Handelsbanken Asset Management Climate Report 2019

In accordance with the recommendations of the Task Force on Climate-related Financial Disclosure

Handelsbanken

About this report

Handelsbanken Asset Management Climate Report 2019 aims to inform our stakeholders about our work related to climate change, our exposure to climate-related risks and opportunities as well as our work going forward. We also hope to contribute to increased transparency and continued development of forward-looking information related to climate change within the financial sector and in the wider economy.

The report is prepared in accordance with the recommendations of the Task Force on Climate-related Financial Disclosure. The focus is on how climate change is affecting us as an asset manager, but also includes comments on how we as an asset manager are affecting the climate.

This is the second time Handelsbanken Asset Management is publishing a climate report, the first time being last year (2018). Starting with this report, our semi-annual carbon-footprint report 'Carbon-footprint in our funds' will be incorporated in the appendix to this Climate Report, 'Appendix A – Metrics and Targets, Fund Level'.

Handelsbanken Asset Management refers to funds managed by Handelsbanken's two fund management companies, Handelsbanken Fonder AB (active asset management and multi-manager solutions, henceforth referred to as active management and asset allocation) and Xact Kapitalförvaltning AB (passive asset management, henceforth referred to as passive management). By the end of 2019, the total assets managed in these funds totalled SEK 639 billion.

SEK 639 billion
in total assets managed

253
engagements with companies on environmental issues

90 % of AUM
managed with our fossil fuel exclusion strategy

About TCFD

The international Task Force on Climate-related Financial Disclosure (TCFD) was formed in 2015 and tasked with correcting the shortage of information regarding companies' work on, and management of, climate change. The TCFD has developed a reporting framework focused on providing decision-useful information to lenders, insurers and investors. The widespread adoption of the TCFD would allow for climate change to be factored into financial decision making, allowing a more efficient allocation of capital, and help smooth the transition to a low-carbon economy.

The TCFD published its final report in June 2017, structuring its recommendations into four areas: Governance, Strategy, Risk Management, and Metrics and Targets. Together with underlying disclosure within each area, the framework provides a standardised and relevant way of helping investors and others understand how the reporting organisation assesses and manages climate-related risks and opportunities.

Contents

Foreword – CEO and Head of Responsible Investment

Handelsbanken Asset Management is a long-term investor working towards creating financial wealth and planetary health. It is our responsibility to help create a long-term sustainable future for all our stakeholders, including both a prosperous planet and a successful financial situation. To achieve this, we must work towards a net-zero carbon economy, but we must also understand how the changing climate will affect our investments.

Currently, at the time of publishing this report, we are experiencing a unprecedented global health crisis from Covid-19. The short term resilience of our societies is being tested and there is a global mobilisation to transform our societies and adapt to a new reality. The crisis has led to fears of a global recession, but it also presents a range of implications for climate change. The immediate impacts of Covid-19 include emission reductions, but the longer–term impacts on resilience-building and climate actions are complex and impossible to fathom today. However, how we react may provide insight into how prepared we are for the increasing frequency of disasters and how financial institutions can prepare for sudden disruptions.

For a long time science has been telling us that the impacts of climate change are happening right now. For many, 2019 will be seen as the year of the wildfires, from the Amazonas, to the less covered outbreaks in Siberia, and the wildfires in Australia. 2019 was also the year when Fridays for Future and Greta Thunberg became household names across the globe. 2019 was not the hottest year ever recorded, but it came in at a close second.[1] We can also look back on the hottest decade as well as the hottest five-year period.

"Is there a silver lining? Perhaps. At least we know what needs to be done, and we have the momentum to do it"

Is there a silver lining? Perhaps. At least we know what needs to be done, and we have the momentum to do it. The 'Report of the Intergovernmental Panel on Climate Change (IPCC) on the Impacts of Global Warming of 1.5°C above pre-Industrial Levels' (2018), demonstrates that we must limit global warming to 1.5°C by the end of this century to avoid irreversible and catastrophic impacts. This means that carbon dioxide (CO_2) emissions need to decline by about 45 per cent by 2030 and reach net zero in 2050. This is within reach, but as IPCC puts it; 'it would require urgent and unprecedented social and economic transformation'.

Urgent and unprecedented social and economic transformation will challenge us as investors. It means that we have to understand and value other qualities in companies. We need to understand what a forestry is doing to prevent wildfires, the different abatement costs for carbon intensive industries when pressured to reduce carbon emissions, and the list goes on.

But change is not only negative. Change will also bring new winners, and it is equally important for us to be able to identify them. Renewable energy, revolutionary new recycling technologies and low-carbon protein are some areas where we have already seen large gains.

Article 2(c) of the Paris Agreement reads 'making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development'. This is a call for the finance industry to become part of the solution, but it is also a recipe for how to be a successful investor. By investing in line with a sustainable, climate-resilient path we can capitalise on climate-related opportunities while minimising our climate-related transition risks. However, it is not enough to invest in line with sustainable development. The physical climate-related risks have started to materialise and will continue to do so for years, even if we were to stop emitting carbon today. Physical climate

"We are working towards the decarbonisation of our portfolios while increasing our investments in climate solutions."

risks can impact climate positive activities as much as negative ones they are agnostic. Therefore, we need stress-tests that include physical climate risks. In 2019, we took our first step towards systematically assessing these risks in our asset management.

What more have we been doing at Handelsbanken Asset Management in 2019 to mitigate the risks and capitalise on the opportunities of climate change?

- All our funds intended for the Swedish market have adopted our fossil fuel exclusion strategy (corresponding to 90 per cent of our total AUM).[2]
- Our exclusion strategy has been refined to include the possibility of investing in companies in transition for funds in active management and asset allocation.[3]
- We have increased our involvement in investor networks, primarily in the Institutional Investors Group on Climate Change (IIGCC), contributing with our experience and expertise in an initiative that strives to define what it means for an investor to be aligned with the Paris Agreement.[4]
- We have engaged with 23 companies directly on environmental issues, and 230 companies on environmental issues via pooled engagements and initiatives with other investors. We have been one of the lead investors in a Climate Action 100+ engagement.[5]
- We partnered with a researcher at Stockholm School of Economics to develop and automate our SDG-exposure model to be able to use it systematically on all our funds to better measure our total exposure to climate opportunities.
- And, as mentioned earlier, to asses both transition and physical climate-related risks, we have initiated a stress-test process for all our funds.

We have a lot of work ahead of us in 2020. In addition to contribute towards a long-term sustainable future, we also need to follow the development in society and in our funds with regard to the spread and impact of the coronavirus Covid-19. We will set sustainability targets for Handelsbanken Asset Management. We have a direction for where we want to go and are working hard to integrate sustainability in to all our operations. Regarding climate change specifically, we are working towards the decarbonisation of our portfolios while increasing our investments in climate solutions. In the next step, we will formulate targets and define how to measure our progress in order to push ourselves even further.

Stockholm, March 2020

Magdalena Wahlqvist Alveskog,
CEO Handelsbanken Fonder

Karin Askelöf, *Head of Responsible Investment, Handelsbanken Asset Management*

[1] 2019 was less than one-tenth of a degree hotter than 2016, the hottest year ever recorded.
[2] We exclude companies with revenue exposure over 5 per cent from production, extraction and distribution of fossil fuels and companies with revenue exposure over 50 per cent from services towards fossil fuel companies.
[3] handelsbanken.com/tron/xgpu/info/contents/v1/document/76-90654.
[4] iigcc.org/download/iigcc-paris-aligned-investment-initiative/?wpdmdl=2292&refresh=5e3a878759f0e1580894087
[5] climateaction100.org

Governance

Governance is the foundation of our work around climate change. Through the integration of Climate Change into policy, strategy and business development we aim to ensure that Handelsbanken Asset Management moves towards alignment with the Paris Agreement.

Board's oversight of climate-related risks and opportunities
Each fund company has its own board of directors in charge of overseeing the implementation of their respective sustainability strategies, which incorporate climate change. Climate change is part of decisions relating to overall strategic direction, the formulation of annual business plans and the adoption of policies. The boards are continually informed by business operations concerning strategy implementation and business progress, such as share of asset under management with fossil fuel exclusion strategy and the carbon footprint of our funds.

The boards also review and approve policy development, including the Policies for corporate governance and responsible investment which govern all our assets under management. The Policies include specific criteria relating to climate change, such as the ambition to align portfolios with the Paris Agreement. The Policies also give strategic direction for our voting at AGMs and for the active management, work in nominating committees.

How Management assesses and manages climate-related risk and opportunities
Management is in charge of monitoring and developing the work around climate change, which includes governance and strategy development. Dedicated Heads of Responsible Investments are members of the management teams and report directly to the respective Chief Executive Officer (CEO). The Heads are responsible for developing and coordinating work around climate change and keeping the organisation informed about global and industry development relating to the issue of climate change in order to manage it. The responsibility for the implementation of strategies and policies lies with the Chief Investment Officers (CIOs) in active and passive management as well as in asset allocation. Within active management and asset allocation, the CIOs are also responsible for integrating risks and opportunities relating to climate change into all investment analysis and decisionmaking.

The Council for Responsible Investments reviews and evaluates the effectiveness of climate-related work and approves and coordinates such work in different

"Management is in charge of monitoring and developing work around climate change"

parts of Handelsbanken Asset Management. Members of the Council are the CEO, the Head of Responsible Investment, and CIO for active and passive management and asset allocation.

Within active management the Committee for Sustainability Risks is tasked with analysing and evaluating the sustainability risks and performance, including climate change, of each fund. The Committee consists of CEO, CIO, investment management group directors, Head of Risk, and Head of Responsible Investment.

In 2019, we established the Sustainability Committee with the purpose of having a forum to discuss and inform the CEO's decision on methodology developments and other sustainability-related issues. The Committee consists of the CEO, CIO, investment management group directors, and Head of Responsible Investment.

Way forward

The funds that are currently managed within Xact Kapitalförvaltning (passively managed funds) will from 1 April 2020, pending the Swedish financial supervisory authority's permission, be managed by Handelsbanken Fonder. Xact Kapitalförvaltning will cease to manage assets per the same date. This action will strengthen and simplify Handelsbanken Asset Management's governance structure in general and in regard to climate risks and opportunities in particular. We will also have one Policy for Responsible Investment and Corporate Governance going forward, reflecting our common stance as well as the different methods used in different management styles.

