Handelsbanken Asset Management Climate Report 2018

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

Handelsbanken

Climate change – **our view**

At the COP21 climate conference in Paris in 2015, the world's countries agreed to limit the increase of global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C. If the world is not successful in limiting global warming, climate change will lead to serious consequences for terrestrial and marine ecosystems, human food security and access to fresh water, negatively impacting human prosperity, security and health. Handelsbanken Asset Management has a role to play in the realisation of the Paris Agreement, the Sustainable Development Goals and the transition to a sustainable economy.

The Paris Agreement´s central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C. The fulfillment of the Paris Agreement would require significant reductions of global greenhouse gas emissions, achieving carbon neutrality early in the next half of this century and then moving towards negative emissions. According to the latest special report[1] from the Intergovernmental Panel on Climate Change (IPCC), limiting global warming to 1.5°C would require dramatic emission reductions by 2030 and demand the transformation of global consumption, transportation and energy production, as well as measures to remove carbon from the atmosphere. Making financial flows consistent with the road towards low greenhouse gas emissions and a climate-resilient development is necessary if the world is to achieve its climate goals.

Over the next years, the effects of climate change will impact the world economy to an even greater extent, with consequences for companies in numerous sectors. Some sectors will see significant increase of investments, presenting investors with opportunities, while other sectors will be negatively affected by the physical impacts of climate change, tougher climate policies and shifts in consumer demand. To date little or no useful information regarding companies´ exposures to risk and opportunities relating to climate change has been available to asset managers.

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 wide spread 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.

About this report

The scope of this report is Handelsbanken's actively and passively managed equity and fixed income funds. At mid-2018 the total assets managed in these funds were SEK 496 billion.[2] The aim of this report is to inform our stakeholders about our work related to climate change, our exposure to climate-related risks and opportunities as well as our continued 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.

Handelsbanken Asset Management refers to funds managed by Handelsbanken's two fund management companies, Handelsbanken Fonder AB (active management) and Xact Kapitalförvaltning AB (passive management).

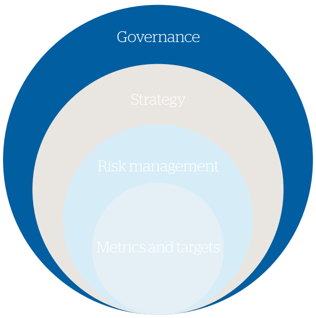
Handelsbanken Asset Management are long-term investors with the goal of creating good returns on our customers' savings, while at the same time contributing to a sustainable future. To achieve this we need to continuously develop our processes for identifying, managing and reporting risks and opportunities related to climate change. In order to do so we need relevant climate-related information from companies. This is why we support the recommendations of the TCFD.

We want to encourage a transition to a greenhouse gas-neutral economy in line with the Paris Agreement and expect companies with which we are invested to pursue their operations in line with such a transition. We want to contribute to increased transparency and the development of tools and methods to better measure and manage climate-related risks and opportunities, such as climate-related scenario analysis. We want to lead by example, which is why we are producing our first Climate report in line with the recommendations of the TCFD. In this report we want to describe our ongoing work related to climate change in our role as asset managers. This report will evolve over time to mirror our work related to climate change, building on the progress of best practices within our industry.

[1] Global Warming of 1.5°C, International Panel on Climate Change.
[2] Volume including internal holdings.

Core Elements of Recommended Climate-related Financial Disclosure

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 a part of the decisions relating to overall strategic direction, the formulations 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 assets under management in fossil free funds[1] and carbon footprint. The boards also review and approve policy development, including the Policies for 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 exclusion of investments in companies with business operations in – or with linkages to – coal mining[2] and coal-based power generation[3]. The boards also review and approve the Corporate Governance Policies which give strategic direction for our voting at AGMs and for the active management's work in nominating committees. It is our belief that the board of directors in the companies we invest in should be composed in such a way that relevant sustainability issues including climate change can be identified and taken into consideration.

How management assesses and manages climate-related risk and opportunities

Management in each fund company 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 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 Council for Responsible Investments reviews and evaluates the effectiveness of climate-related work and coordinates such work in the different areas of Handelsbanken Asset Management. Members of the Council are the CEOs, the Heads of Responsible Investments and CIOs of Handelsbanken Fonder AB and of Xact Kapitalförvaltning AB.

