achmea.nl/duurzaam-ondernemen/verantwoord-beleggen/impactbeleggingen/Paginas/default.aspx, retrieved 28 November 2017.

136 Copenhagen Infrastructure Partners. About Copenhagen Infrastructure Partners. http://cipartners.dk/, retrieved 28 November 2017.

137 Green Climate Fund. GCF REDD+ Pilot Pushes Paris Momentum, according to COP23 Side Event. http://www.greenclimate.fund/home, retrieved 28 November 2017.

138 Swedwatch telephone interview with Liane Schalatek, Associate Director of the Heinrich Böll Foundation North America, 5 September 2017.

139 Global Witness. Rubber Barons, How Vietnamese companies and international financiers are driving a land grabbing crisis in Cambodia and Laos. (May 2013). https://www.globalwitness.org/documents/10525/rubber_barons_lores_0_1.pdf, retrieved 28 November 2017. Oxfam. The suffering of Others, The human cost of the International Finance Corporation's lending through financial intermediaries. (April 2015). https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/ib-suffering-of-others-international-finance-corporation-020415-en.pdf, retrieved 28 November 2017.

140 SPP and Skandia stated that they have made smaller allocations to companies with small market capitalisation (so-called 'small caps') and to private equity – investments, which generally have higher potential to contribute to climate innovation and solutions - during the period 2014-2017: SPP states that their sustainability niche funds have increased investments in small caps. Skandia added an asset class to its offering in 2015 by starting the Thule Real Estate Fund, which is available for institutional clients only. The fund reflects the return from Skandia's wholly owned real estate company, Skandia Fastigheter. which has engaged in several projects related to renewable energy and energy efficiency.

141 Principles for Responsible Investment. Homepage. https://www.unpri.org/, retrieved 20 November 2017.

142 UNEP Finance Initiative. Homepage. http://www.unepfi.org/, retrieved 20 November 2017.

143 UN Global Compact. COP 23/CMP 13: High-Level Meeting of Caring for Climate. https://www.unglobalcompact.org/, retrieved 20 November 2017.

144 Institutional Investors Group on Climate Change. About Us. ND. http://www.iigcc.org/about-us, retrieved 20 November 2017.

145 Investor Platform for Climate Actions. Aiming for A. http://investorsonclimatechange.org/portfolio/aiming-for-a/, retrieved 28 November 2017.

146 Portfolio Decarbonation Coalition. Latest Annual Report: 29 Investors Representing over $600bn in Decarbonization Commitments Detail Progress Made. http://unepfi.org/pdc/, retrieved 28 November 2017.

147 Portfolio Decarbonation Coalition. PDC Membership Commitment Document for Asset Managers. http://unepfi.org/pdc/wp-content/uploads/PDCmembership_assetmanagersUPDATED1.pdf, retrieved 28 November 2017.

148 Fossilfritt Sverige. Homepage. http://fossilfritt-sverige.se/, retrieved 20 November 2017.

149 ICMA Group. The Green Bond Principles 2017. https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/GreenBondsBrochure-JUNE2017.pdf, retrieved 20 November 2017.

150 Norge203040. VÅR VISJON. http://norge203040.no/, retrieved 20 November 2017.

151 My News Desk. Storebrand/SPP partners up with Global Opportunity Explorer. 24 August 2017. http://www.mynewsdesk.com/se/spp-livfoersaekring/press-releases/storebrand-slash-spp-partners-up-with-global-opportunity-explorer-2120966, retrieved 20 November 2017.

152 Swedish Investment Fund Association. Guidance for Fund Management Companies' Reporting on Funds' Carbon Footprint. May 2016. http://fondbolagen.se/PageFiles/7581/V%C3%A4gledning%20f%C3%B6r%20CO2-redovisning%20160502_ENG.pdf, retrieved 20 November 2017.

153 Investor Platform for Climate Actions. Aiming for A. ND. http://investorsonclimatechange.org/portfolio/aiming-for-a/, retrieved 20 November 2017.

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