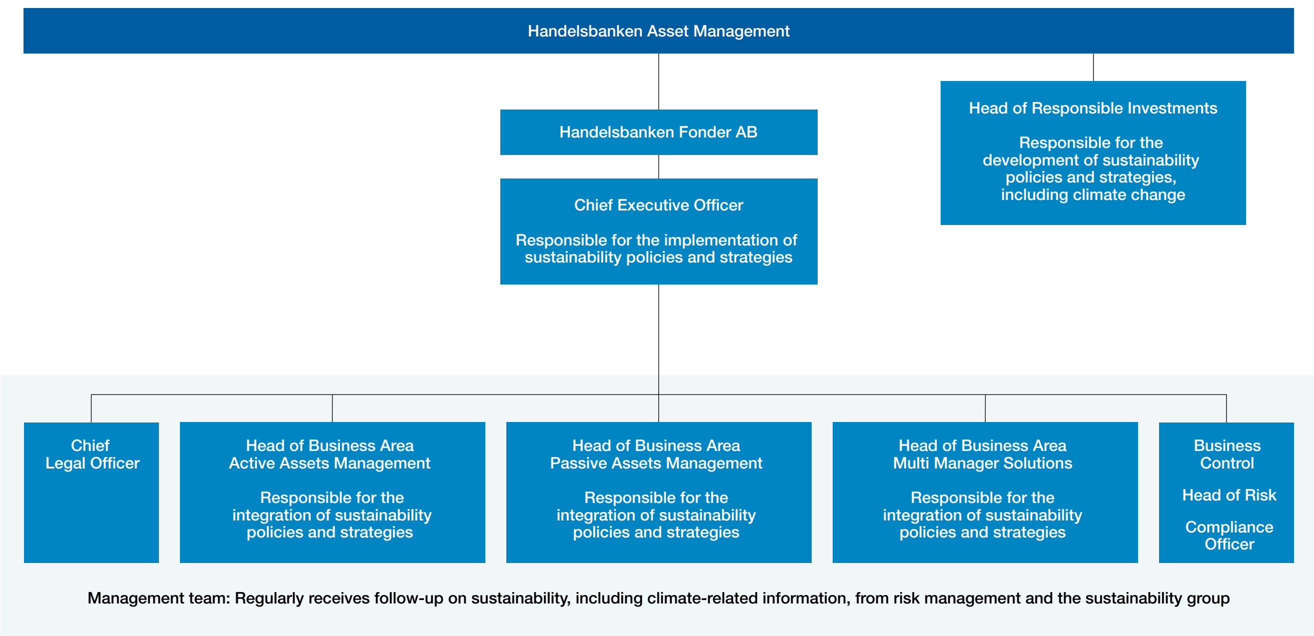
In the new structure, the CEO of Handelsbanken Fonder will be responsible for the implementation of sustainability-related policies and strategies. The Heads of active and passive management and asset allocation will be responsible for the integration of climate risks and opportunities in accordance with the policies and strategies in the respective business areas. All this will be guided by the Head of Responsible Investment who will take on the responsibility of coordination and the development of policies and strategies related to sustainability and climate change.

Besides these structural changes, we have initiated the following actions to strengthen governance around climate-related risks and opportunities:

- Widen the scope of the Committee for Sustainability Risks and the Sustainability Committee to also include passive management and asset allocation.
- Set goals for Handelsbanken Asset Management's sustainability work, including specific goals tied to our ambition of supporting the Paris Agreement.
- With the basis in our coming goals, further develop the scope of reporting regarding transition-related risk and opportunities as well as physical climate risks to the board.

"The Committee for Sustainability Risks is tasked with analysing and evaluating the sustainability risks and performance, including climate change, of each fund"

Our governance structure for climate-related risks and opportunities going forward



Strategy

Handelsbanken Asset Management takes a long-term perspective on investments, integrating issues relating to climate change in all major business and strategy decisions. We see transition risks playing out already today in tougher regulations and changing consumer demands. We have yet to see physical climate risks being fully reflected in asset valuations, but even if the most impactful physical risks play out in the long-term perspective, the repricing of asset values will occur much sooner.

HOW DO WE RESPOND TO CLIMATE CHANGE?

Climate change has been a strategic focus within Handelsbanken Asset Management for many years. We have been excluding investments in companies dependent on coal since 2015 and have taken a precautionary approach to the entire fossil fuel industry for several years. In 2018 we made a policy commitment to the Paris Agreement and took the strategic decision to widen our fossil fuel exclusion strategy to the majority of our funds.

Going forward we will systematically continue our work within three strategic pillars and capacity building:

Strategic pillars:

1. Decarbonise our portfolios
2. Invest in climate solutions
3. Active stewardship on climate change

Building capacity:

4. Educate our portfolio managers and other key personnel

1. Decarbonise our portfolios

Given our strategic decision to exclude fossil fuel in the majority of our funds, 90 per cent of our total assets under management used our fossil fuel exclusion strategy at the end of 2019. We do not believe divesting from every sector with enhanced climate risks is the way to decarbonise our portfolios. We do, however, believe that the current rate of change in oil and gas companies is too slow, and that our possibility for meaningful engagements to improve that pace, is limited. Therefore, we see divestment from the sector as the right way forward in this particular case.[6]

Going forward, we will work with our exposure to other high-risk sectors, informed by scenario analyses.[7] Much of this work will be centred around investing in the leaders within these sectors as well as finding ways to leverage our engagements with companies in which we see the possibility for change.

2. Invest in climate solutions

Decarbonising our portfolios will mitigate our climate-related risks, but it will not help us capitalise on climate-related opportunities. We must actively work to increase our exposure to climate solutions while decarbonising, rather than only shifting our investments to more neutral sectors.

In 2019, we finalised and adopted transition criteria for what we call Transition companies – utility companies that are changing from fossil fuel to renewable energy in line with the Paris Agreement. We see this as an important step towards increasing our exposure to climate solutions in the form of renewable energy. However it is also important in terms of supporting the transition within the power sector, one of the key sectors in the decarbonising of our economy.

Our current criteria requires manual analysis of the companies to ensure they are transitioning as promised. Therefore, the criteria apply to our active management and asset allocation but not to passive management. Within our passive management, we are looking at ways to implement similar criteria systematically. Here, the work in the EU Sustainable Finance working group on Paris-aligned benchmarks is promising and something we are following closely.

In our active management, environmental solutions, with climate solutions as the dominant sub-theme, is one of four key themes that help guide our investment processes. We also actively work towards finding smaller companies with new innovative climate solutions. The prime example is Hållbar Energi, our flagship product within climate solutions, which only invests in companies providing these solutions.

During the year, within active management we have also further developed our model for analysing revenue exposure towards the Sustainable Development Goals (SDGs). The model includes investments in climate solutions as this is a vital part of the 2030 Agenda and will enable us to measure our exposure to these solutions. During the first half of 2020, our intention is to deploy the model for all our actively managed funds. In 2020 we will also evaluate the possibility to use it for our passive management and asset allocation.

Within our passive management we work quantitatively to develop the positive inclusion of companies based on sustainability criteria. An important part of this work is our collaboration with index providers creating new benchmark, which enable us to create more sophisticated products and increase our offering of products integrating climate-related risks and opportunities.

Going forward we will systematically continue our work within three strategic pillars and capacity building:

Strategic pillars:

1. **Decarbonise our portfolios**
2. **Invest in climate solutions**
3. **Active stewardship on climate change**

Building capacity:

4. **Educate our portfolio managers and other key personnel**

"The SDG model includes investments in climate solutions as this is a vital part of the 2030 Agenda and will enable us to measure our exposure to these solutions."

[6] For a more thorough discussion, see our discussion paper 'Exclusion as a Means for Decarbonisation'.
[7] See section 'Climate-related risks and opportunities and our resilience towards different outcomes' for discussion of high-risk sectors.

In asset allocation, our inclusion lies within the selection of fund managers and funds that align or contribute positively to a sustainable development as set out in the 2030 Agenda. We strive to increase investments in solutions and thereby contribute to the achievement of the Sustainable Development Goals and to the transition to a low-carbon world. In the selection of investments, we assess the following dimensions: (i) Methodology for assessing investments alignment with SDGs or direct positive SDG impact, and (ii) Methodology for measuring, follow up and reporting on a continuous basis.

The EU Sustainable Finance working group on a green taxonomy is something we are following closely. The taxonomy will be heavily influential in the market and will help guide a harmonisation on how to define climate solutions activities. In 2019, we analysed our fund Handelsbanken Hållbar Energi against the proposed taxonomy. We found that 77 per cent of the aggregated revenues in the fund would have a high likelihood of meeting the criteria set out in the taxonomy, as compared to our internal SDG exposure model that says 82 per cent of aggregated revenues are contributing to climate solutions. The small difference in the results is explained by our model including more supporting activities, such as specific consultancy services tailored to energy efficiency in buildings.

3. Active stewardship on climate change

As a large institutional investor, we have the possibility of engaging with companies and the industry to help support the transition to a net-zero carbon economy. This commitment has led Handelsbanken Asset Management to vote in favour of several shareholder proposals pushing companies to identify and report on climate-related issues, for example through climate-related scenario analysis. We also participate in several collaborative engagements such as the PRI engagement on Methane Risks and Climate Action 100+.

Direct engagements with companies continue to play an important part in our stewardship within active management. In 2019, we increased our engagements with heavy emitters in Asia, as this constitutes one of our biggest exposures to greenhouse gas emissions. We also increased our engagement in industry networks working to promote sustainable finance. One example is our efforts in the Institutional Investors Group on Climate Change (IIGCC) and specifically in the working group trying to develop industry standards for how to define and measure what it means for an investor to be aligned with the Paris Agreement.

Going forward we will work towards being more systematic in our climate change engagements. This includes participating in initiatives and collaborative engagements more systematically based on our key climate-related risks, engaging more in manager selection informed by our climate stress tests, and taking greater responsibilities within the working groups of Climate Action 100+.