The Chief Investment Officers are responsible for the implementation of strategies and policies within both passive and active asset management. Within active management, the Chief Investment Officer is also responsible for integrating risks and opportunities relating to climate change into all investment analysis and decision-making.

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

Way forward

The integration of issues related to climate change is a continuous process within the governance of Handelsbanken Asset Management. We have initiated the following actions to strengthen governance around climate-related risks and opportunities:

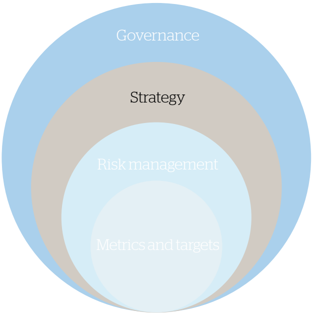
- Further develop and formalize the reporting scope of the Committee for Sustainability Risks within active management to better incorporate climate-related metrics.
- Further develop the scope of reporting transition related risk and opportunities to the board, which may include 2-degrees alignment tests.
- Develop metrics for reporting exposure to climate risks, for example physical climate risks, to the board.

Key roles

Chief Investment Officer	Responsible for the adoption of policies and strategies within the investment management activities.
Head of Responsible Investment	In charge of the development of policies and strategies.
Management Team (Incl. The Head of Risk, The Head of Responsible Investment and COO, CEO, Chief Legal Counsel, CIO, Compliance Officer.)	Regularly receives reporting and follow up on sustainability, including climate, from risk management.

[1] According to the Swedish Investment Association's definition.
[2] Limit for investment is a maximum of 5 per cent of revenues.
[3] Limit for investment is a maximum of 30 per cent of revenues.

Strategy



Handelsbanken Asset Management has a long term perspective on investments, integrating issues relating to climate change in business and strategy decisions. We consider climate change to be a long term and evolving systemic risk to the global economy. It will affect not only industries and individual companies, but potentially entire asset classes such as equities and bonds through its potential impact on the global economy.

Climate-related Risk

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 result in more significant transition risks and less physical risk, and conversely, a slower and less significant reduction of greenhouse gas emissions result in higher physical risk.

Short to medium time horizon (1–10 years)

We have seen material transition risk in the fossil fuel sector building up for many years, especially within the coal industry. Several reports show that a large share of fossil fuel company reserves would have to remain in the ground if the world is to fulfil the Paris Agreement.

In order to be aligned with the International Energy Agency's (IEA) Sustainable Development Scenario, global oil production should decrease slightly over the next five years. The results from our analysis performed with the tool Paris Agreement Capital Transition Assessment (PACTA) show that the buildout plans of many fossil fuel companies within oil production are not aligned with the Paris Agreement. Whether or not these production plans will materialise is uncertain, but the analysis gives an indication of the fossil fuel sectors misalignment with the Paris Agreement and the IEA:s best estimate of fulfilling it.

Medium time horizon (3–10 years)

We expect the power and automotive sectors to see significant change in this time period. The power sector represents a large part of global emissions, and efforts to curb emission from energy are being pursued in many parts of the world. Renewable energy alternatives are becoming cost competitive in more and more geographies. Power production from fossil fuels is also linked to issues of smog and air pollution, a significant problem in many densely populated areas in the world. Fossil fuel dependent power companies are exposed to transition related risk, depending on their energy production mix and geographical location. Technological development, increased pricing of GHG-emissions and the sharp fall of costs of renewable energy are significant drivers of increased transition risk.

The transport sector also represents a significant share of global emissions, especially in high income regions such as Europe and the USA. Low emission alternatives exist and are quickly becoming cost competitive, especially in the automotive sector. The use of internal combustion engines is also a significant contributor to smog and poor air quality. Several cities are moving towards limiting the use of fossil fuel driven vehicles in the future. Legislative developments such as tougher emission rules and more accurate emission tests are also being implemented in many parts of the world putting pressure on car producers to decrease harmful emissions. Consumer demand is also shifting and low carbon alternatives are gaining market shares in many parts of the world. Companies within the automotive sector face transition related risks depending on their ability to meet these changes and their capability to absorb the increased costs in research and development needed for low carbon development.