4. Educate our portfolio managers and other key personnel

During the year, we collaborated with a meteorologist on lectures and workshops for our portfolio managers in active management about the physical properties of climate change. We also invited researchers from Stockholm Resilience Centre to talk about their report on tipping points and the financial industry's role in engaging with the companies doing business in these important areas. Further, we held internal seminars on climate change for our other key personnel, led by our sustainability group.

In 2020 we will continue our collaboration with the meteorologist via lectures on the physical properties of climate change for our other key personnel. We will also work closer with our portfolio managers in asset allocation to strengthen their knowledge about climate change as a systemic risk for the financial sector and whole asset classes. Further, we will explore other ways in which we can engage with academia, both in Sweden and abroad, to help our portfolio managers and other key personnel stay on top of the latest research.

CLIMATE-RELATED RISKS AND OPPORTUNITIES AND OUR RESILIENCE TOWARDS DIFFERENT OUTCOMES

Climate-related risks are diverse, complex and often hard to measure. They are unevenly spread geographically and are related to both the transition away from, and the physical consequences of, emissions of greenhouse gases. The basic principle is that a faster and more significant reduction in greenhouse gas emissions results in more significant transition risks and less physical risk, and conversely, a slower and less significant reduction of greenhouse gas emissions results in higher physical risk. However, as we have discussed earlier in this report, even if we stopped carbon emissions today, physical climate risks would still be significant due to the accumulated carbon in the atmosphere.

In 2019, we analysed all our portfolios with the help of a stress-test tool developed by 2° Investing Initiative and the Bank of England.[9] We also used complementary resources to help understand and validate the results. The following is a presentation of our key conclusions in terms of our overall exposure per business area to climate-related risks and opportunities, as well as our resilience towards different outcomes.

"As a large institutional investor we have the possibility to engage with companies and the industry to help support the transition to a net-zero carbon economy."

"In 2019, we increased our engagement with heavy emitters in Asia, as this constitutes one of our biggest exposures to greenhouse gas emissions."

[9] Read more about the stress test tool in the section 'Metrics and Targets'

Historical yields are not a guarantee of future returns. The money you invest in a fund can both increase and decrease in value and it is not guaranteed that you will recover the entire invested amount.

Active Management

KEY RISK EXPOSURE
- Fossil fuel-based materials
- Non-electric vehicles
- Real estate in our fixed-income portfolios

EXPOSURE WITH BOTH HIGH RISKS AND HIGH OPPORTUNITIES
- Food logistics
- Agriculture

OPPORTUNITIES
- Low-carbon power and electric vehicles in some of our products, but low exposure on the aggregate level

RESILIENCE
- High. We choose what we invest in and can thus change portfolio exposure in a short period of time.
- The most impactful scenario would be if the economy fails to decarbonise and we see physical climate risks playing out in full.

Passive Management

KEY RISK EXPOSURE
- Fossil fuel-based materials
- Non-electric vehicles
- Real estate

EXPOSURE WITH BOTH HIGH RISKS AND HIGH OPPORTUNITIES
- Food logistics
- Agriculture

OPPORTUNITIES
- Low exposure on the aggregate level

RESILIENCE
- Medium. The exclusion of fossil fuels mitigates climate risks. But the difference in outcome is greater between different scenarios for our passive management compared to active management and asset allocation. It takes more time to change the exposure as we must construct new products/develop new methodologies for the current products.

Asset Allocation

KEY RISK EXPOSURE
- Non-electric vehicles
- Real estate

EXPOSURE WITH BOTH HIGH RISKS AND HIGH OPPORTUNITIES
- Food logistics
- Agriculture

OPPORTUNITIES
- Substantial exposure to low carbon power on the aggregate level

RESILIENCE
- Medium-high. We choose what funds we invest in and can thus change portfolio exposure in a short period of time. Our choices are more limited than for an equity portfolio.
- The most impactful scenario would be if the economy fails to decarbonise and we see physical climate risks playing out in full.

Active management
Given our current portfolio holdings, our highest climate-related risk is our exposure to food logistics and agriculture on the equity side. This holds for three different scenarios we have stress-tested, ranging from a sudden and disorderly transition (high transition risks and lower physical risks) to no transition at all (low transition risks and high physical risks).

We also see climate-related risks in our exposure to non-electric vehicles and fossil fuel-based materials. If there would be no transition, meaning the global temperature would continue to rise, we see the physical risks being elevated in our real estate exposure as well as our exposure to the sectors classified as 'all other sectors'.[9]

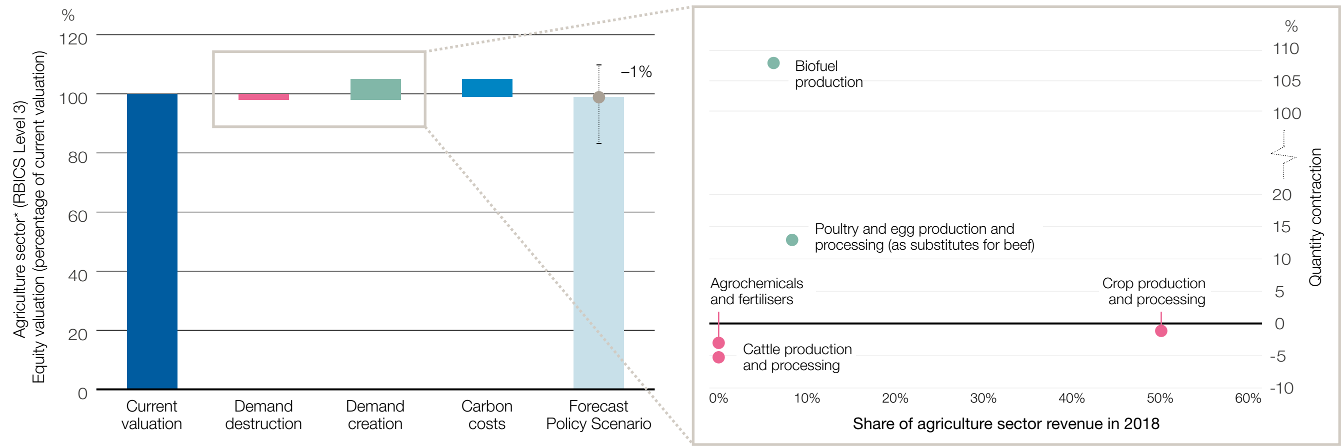
In our fixed income portfolios, we have only analysed our exposure to corporate bonds (not government bonds). In our corporate bond exposure, we have a high exposure to real estate. We see the greatest risks in our corporate bond portfolios in a scenario where no transition occurs and the physical risks are elevated for real estate and all other sectors.

It is important to note however, that the sector exposures mentioned above are where we have identified our most important climate risks on the subsector level. The discrepancies between companies within these groups will be larger, and it will therefore be important for us to continue breaking down the analysis to our actual holdings within these exposures. A good example of this is found in an analysis performed by the Principles for Responsible Investors (PRI) together with Vivid Economics on how a global index would be impacted by PRI's Inevitable Policy Response (IPR) scenario (a scenario focusing on policy risks). Their results points to a -1 per cent repricing of the agriculture sector as a whole, but upon further breakdown, find a large upside in biofuels and poultry while seeing the downside risk of cattle and agrochemicals being much greater than -1 per cent. This points to a shift in the industry dynamics within agriculture while the industry as a whole is expected to be only marginally affected.

"This points to a shift in the industry dynamics within agriculture while the industry as a whole is expected to be only marginally affected."

[9] See 'Appendix B – Supplementary Information' for more information about the classification of sectors.

Analysis of the equity valuation of the agricultural sector given PRI's IPR Scenario*



*PRI & Vivid Economics IPR FPS. https://www.unpri.org/download?ac=985

Given the discrepancies between companies with the same subsector exposure, some of our biggest opportunities are also found in our exposure to food logistics and agriculture. However, this is less so in non-electric vehicles and fossil fuel-based materials, which are more homogeneous in their risk profile.

The other opportunities we see are in low-carbon power and electric vehicles. Overall, we have limited exposure to these sectors today. At the product level however, we see some funds well positioned to capitalise on these opportunities. Handelsbanken Hållbar Energi is the leading example, with an exposure to low-carbon power that would give a positive repricing of around five to seven per cent if a transition were to occur, given the assumptions of this modelling exercise.

Passive management

In passive management, the difference in impact is greater between different scenarios in comparison to active management. This is to be expected as passively managed funds do not have the same concentration of exposure to certain sectors as actively managed funds can have.

We see elevated climate risks in the sub-sectors; food logistics, agriculture, non-electric vehicles and fossil fuel-based materials. However, the closer we come towards no transition, real estate and all other sectors emerge as the most important risks. Agriculture is the biggest discrepancy in comparison with a global benchmark due to us having a higher Nordic exposure in our aggregated portfolio, a geographic region with higher exposure to agriculture.

Capturing more of the positive upside will be an important step going forward for our passive management. The first step, and the one with the biggest impact, will be to reach a solution to systematically include the utilities that are in transition, thus capturing the upside in low-carbon power while still mitigating the risks from coal and gas power generation.

Asset allocation

Our asset allocation has the same fundamental exposure as our active and passive management: agriculture and food logistics as the primary risk exposures in the first two scenarios, and real estate and all other sectors in the in the no transition scenario. Currently we have a much lower exposure towards non-electric vehicles and fossil fuel-based materials in comparison with our active and passive management.

What distinguishes asset allocation is that we currently have a higher exposure to low-carbon power at the aggregate level. This results in substantial positive repricing in both cases were a transition to occur. The reason for this is that compared to our active management, our asset allocation did not exclude all utilities with fossil fuel exposure and then open up for transition companies, but rather deployed the fossil fuel strategy including the transition criteria directly.

"Handelsbanken Hållbar Energi is the leading example, with an exposure to low-carbon power that would give a positive repricing of around five to seven per cent if a transition were to occur, given the assumptions of this modelling exercise."