Medium to long time horizon (3–30 years)

For this time period we see transition risks in high emitting sectors such as cement and steel. Increased pricing of greenhouse gas emissions and emission trading systems such as the EU ETS will escalate pressure on companies within these sectors to decrease emissions. In order to keep costs down companies will be forced to increase investments in order to decrease emissions. Trying to pass the increased cost onto consumers will likely stimulate the development of low emission alternatives, such as wood for construction applications, which might lead to lower demand. Moreover the trend towards circular economy, leading to a potential decrease in the use of virgin materials, is likely to amplify the transition risks.

In the medium to long time horizon we will likely see physical risks start to have material impact on companies. Businesses are already being affected by changes in weather patterns and rising costs due to extreme weather events. In this time period, it is also possible that the global climate will pass tipping points, in other words thresholds for abrupt and irreversible change. The likelihood of such events is higher

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with increased temperatures, however it is hard to estimate the probability, timing and impact of such events today. Additionally, the specific effects on a sector or a company are hard to estimate and more analysis is needed.

Implications for our Strategy

Climate change has been a strategic focus within Handelsbanken Asset Management for many years. We have been excluding investment 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 we will move toward aligning our portfolios with the Paris Agreement over time. Our range of fossil free funds have been increasing steadily over the last couple of years and now represent around 50 per cent of the volume in our equity and fixed income funds and over 30 per cent of our total assets under management.

In 2018 we took the strategic decision to start excluding investments in companies in the fossil fuel sector in the majority of our funds. We have taken this decision because we are convinced that sectors that are not aligned with the Paris Agreement will be financially outperformed by the market over time. It is also clear that fossil fuel industries do not carry the true cost of their products including the cost to the environment. It is our view that there is unpriced risk in the fossil fuel sector related to the transition to a carbon neutral economy. We also believe that the possibility for us to have meaningful engagements, supporting companies in this sector in their transition towards sustainability, is limited.

Our current exclusionary approach towards companies involved in fossil fuels also results in the exclusion of the majority of companies in the power sector. In contrast to the fossil fuel sector, long-term and sustainable alternatives exist within the power sector making this an area for improvement within our current strategy. We have therefore identified the need to modify our exclusion criteria to align with the transition stipulated in the Paris Agreement.

Long-term and sustainable alternatives exist within the automotive sector, which is why exclusion will not be our strategic focus going forward.

In addition to the overall integration of risk and opportunities related to climate change into Asset Management, we have specific funds where climate change is the investment strategy. The fund Handelsbanken Hållbar Energi invests globally in companies that develop or use technologies and methods to limit global warming. Thereby seizing the opportunities that arise from the transition towards carbon neutrality by investing in companies that offer solutions to climate change.

Way forward

In the longer perspective we see full integration of climate-related risks and opportunities into our investments strategies as a key. Exclusion strategies will continue to play a part, but our focus will be on developing our work around inclusion of companies working to mitigate climate change, and engagement in order to continue to support companies in their transition towards alignment with the Paris Agreement. We also see the need to build our competence around risk and opportunities related to physical climate change.

Going forward we aim to initiate the following actions:

- 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.
- 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.
- Integrate the recommendations of the TCFD into our engagement strategies.
- Build competence around physical climate risks for better incorporation into our investment strategies.

Risk management

Our long-term success as an asset manager is dependent on our ability to identify, assess and manage risk. 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
Handelsbanken Asset Management uses external analytical tools for company specific sustainability analysis coupled with internal sustainability experts for the identification and assessment of risk related to climate change. Identified risk is used in investment decisions, product and policy development and in engagement and asset stewardship.

Within active management a shared global analysis is the foundation for the entire investment management team. At quarterly strategy meetings global developments, such as climate change and associated investment risks and opportunities, are analysed, forming 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 space. During this process climate-related risks are continuously present.

Within our passive management risk identification and assessment is conducted in two main areas; the identification and management of climate-related risks in product development and assessment of current products and benchmarks. As a complement, themes and strategic areas related to climate risk are also identified as part of the ongoing management and serves as the starting point for engagement and asset stewardship.