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Way Forward

With almost all of our funds excluding fossil fuels, it is natural to see that climate risks from exposure to fossil fuels at the aggregate level are close to zero in our modelling exercise. In comparison, if we look at a global index without any exclusion criteria, that benchmark would face the greatest climate risks in exposure to oil extraction and coal power in the two scenarios where a transition does occur. In the scenario where a transition does not occur, the most impactful risk, including for a global index, is in all the other sectors.

We see no need to widen our exclusion strategy to more sectors on the basis of climate-related risks. We believe our current strategy is capable of handling the risks we see going forward. Therefore, the continued work around identified high-risk subsector exposures will continue within the respective business areas, guided by the sustainability group. In the short term we do not foresee any strategic changes as our decision to exclude fossil fuels.

In active management and asset allocation, our resilience lies in our possibility to actively make investment decisions. Here, more than anything, the key is the skills and abilities of our portfolio managers to understand climate-related risks and opportunities. We will continue our focus on educating our portfolio managers and other key personnel. In passive management, we must be more strategic in the construction of our products, and we will therefore continually, and to a larger extent, evaluate the products themselves from a climate-related risk and opportunity perspective. We will also, in all our business areas, continue to evaluate the need for more niched products focusing specifically on capitalising on the transition to a net-zero carbon economy.

About our fossil fuel exposure

In our funds intended for the Norwegian market, we do not deploy our fossil fuel exclusion strategy.[10] In the stress-test exercise, we see elevated risks, based on the exposure to oil and gas exploration and production, in comparison with our other funds in both scenarios where a transition does occur. We also see in our scenario analysis based on the PACTA tool that the companies we are invested in do not have five year plans in line with the Paris Agreement. This is also reflected in the assessment of our alignment on aggregate level. In 2020 we will evaluate how we can move forward with our fossil fuel exposure in these funds. It is a complex issue as the risk lies not only in the integrated oil and gas companies but also with all companies with revenue exposure to these companies, which constitutes a large share of the Norwegian market.

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[10] Handelsbanken Høyrente, Handelsbanken Kort Rente Norge, Handelsbanken Norge, Handelsbanken Obligasjon, Handelsbanken Norge Index, and Xact OBX.

Risk Management

Our long-term success as an Asset Manager is dependent on our ability to identify, assess and manage risk. We consider climate change to be a long-term and evolving systemic risk to the global economy, affecting not only industries and individual companies, but potentially also entire asset classes such as equities and bonds through its potential impact on the global economy. We take an integrated approach to risks related to climate change and work continuously to improve our risk management processes.

PROCESS FOR RISK IDENTIFICATION AND ASSESSMENT

Sustainability Risk Committee

This year's scenario analysis and stress-test endeavour has been of exploratory nature, and for the first time has also included our asset allocation. Going forward, a similar process will be formalised and carried out on an annual basis. The purpose is to establish a process which will help guide strategic decisions by providing information at the aggregated level, as well as informing portfolio management decisions at the fund level via detailed information about each fund.

The formalised process will be incorporated into our Sustainability Risk Committee, which up to today has included actively managed funds and has had a focus on sustainability risks more broadly. The primary resources have been ESG ratings from MSCI and Arabesque and carbon footprint (with data from ISS ESG). On a semi-annual basis, carbon footprint has been analysed for each fund and presented in the Committee, whereas ESG ratings have been reviewed quarterly.

Going forward, the broader focus on sustainability-related risks will remain but will be complemented with a section on climate-related risks and opportunities. The Committee will also include funds within passive management and asset allocation.

Metrics to be included in the section on climate-related risks and opportunities is something that will be decided during the year. For this year's scenario analysis and stress-test, which have been conducted outside the scope of the Sustainability Risk Committee, the resources used have been the Paris Agreement Capital Transition Assessment tool developed by 2° Investing Initiative (2°ii), the stress-test tool developed by 2°ii together with Bank of England and ISS ESG's climate analysis. These analyses will be the foundation for our continued work in 2020, where we start from the identified high-risk subsector exposures and break down the analysis further to the company level. The overall structure is similar to how the process in the Committee will inform continued work in each business area moving in to next year (2021).

Shared global analysis in active management

Within active management, a shared global analysis is the foundation for the investment management team. In quarterly strategy meetings, global developments such as climate change and associated investment risks and opportunities, are analysed to form our view of the future. During these meetings, potential investment themes are prepared based on relevant developments such as technological shifts, market changes or developments in regulations. Each portfolio management team then conducts further analysis in order to identify risk and opportunities in their specific investment areas. During this process, climate-related risks are continuously present.

RISK MANAGEMENT PROCESS

Company-wide Exclusion

Sector exclusion forms the first line of defence against climate risk in our risk management process. We use exclusion primarily when a sector has high sustainability risks, when it is not aligned with our vision of long-term sustainable asset management, and when we believe our ability to influence companies to align with a sustainable development is limited. As previously mentioned, the majority of our funds use our fossil fuel exclusion strategy. The few funds which do not deploy this strategy, however, do exclude involvement in coal mining and significant involvement in coal power generation.

Active management

As a portfolio manager at Handelsbanken Fonder, you are the sustainability analyst for your portfolio. Our team of sustainability experts are on hand to assist in the process but the responsibility lies with the portfolio manager. Our portfolio managers have access to both general sustainability-related information, as well as more climate-specific information. In conjunction with the quarterly meetings in the Sustainability Risk Committee, portfolio managers with elevated risks according to any of the metrics reviewed are invited to present their case. The case might be why the metric does not reflect the true risks, or why there is confidence accepting the risk or, if it is a case in which the manager needs

"This year's scenario analysis and stress-test endeavour has been of an exploratory nature, and for the first time has also included our asset allocation."

assistance in formulating an engagement plan for the company.Direct engagement and active ownership are important tools for managing climate risks. As long-term owners we engage with management and press for improvements with regard to tackling climate change, increased transparency and reporting, as well as vote for climate proposals on AGMs. We are also actively involved in collaborative engagements, primarily Climate Action 100+.

Passive management

In passive management, the management of climate risks takes place in product development and via asset stewardship. Given the rules-based nature of passive investments, it is key that the choice of benchmark in product development incorporates sustainability factors. As a complement, themes and strategic areas related to climate risk are also identified as part of the ongoing management and serve as the starting point for engagement and asset stewardship. Going forward, this process will be informed by the Sustainability Risk Committee.

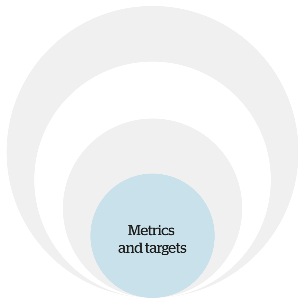
Within passive management, our main tool for engagement on climate risks is to participate in collaborative engagements such as Climate Action 100+ and PRI engagement on Methane Risks. We also use our influence as shareholders. In 2019, we voted in favour of several shareholder proposals pushing companies to identify and report on climate-related issues, for example through climate-related scenario analysis.

Asset allocation

In asset allocation, the management of climate-related risks takes place in the manager selection process. To date, manager selection has been informed by broader ESG ratings, carbon footprinting and qualitative assessment of managers' capabilities to manage climate-related risks. Going forward, we will work to strengthen this process with more climate-specific metrics via the Sustainability Risk Committee. We will also increase our engagement with managers over climate-related issues, with the basis in TCFD's recommendations and our scenario and stress-test analyses of the specific portfolios.

"In 2019, we voted in favour of several shareholder proposals pushing companies to identify and report on climate-related issues, for example through climate-related scenario analysis."

Metrics and Targets



At Handelsbanken Asset Management, we have used a carbon footprint metric for many years. This has been one of the few metrics easily available to asset managers for measuring exposure to climate-related risk. The limitations of carbon footprint metrics are well known, and in the last couple of years, additional metrics have emerged. In 2017, we performed our first scenario analysis and 2019 was the first year we assessed our climate-related risks and opportunities with dedicated climate-related stress-tests.

CARBON FOOTPRINT

In the beginning, the measuring and reporting of the carbon footprint of our funds was conducted from a responsibility perspective, i.e. how much of our portfolio companies' emissions were attributable to us, calculated as the emissions in proportion to our ownership of the company's stocks. Dividing this by our portion of the portfolio companies' sales gave us the carbon intensity of our respective funds. This was also industry-standard in Sweden up to the end of 2019.

From 2020, the new industry standard will be based on the risk-focused alternative carbon metric, weighted average carbon intensity. The key difference of the new industry standard is that it measures a portfolio's exposure to carbon-intensive companies (i.e. better reflects the risks) instead of 'our part' of our portfolio companies' emissions. Given the difference, the metrics are not perfectly comparable, but they do generally point in the same direction. Larger differences arise when, for example, a portfolio has high portfolio exposure to a carbon intensive company while the ownership in this company is very small. The carbon-intensity of the company will then have a much greater impact on the weighted average carbon intensity than the ownership-based carbon intensity.

Carbon footprint is a good starting point, and the adoption of the weighted average metric is a step forward. However, this metric also has several limitations in terms of measuring climate-related risks, including data reliability, scope and coverage, being backward-looking and not factoring in the sector-specific emissions reductions required to fulfil the Paris Agreement. Therefore, carbon footprint is only one of several climate metrics we use internally. In 2020, we will also start to report complementary climate metrics on the fund level.

Going forward, we will follow the new industry standard in Sweden and report on the weighted average carbon intensity. In the table below, we present the metric at the aggregate level for each of our business areas. In 'Appendix A – Metrics and Targets, Fund Level', the metric is presented at the fund level along with a short summary of the results. Given that this is the first time we present the carbon intensity via weighted average instead of 'ownership', we will include 'ownership' data where necessary to exemplify the differences and similarities in outcome.

At aggregate level, we can see that the discrepancies between the weighted average and 'ownership' metric are small. It is to be expected that, as on the aggregate level, the specific company exposures are limited as compared to at the individual fund level. We can also see that our aggregate exposure to carbon-intensive companies is smaller in each business area than for a global index without any exclusion strategy. The trend is also downwards, but with a limited sample.

"We can also see that our exposure on aggregate to carbon intensive companies is smaller in each business area than for a global index without any exclusion strategy."