Risk management process
The process for risk management rests on our three pillars when it comes to sustainable investment, namely Exclusion, Inclusion and Engagement

Exclusion
Sector exclusion forms the first line of defense against climate risk in our risk management process. We use exclusion primarily when a sector has a high sustainability risk, is not aligned with our vision of long-term sustainable asset management and when we believe our ability to influence companies within the sector to align their operations with sustainable development is limited. All our funds exclude companies with significant operations within the mining of coal or power production based on coal. In practice this means that a maximum of 5 per cent of a company's turnover may be derived from coal mining. A maximum of 30 per cent of the power company's turnover may be derived from coal power generation. Additionally, a large part of our fund offering excludes investments in fossil fuels altogether. These funds exclude with a 5 per cent threshold all companies involved in the production, exploration or distribution of coal, oil and gas. The funds also exclude with a zero tolerance level all companies involved in oil sand. In 2018 we took the strategic decision to impose this broad restriction on fossil fuels in the majority of our funds, including all our actively managed funds, and this will be completed during 2019.

Inclusion
Within active management, each portfolio manager has a high degree of individual responsibility to manage risks and opportunities related to climate change and integrate it into investment decisions. Even though every portfolio manager has their own thought process regarding investment management, common for all are that ESG-issues, including climate-related risks are integrated. Transition related climate risks are the ones currently most present and portfolio managers regularly evaluate regulatory, technological, market and brand related risk associated with climate change. The Committee for Sustainability Risks evaluates and follows up funds' climate-related performance.

The shared global analysis is intertwined with the thematic investment process practiced by our portfolio managers. The thematic investment process focuses on investment opportunities in structural changes that drive demand and growth over time. Currently, four main themes govern this process, environment including climate change, being one of them. The thematic process helps ensure that climate risks are identified and assessed as it stimulates discussions around each theme and sub-theme from many different perspectives, including climate risks. In the medium and long term, the 'how'-perspective (operational sustainability) remains important when analysing climate risks facing different investment themes. Lately, active management has had an increased focus on what types of products and services a company offers, the 'what' perspec-

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tive, meaning that seeking new relevant themes and sub-themes will be done more closely related to climate change.

Within our passive management we work quantitatively with the positive inclusion of companies based on environmental criteria as one method to address climate risk in our portfolios. During 2018 we introduced our first index fund with positive selection and this work will continue and expand in the years to come. An important part of this work is our collaboration with index providers creating new benchmarks which enable us to create more sophisticated products and increase our offering of products integrating climate risk.

Engagement and active ownership

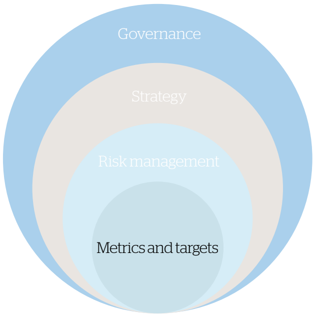
An important part of our risk management is to work with engagement and asset stewardship. As long term owners we engage with management pressing for improvements with regards to tackling climate change and increased transparency and reporting. This commitment has led Handelsbanken Asset Management to vote in favor 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 100+.

Way forward

Within risk management we see several areas of improvement and going forward we will specifically focus on:

- Advancing our knowledge, understanding and structures for knowledge-sharing regarding climate change risks.
- Improving our ability to quantify and integrate climate change into our risk management, analysis and product development.
- Increase the number of products with positive inclusion and investments in companies well positioned for a transition to a low carbon economy.
- Expand engagement to further integrate issues related to climate change and the recommendations of the TCFD focusing on high risk sectors.

Metrics and targets



At Handelsbanken Asset Management we have used metrics in the form of carbon footprint for many years. It has been one of few metrics easily available for asset managers when measuring climate change risk exposure. New and promising ways to measure climate risk, such as scenario analysis, are being developed and we are following this development closely.

Carbon footprint

Through our ESG service providers we have access to in-depth company and sector analysis and metrics such as carbon footprint. The carbon footprint is measured and analysed on a regular basis and has enabled us to engage with large emitters. It also gives us an indication of a particular fund's CO_2-intensity in comparison to its benchmark. Within active management, 18 of the 22 funds with sufficient coverage have a lower CO_2-intensity than their benchmarks. Within passive management we see a positive effect of our implementation of ESG benchmarks resulting in the majority of ESG Index funds having a significantly lower carbon footprint compared to the corresponding standard unscreened benchmark. Carbon footprint per fund is calculated bi-annually and the carbon footprint of all measured funds is found in the appendix.