The difference in carbon intensity between active management and passive management is due to active management having a higher exposure to emerging markets in the product offerings at the aggregate level. Our passive and active management as well as asset allocation have a higher exposure to the Nordics in comparison with a global index, which means that we on aggregate (also without exclusion strategy) will have a lower carbon intensity than a global index, but it is still a relevant reference point as it describes the characteristics of the global listed market in which we operate.

CLIMATE-RELATED SCENARIO ANALYSIS AND STRESS-TEST

A climate-related scenario analysis can either try to answer the question of 'how do our investments affect

Summary of our carbon intensity

	Weighted Average Carbon Intensity (tCO_2e/mSEK Revenue)			Ownership carbon intensity[1]
Carbon footprint	2017-12-31	2018-12-31	2019-12-31	2019-12-31
Active Management	16	13	12	12
Passive Management	12	12	8	11
Asset Allocation	17	12	10	13
Global Index	24	24	23	25

[1] No corporate bonds included

the climate? or "how do the climate and associated changes affect our investments?". At first, many tools for investors helped answer the first question. This was done by looking at the current emissions of companies, or the estimated future emissions of these companies, and comparing them to sector trajectories outlined by breaking down emissions trajectories from climate models. The rationale was that by knowing whether your investments are following the required emission-reduction trajectory for their specific sector, you know if there is an elevated transition risk. This is because we know that regulators will try to enforce compliance with those trajectories and that technologies and consumer demand are trending in those directions as well.

Today, more elaborate models are emerging which are explicitly trying to answer the second question for both transition and physical climate-related risks. These models use inputs like how physical climate will change in different temperature scenarios, companies' abatement costs for reducing carbon emissions and likely policy responses from governments. These are commonly referred to as climate-related stress-tests.

Stress testing our business areas

As described in the section on risk management, in 2019 we used a tool developed by 2° Investing Initiative and the Bank of England to stress-test all our portfolios. We also used the Paris Agreement Capital Transition Assessment (PACTA) tool as in 2017 and 2018, and complemented these analyses with the climate analysis from ISS ESG.

We chose to work with the PACTA tool for scenario analysis for continuity reasons. The tool has not been updated during 2019, and thus, the differences between the results in 2018 and this time are only a reflection of us changing portfolio exposures rather than the model capturing new information about the companies. As of 2018, we have less than five per cent of our assets under management in the sectors relevant for the analysis. Given this constraint, we will work towards finding a methodology covering a larger share of our assets during 2020.

The stress-test tool developed by 2° Investing Initiative and the Bank of England was chosen due to its transparency and straight forward methodology. Another benefit of the tool is that it assesses revenue exposure, i.e. not only the impacts on companies in, for example, the extraction of oil, but also the impacts on the companies with revenue exposure to the extraction of oil, such as, for example, sales of mechanical systems specifically developed for oil and gas companies.

In the following tables, the results are presented at the aggregate level for each business area.

"We acknowledge that we cannot wait for the perfect metrics, and given our thorough work in 2019 reviewing alternative metrics and engaging in industry-networks on this topic – we are ready to set specific targets during 2020."

Summary of the results of our scenario analysis

	Power				Fossil fuels		Automotive		% of AUM Analysed
	Trajectory of coal power capacity	Trajectory of gas power capacity	Trajectory of renewable power capacity	Trajectory of nuclear power capacity	Trajectory of Oil Production	Trajectory of Gas Production	Trajectory of ICE V Production	Trajectory of EV Production	
Active Equity	< 1.75	2–2.7	< 1.75	> 3.2	> 3.2	< 1.75	2–2.7	< 1.75	< 5%
Active Bonds	1.75–2	< 1.75	< 1.75	> 3.2	> 3.2	< 1.75	2–2.7	2–2.7	< 5%
Passive	2–2.7	< 1.75	< 1.75	< 1.75	> 3.2	< 1.75	2–2.7	2–2.7	< 5%
Asset allocation Equity	< 1.75	2.7–3.2	1.75–2	> 3.2	> 3.2	1.75–2	2–2.7	2–2.7	< 5%
Asset allocation Bonds	1.75–2	< 1.75	< 1.75	> 3.2	> 3.2	1.75–2	2–2.7	2–2.7	< 5%
Global Index	2–2.7	< 1.75	> 3.2	2–2.7	2–2.7	< 1.75	2–2.7	2.7–3.2	~ 10%

The results of the analysis presented above show the alignment of several technologies in our aggregated portfolios with different transition scenarios from the International Energy Agency (IEA), and the estimated increase of global mean temperature associated with each scenario. The results do not show if the portfolio as a whole is aligned. Instead they show what temperature increase the build-out plan, or 'trajectory', of the underlying companies is associated with for the coming five years, for example the scenario alignment of the underlying companies' investment plans. For more details on the methodology please visit transitionmonitor.com

Distribution between analysed sectors in our climate-related stress-test

Active management
Equity: 75 per cent in 'all other sectors' and 25 per cent divided among key analysed sectors
Bonds: 89 per cent and 11 per cent (7.5 per cent real estate)

Reference
MSCI ACWI: 82 per cent in 'all other sectors' and 18 per cent divided among key analysed sectors

Passive management
Equity: 87 per cent in 'all other sectors' and 13 per cent divided among key analysed sectors

Asset allocation
Equity: 90 per cent in 'all other sectors' and 10 per cent divided among key analysed sectors
Bonds: 96 per cent and 4 per cent (3 per cent real estate)

Summary of the results from our climate related stress-test

Stress Test			
Impact		Subsectors driving impact	
If this scenario were to play out, and it was completely known today, the repricing of our assets is estimated to be around:		The subsector exposures driving the negative repricing are:	
		Primarily	And to a lesser extent
No transition – temperature rise above 4*C by 2100			
Active management			
Equity	-7%	Food logistics, Real Estate and All other sectors	Agriculture, Non-Electric Vehicles and Fossil Fuel-based Materials
Bond	-1%	Real Estate and All other sectors	-
Passive management			
Equity	-7%	Real Estate and All other sectors	Food logistics, Agriculture, Non-Electric Vehicles and Fossil Fuel-based Materials
Asset allocation			
Equity	-6%	All other sectors	Agriculture and Real Estate
Bond	-1%	Real Estate and All other sectors	-
Reference – Global index			
Equity	-7%	All other sectors	Real Estate
A Sudden and Disorderly Transition – temperature rise below 2*C by 2100			
Active management			
Equity	-5%	Food logistics and Agriculture	Non-Electric Vehicles and Fossil Fuel-based Materials
Bond	No substantial effect	-	-
Passive management			
Equity	-3%	Food logistics, Agriculture and Non-Electric Vehicles	Fossil Fuel-based Materials and Real Estate
Asset allocation			
Equity	-2%	Agriculture	Food logistics and Non-Electric Vehicles
Bond	No substantial effect	-	-
Reference - Global index			
Equity	-5%	Oil Extraction, Coal power and Non-Electric Vehicles	Evenly spread among other key analysed sectors
Long-term, Orderly Transition – temperature rise well below 2*C by 2100			
Active management			
Equity	-6%	Food logistics, Agriculture and All other sectors	Non-Electric Vehicles, Fossil Fuel-based Materials and Real Estate
Bond	-1%	Real Estate and All other sectors	-
Passive management			
Equity	-4%	All other sectors	Food logistics, Agriculture, Non-Electric Vehicles, Real Estate and Fossil Fuel-based Materials
Asset allocation			
Equity	-6%	Agriculture and All other sectors	Food logistics and Real Estate
Bond	No substantial effect	-	-
Reference - Global index			
Equity	-6%	Oil Extraction, Coal power and All other sectors	Evenly spread among other key analysed sectors

The results from the analysis presented below show the estimated impact on our aggregated company exposure given three different future scenarios, if repricing was to occur today. Note that the different scenarios assume different years of impact, but with discounted values to the same date. The specific number is not our key focus, but rather the relative impact and the key drivers of the impact, as is also presented. For more details on the methodology please visit transitionmonitor.com

TARGETS

We believe we have taken important steps in recent years to integrate climate-change issues in to our asset management. We have worked towards aligning our portfolios with the Paris Agreement as well as towards managing climate-related risks and capitalising on climate-related opportunities.

The reason we have not yet adopted specific and well-defined targets, is that we have not been comfortable concerning what has been possible to measure. Several of the metrics used to inform our actions today are not ready yet to be used directly to steer our investment decisions, but only to guide further analysis. With that said, we acknowledge that we cannot wait for the perfect metrics, and given our thorough work in 2019 reviewing alternative metrics and engaging in industry-networks on this topic – we are ready to set specific targets during 2020.

Beyond defining and setting targets for our climate strategy, we will also work to incorporate government bonds in our climate analysis.

Discussion: Exclusion as a Means for Decarbonisation

The clock is ticking. Science is clear. We must decarbonise our economy. As investors, we have a great opportunity and moral responsibility to help push and invest in the transition. We, at Handelsbanken Asset Management, have been working with this for years and we are glad to see investor after investor joining us in the endeavour – expressing commitment to the Paris Agreement and promising action. We believe the asset owner and asset management community is approaching a tipping point where working towards Paris alignment is the norm rather than a niche alternative.

But so far, the views on viable methods vary. How can we as investors contribute to real-world decarbonisation through our actions? We believe there are two main complementary routes: (i) increasing investments in companies providing climate solutions, and (ii) taking action regarding companies that are not aligned with the emission-reduction pathways compliant with the Paris Agreement. This discussion paper outlines our motivations for why, and views on when, to use exclusion as an action. Is also elaborates on three common misconceptions surrounding the method of exclusion.

The importance of investing in companies providing climate solutions is undisputed. The question lies in how to handle the companies that are not transitioning in line with the Paris Agreement. The mainstream view has been to engage with these companies in order to support and push their decarbonisation process. We agree, engagement methods hold merit. However, we should also acknowledge the limitations of our engagements, and use exclusions as a means to realise change where engagements fall short.

Misconception 1: Exclusions and engagements are either-or

Excluding one group of companies does not mean that we cannot engage with another group of companies. On the contrary, it frees up time for us to engage where we see the potential for change to be greater. In the context of excluding companies with involvement in fossil fuels, the goal is to decarbonise our economy. Our actions are therefore based on what we believe best supports real-world decarbonisation, not primarily what best supports the decarbonisation of the carbon footprint of our investment portfolios.

It is true that you lose leverage to engage with the specific company if you divest. However, that in itself does not mean that your impact on the real-world decarbonisation via engagements will be smaller. In short, yes, exclusions and engagements are either-or at the company level, but go hand in hand at the portfolio and asset management level.

Misconception 2: Since we need oil and gas in the foreseeable future, the exclusion of oil and gas companies does not make sense

Yes. We do need oil and gas in the foreseeable future. We do not oppose the need for oil and gas in the coming years nor that it takes time to transition our energy system. Excluding companies involved in oil and gas does not mean we are opposed to their current activities per se, but what we are against is their lack of commitment to align future business operations to the Paris Agreement. We want to see science-based reduction targets for their complete value chains, as well as investments supporting a 'well-below two-degree´s temperature increase', as stated in the Paris Agreement, rather than a prolonged fossil fuel exploration.

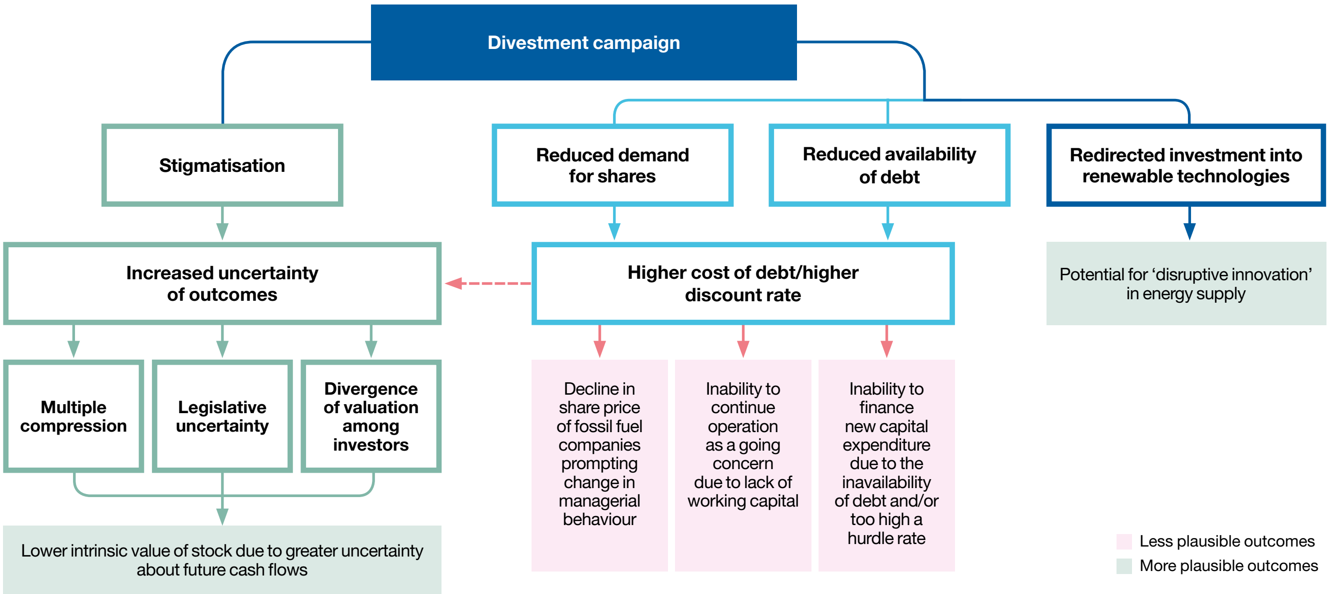
Misconception 3: If you divest from a company, another investor will just pick up the shares, so the real-world impact is none

The immediate direct effects of us choosing not to invest in a group of companies are limited, yes. But the argument for exclusion is not that divestments will bankrupt these companies. The argument is that divestment serves to delegitimise their business model, the business model of prolonged fossil fuel exploration that is neither economically nor planetary rational in a Paris-aligned world. It is about the political and societal influence rather than the direct near-term financial consequences.

Delegitimisation should not be undervalued. Granted that it is hard to disentangle indirect effects from each other, studies of other divestment movements have shown that these are often followed by restrictive legislations affecting the targeted companies, and that the expected future cash flows are viewed as more uncertain for the companies not addressing the critique of their business models. Researchers at the Stranded Asset Programme (University of Oxford) have written extensively about this topic, and concluded in one of their studies that: "The outcome of the stigmatisation process, which the fossil fuel divestment campaign has now triggered, poses the most far-reaching threat to fossil fuel companies and the vast energy value chain. Any direct impacts pale in comparison".[11]

"We want to see science-based reduction targets for their complete value chains, as well as investments supporting a well-below two-degree temperature increase."

Potential direct and indirect impacts of a fossil fuel divestment campaign*



*Adopted from the work done by the Stranded Assets Programme, smithschool.ox.ac.uk/research/sustainable-finance/publications/SAP-divestment-report-final.pdf

The investment case vs engagements
Given the nature of our business, being an asset manager, we must also assess the financial risks and opportunities of our strategic choices.[12] In the case of oil and gas companies, there is a well-documented risk for stranded assets.[13] The estimates of fossil fuel reserves vary, but what all estimates have in common is that there are more reserves than can be used if we are to reach the targets of the Paris Agreement. A study published in Nature 2015 concluded that an estimated third of oil reserves, half of gas reserves and more than 80 per cent of known coal reserves should remain unused in order to meet global temperature targets under the Paris Agreement.[14] Given our continued rate of production since 2015, those numbers are substantially lower today. Analyses looking at the current capital expenditures of oil and gas companies also suggest that about USD 50 billion worth of recently sanctioned projects in the oil and gas industry is not cost-effective in a Paris-aligned world, including projects with investments from every major oil and gas company.[15] Climate-related stress-tests all point towards big risks in the oil and gas industry, and compared to other industries, the risks are more homogeneous with all companies being at risk, whereas many other industries are estimated to include both winners and losers following the transition.[16]

Given the constraints on future use of fossil fuels in a Paris-aligned future, the oil and gas industry will shrink in market value.[17] Some companies may still be successful in the short to medium-term, via providing the most carbon-efficient oil and gas during the transition period and taking market shares in an overall declining market. Another, more future-proof, alternative would be to diversify and transition towards for example, renewable energy, while responsibly dismantling the legacy business. These strategies however, are far from bulletproof. As an investor engaging with these companies, that is something one has to think about. There is not only a risk of stranded assets having a negative impact on the company's valuation if the engagement is unsuccessful – there is also a material risk for the company's valuation even if the engagement is successful.[18]

How does Handelsbanken Asset Management use exclusions to drive decarbonisation?
We like engagements, we believe in being an active owner and we believe the financial and sustainable sides go hand in hand when we can engage successfully. We therefore have substantial positions in some of the most polluting listed companies. In active management, we drive these engagements ourselves, or in collaboration with other investors in primarily Climate Action 100+. In passive management, we engage in initiatives supporting decarbonisation, and in asset allocation, we push our portfolio managers to engage with companies.

"Analyses looking at the current capital expenditures of oil and gas companies also suggest that about USD 50 billion worth of recently sanctioned projects in the oil and gas industry is not cost-effective in a Paris-aligned world."

[11] smithschool.ox.ac.uk/research/sustainable-finance/publications/SAP-divestment-report-final.pdf
[12] Read our full Climate Report for further discussion addressing the financial risks and opportunities in our business.
[13] Stranded assets: fossil fuel supply and generation resources which, at some time prior to the end of their economic life, are no longer able to earn an economic return (i.e. meet the company's internal rate of return) as a result of changes associated with the transition to a low-carbon economy.
[14] McGlade, C., Ekins, P. The geographical distribution of fossil fuels unused when limiting global warming to 2 °C. Nature 517, 187–190 (2015). https://doi.org/10.1038/nature14016
[15] carbontracker.org/reports/breaking-the-habit/
[16] See for example our own climate-related stress-tests based on the tool from 2° Investing Initiative and Bank of England, and estimated impact in equity markets from Vivid Economics and PRI: unpri.org/download?ac=9857
[17] carbontracker.org/reports/balancing-the-budget/
[18] Two examples of studies looking at possible strategies for oil and gas companies going forward: carbontracker.org/reports/balancing-the-budget/, and smithschool.ox.ac.uk/research/sustainable-finance/publications/E3G-Oil-Majors-Report-Digital-March-2018.pdf

With that said, we exclude the majority of companies with revenues from the production and distribution of fossil fuels. We do this for portfolios corresponding to 90 per cent of our assets under management, spanning active management, passive management and asset allocation. We believe there is an important difference between a company producing cement, that emits large amounts of carbon, and a company that refines and distributes oil and gas. In one case, the fossil fuel is part of the creation of the end product, whereas in the other case, the fossil fuel is the product – it is the business model.

As discussed earlier, when fossil fuel is the business model, the financial risks are greater and still material even if we were to succeed with our engagements. We also see the probability of achieving substantial change via engagements as limited. This is substantiated by the current plans and investment activities of the oil and gas companies still not being Paris-aligned, despite adjustments to their business strategies following engagement efforts from investors like us.[19] Combining these aspects, we believe the indirect effects from exclusions to have a more substantial real-world effect in this case – while also being the financially sound decision.

For utilities on the other hand, which fall somewhere between fossil fuel as a business model and fossil fuel being a means to an end, we have seen strategic plans in line with the Paris Agreement start to emerge. Several utility companies have set science-based targets and laid out plans for how to make the transition from fossil-based to renewable-based power production in a financially sound manner.

During the last review of our exclusion strategy, we observed this change within the utility sector. Therefore, we complemented our exclusion strategy with criteria for transition companies, utilities taking the necessary steps to decarbonise their business in line with the Paris Agreement. To us, this is how it should be. Exclusion is one tool, and when we see companies taking the necessary actions, we will update our strategy – as in the example with leading utilities.

Moving back to the indirect effects. What can we say about our choice to divest from the majority of companies involved in fossil fuels?

- We have given institutional investors the possibility to divest from fossil fuels by investing in our product offerings. Having the majority of our offerings with the fossil fuel exclusion strategy means that our investors are not limited to certain niched products when they choose to exclude fossil fuels.

- Even if the majority of our products started using our fossil fuel exclusion strategy last year, we have had several products which have done so for multiple years now – showing in a real-world case study that it is by no means a drag on financial performance. On the contrary, some of our most successful products have had this exclusion strategy for years.

- Within passive management we have been part of developing new passive solutions that exclude fossil fuels in markets where those offerings have not been available before.

- Via our exclusion strategy in asset allocation, we have also pushed other fund managers to divest, or to create completely new products which exclude fossil fuels.

- We integrate decarbonisation as a thematic investment theme into our full active product offering. Funds from excluded companies are thereby redirected to investments in climate solutions. We also have a specific product, Handelsbanken Hållbar Energi, which has been investing exclusively in climate solutions since its inception in 2008.

In summary, we have shifted capital from businesses with limited willingness to change their climate-destructive business operations, to companies that are transitioning towards doing so, or companies already providing climate solutions, while showing that it is also a viable investment strategy financially. Granted, our efforts of shifting capital to climate solutions can be taken further, and we have to keep working on future progress in active and passive management as well as asset allocation. But we are moving in the right direction.

Going forward we will be more open and transparent about our methods and help raise public awareness about the role of the asset management industry. Today, the public is more aware than ever about the state of the climate. Still, there is a need for large institutions to also engage in the discussion and provide input from their field of expertise. We see this as one part of our responsibility, and a great opportunity to increase our contribution to the decarbonisation of our economy.

[19] All major oil and gas companies continue to put Capex in projects that would not be financially or planetary rational in a Paris-aligned world. See for example, the analysis by Carbon Tracker: carbontracker.org/reports/breaking-the-habit/ Despite current investments, as of the beginning of 2020, a number of oil and gas companies have communicated what they claim to be Paris-aligned strategies, and promised to put forth more details during the year, something we will follow closely.

Historical yields are not a guarantee of future returns. The money you invest in a fund can both increase and decrease in value and it is not guaranteed that you will recover the entire invested amount.

Appendix A – Metrics and Targets, Fund Level

CARBON FOOTPRINT

At Handelsbanken Asset Management we have used a carbon footprint metric for many years. It has been one of the few metrics easily available to asset managers for measuring exposure to climate-related risk. We measure all our funds biannually, and present the results at the fund level per business area.

Method

From 2020, the new industry standard will be based on the risk-focused alternative carbon metric, weighted average carbon intensity. The key difference of the new industry standard is that it measures a portfolio's exposure to carbon-intensive companies (i.e. better reflects the risks) instead of 'our part' of our portfolio companies' emissions. Given the difference, the metrics are not perfectly comparable, but they do generally point in the same direction. Larger differences arise when for example a portfolio has high portfolio exposure to a carbon intensive company, but measured from an ownership perspective, the ownership is very small, then the carbon intensity of the company will have a much greater impact on the weighted average carbon intensity than on the ownership calculated carbon intensity.

Carbon footprint is a good starting point, and the adoption of the weighted average metric is a step forward. However, this metric also has several limitations in terms of measuring climate-related risks, including data reliability, scope and coverage, being backward looking and not factoring in the sector-specific emissions reductions required to fulfil the Paris Agreement. Therefore, carbon footprint is only one of several climate metrics we use internally. In 2020, we will also start to report complementary climate metrics on the fund level.

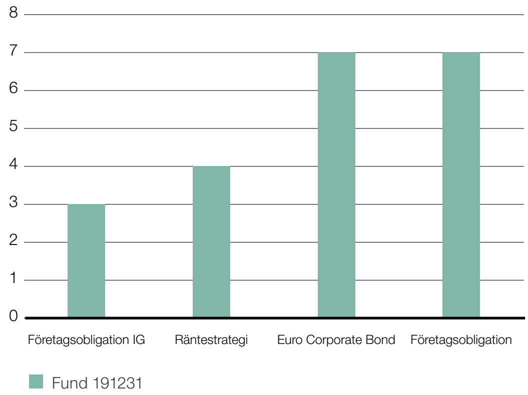
Going forward, we will follow the new industry standard in Sweden and report on the weighted average carbon intensity. Below, we present our carbon footprint at the fund level per business area. We report the footprint for all funds which have carbon data for over 75 per cent of the fund's assets under management and we use data from the service provider ISS ESG. The carbon data is based on Scope 1 emissions, direct emissions produced by the burning of fuels of the emitter, and Scope 2 emissions, indirect emissions generated by the electricity consumed and purchased by the emitter. The data should be evaluated as one part of our work around climate change.

Active Management

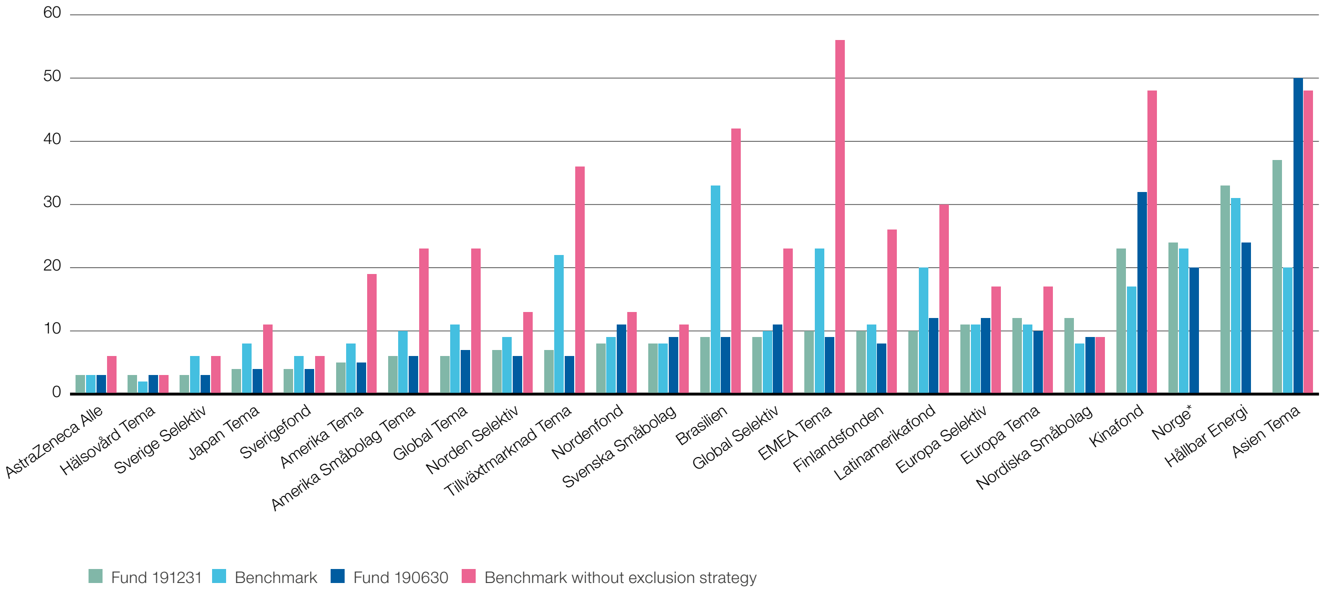
As of 31 December 2019, twenty of our actively managed funds have a lower carbon footprint than their corresponding benchmarks without exclusion strategy. Three funds have a higher carbon footprint and one fund has the same footprint. Eight funds have reduced their footprint from the last measurement period (30th of June 2019), while eight have increased their footprint and eight funds have not changed significantly.

For the first time, we can present data for some of our fixed-income funds as well. Four of our funds have data coverage over 75 per cent and are presented below, but without benchmarks and a last measurement period as this is the first time with enough coverage and we still do not have coverage for our benchmarks.

Weighted Average Carbon Intensity as of 31 December 2019 (tCO_2e/mSEK revenue)



Weighted Average Carbon Intensity as of 31 December 2019 (tCO_2e/mSEK revenue)



*The fund Norge as well as its benchmark is without our fossil fuel exclusion strategy.

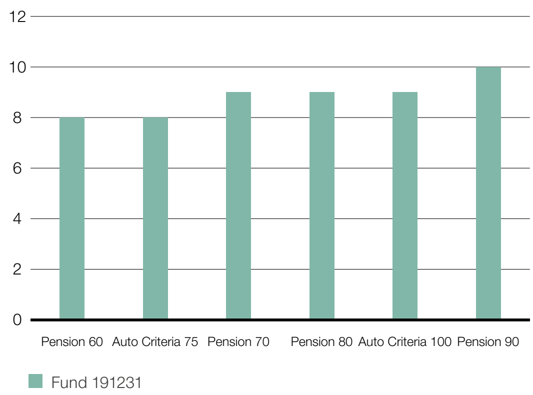
Historical yields are not a guarantee of future returns. The money you invest in a fund can both increase and decrease in value and it is not guaranteed that you will recover the entire invested amount.

Passive Management

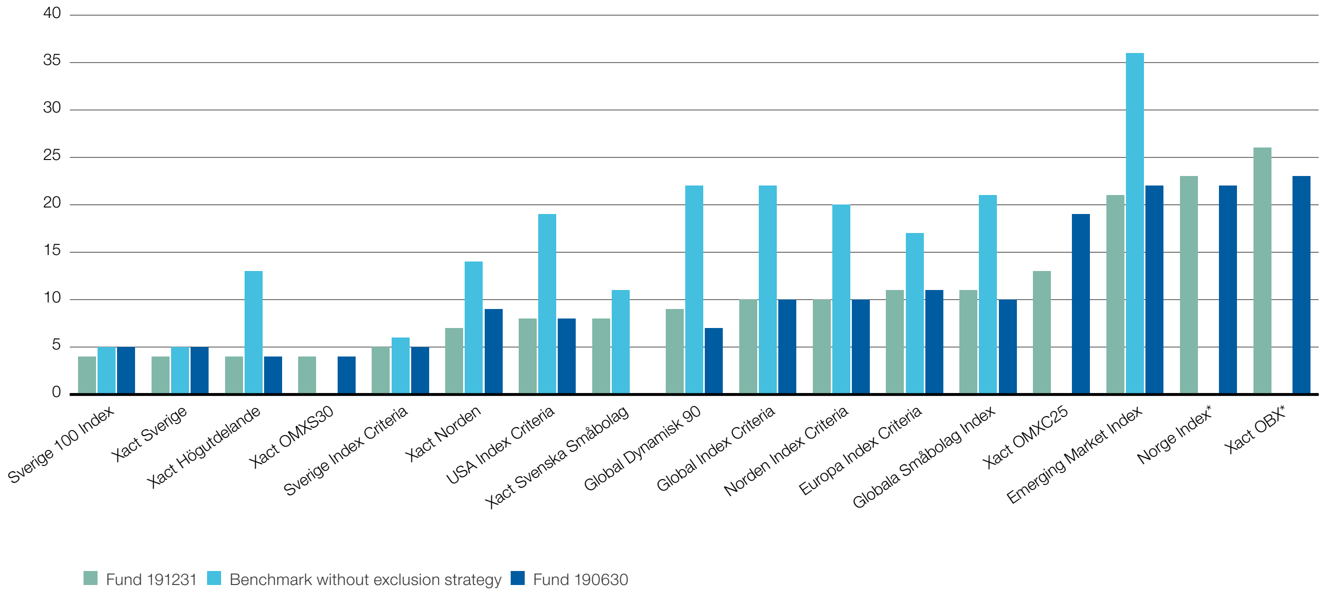
In our passive management, the majority of our funds use our fossil fuel exclusion strategy. This means that the majority of our passive funds also have a lower carbon footprint than a comparable passive fund without the exclusion strategy.

For the first time, we can present data for some of our passively managed allocation funds as well, but without benchmarks and a last measurement period.

Weighted Average Carbon Intensity as of 31 December 2019 (tCO_2e/mSEK revenue)



Weighted Average Carbon Intensity as of 31 December 2019 (tCO_2e/mSEK revenue)



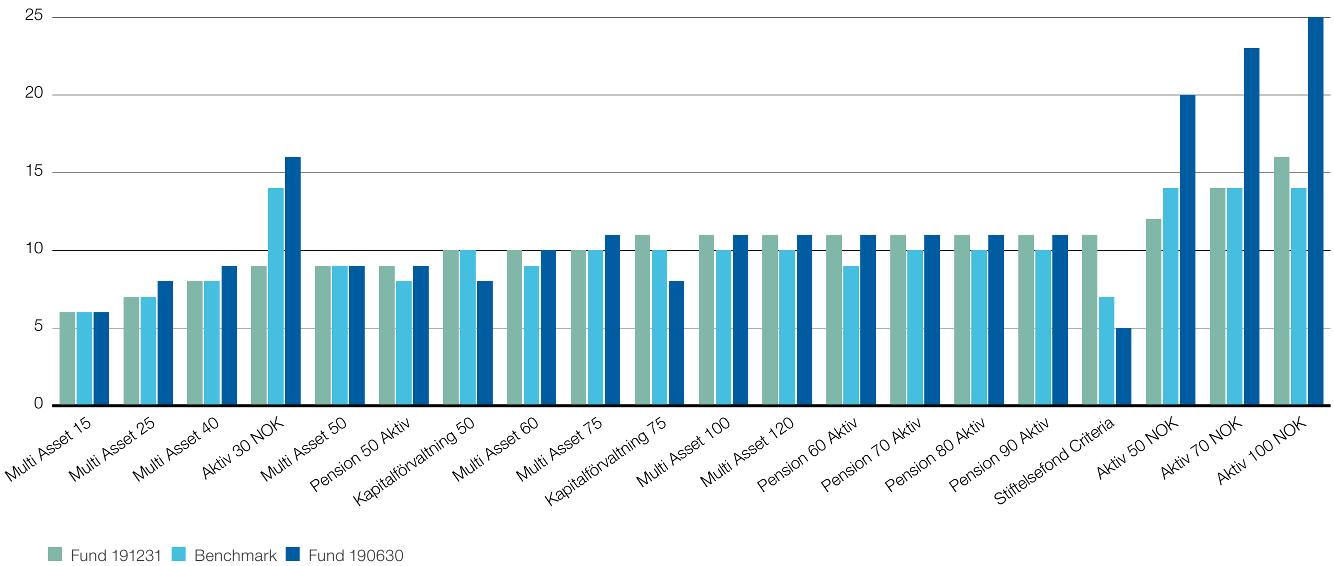
*The funds Norge Index and Xact OBX is without our fossil fuel exclusion strategy, which explains why there is no comparable benchmark without exclusion strategy.

Historical yields are not a guarantee of future returns. The money you invest in a fund can both increase and decrease in value and it is not guaranteed that you will recover the entire invested amount.

Asset Allocation

For the first time, we can present data for some of our funds in asset allocation as well. The funds not included below are due to coverage under 75 per cent of assets under management. We have also measured the carbon footprint for the benchmarks and gone back and calculated the footprint for the last regular measurement period as well. In the asset allocation, we see smaller discrepancies between the different funds' footprint. This is due to the funds being more similar in their exposure to sectors and geographical areas than our funds in active and passive management.

Weighted Average Carbon Intensity as of 31 December 2019 (tCO_2e/mSEK revenue)



CLIMATE-RELATED STRESS-TEST AND SCENARIO ANALYSIS

The climate-relates stress-test analysis and the scenario analysis have been of an exploratory nature. The focus has, as described, been on identifying key risk sectors and relative impacts. We will therefore not present any of the results at the individual fund level, as we do for carbon footprint. The results for the individual funds will be used as a basis for further discussion and analysis internally.

After setting our climate-related targets, we will also define which metrics we will use to assess progress towards the targets. When this is done, we will start to present fund-level data that go beyond carbon footprints, helping our stakeholders better understand the climate profile for each of our individual funds.

We expect to present more thorough climate-related data at the fund level in next year's climate report.

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Appendix B – Supplementary Information

Follow-up on the commitments from last year's climate report

Governance

Commitment	Steps taken
Further develop and formalise the reporting scope of the Committee for Sustainability Risks within active management to better incorporate climate-related metrics.	We will continue the work while also including passive management and asset allocation.
Further develop the scope of reporting transition related risk and opportunities to the board, which may include 2-degrees alignment tests. Develop metrics for reporting exposure to climate risks, for example physical climate risks, to the board.	We have conducted a larger project evaluating metrics and analysing our portfolios. We ended up taking one step back and focusing on setting targets, and will then start reporting on those targets given the relevant metrics (which will include climate-related risks and opportunities).

Strategy

Commitment	Steps taken
Advance our knowledge and understanding about how the most greenhouse gas intensive industries, beyond the power and fossil fuel sectors, are likely to be affected by the transition to a carbon-neutral economy.	Yes, we had several climate workshops during the year.
Explore how we can develop our exclusionary strategy to enable investments in power companies that are transitioning away from fossil fuels to renewable energy in line with the Paris Agreement.	Yes, we launched our transition criteria for both active management and asset allocation. We will continue to work with the question in passive management.
Integrate the recommendations of the TCFD into our engagement strategies.	Partly, we are taking one step back and reviewing our engagement strategy in light of the incorporation of our passively managed funds in Handelsbanken Fonder AB.
Build competence around physical climate risks for better incorporation into our investment strategies.	Yes – but ongoing.

Risk Management

Commitment	Steps taken
Advancing our knowledge, understanding and structures for knowledge-sharing regarding climate change risks.	Yes – but ongoing.
Improving our ability to quantify and integrate climate change into our risk management, analysis and product development.	Yes – but ongoing.
Increase the number of products with positive inclusion and investments in companies well positioned for a transition to a low-carbon economy.	Yes – during the year we launched our second ETF with positive inclusion, Xact Norden. We continue to explore this possibility in all business areas.
Expand engagement to further integrate issues related to climate change and the recommendations of the TCFD focusing on high-risk sectors.	Partly, we are taking one step back and reviewing our engagement strategy in light of the incorporation of our passively managed funds in Handelsbanken Fonder AB.

Metrics and Targets

Commitment	Steps taken
Extend the transition risk analysis to include corporate bonds.	Yes.
Develop methods for physical climate risk analysis.	Yes.
Extend CO_2 measurement to funds that are not yet measured – fixed-income and multi-asset funds (in asset allocation).	Yes.
Develop metrics and targets to follow up on investments in climate opportunities.	Steps taken – ongoing.

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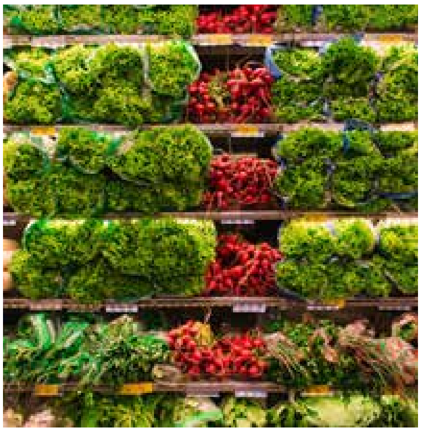
Sector mapping

The mapping of key BICS sectors in the BOE Subsectors. For a full explanation of mapping, please see: transitionmonitor.com/wp-content/uploads/2019/07/BoE-Stress-Test-Methodology.pdf

BOE Subsector	BICS Sector
Aviation	Airlines
Aviation	Airport Development/Maintanance
Automotive	Auto Parts Manufacturing
Automotive	Auto/Truck Parts & Equipment
Automotive	Automobile Manufacturing
Food Logistics	Beverages
Food Logistics	Food Products
Food Logistics	Food Wholesale/Distribution
Food Logistics	Restaurants
Food Logistics	Supermarkets & Pharmacies
Agriculture	Forest & Paper Products
Fossil Fuel-Based Materials	Metals & Mining
Fossil Fuel-Based Materials	Metal-Aluminum
Fossil Fuel-Based Materials	Metal-Steel
Fossil Fuel-Based Materials	Precious Metals



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handelsbanken.com | +46(0)8 701 10 00 | SE-106 70 Stockholm, Sweden