Carbon footprint is a good starting point, but has several limitations in terms of measuring climate-related risks, including data reliability, scope and coverage, being backward looking and not factoring in climate science and the sector specific emissions reductions required to fulfil the Paris Agreement.

Carbon footprint

Handelsbanken Asset Management	13.3 tCO_2e/MSEK Sales
MSCI ACWI Index	26.4 tCO_2e/MSEK Sales

Climate-related Scenario Analysis

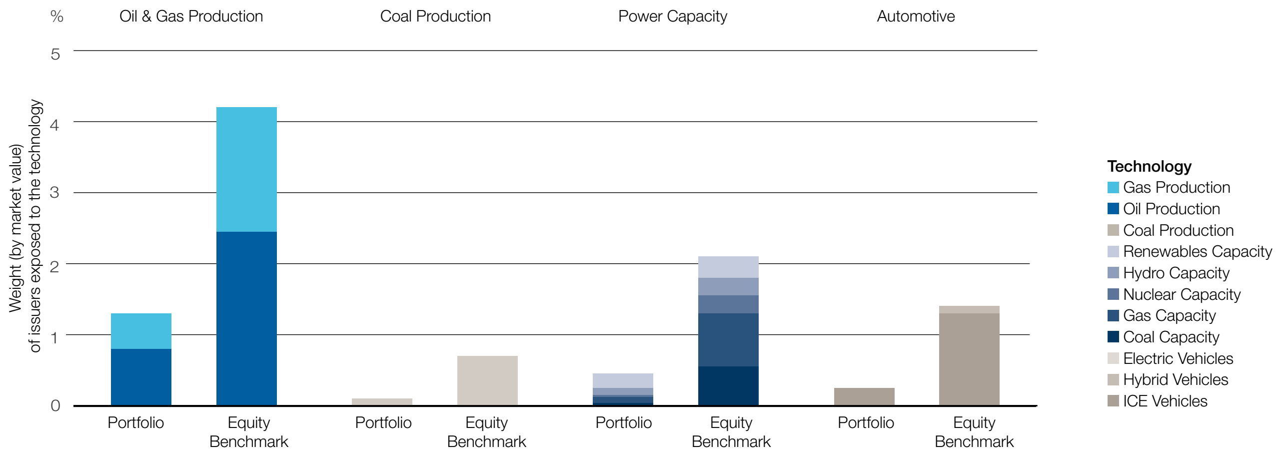
The TCFD has highlighted the need for forward-looking scenario analysis. Climate-related scenario analysis has the potential to increase the understanding of the climate risk facing companies going forward. Thereby helping the development of better investment strategies and company dialogues and contributing to a smooth transition towards a low carbon economy. A lot of work is being done to develop tools and methods for climate-related scenario analysis throughout the financial sector. We believe this work has great promise both within physical and transition related risk analysis by being forward looking and integrating science based benchmarks.

2° Scenario Analysis

In 2017 we partnered with 2-degrees Investing Initiative, a non-governmental organisation (NGO) specialised on measuring climate risk, and performed a climate alignment test of our fund portfolios. During 2018 we reassessed our portfolios using the newly launched *Paris Agreement Capital Transition Assessment-tool (PACTA)* developed by the same NGO and co-launched with the UN PRI. Due to methodological changes, the results from the PACTA analysis is not comparable with last years analysis.

The PACTA-analysis shows that our exposure to both high and low-carbon activities at the time was lower than the equity benchmark. Our total equity exposure to sectors included in the scenario analysis is below 2.5 per cent and our exposure to oil, gas and coal production is below 1.5 per cent of total equity under management.

Current exposure of the equity portfolio to high-carbon and low-carbon activities, as a per cent of the portfolio, compared to the equity market



"Our total equity exposure to sectors included in the scenario analysis is below 2.5 per cent and our exposure to oil, gas and coal production is below 1.5 per cent of total equity under management."

The results from the analysis depicted below shows the alignment of several technologies in our equity 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, rather it shows what temperature increase the build out plan, or 'trajectory', of the underlying companies is associated with for the coming 5 years, for example the scenario alignment of the underlying companies' investment plans. For more detailed results, please see the appendix. For more details on the methodology and PACTA please visit transitionmonitor.com

	Power				Fossil fuels		Automotive		
	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	Carbon footprint (tCO^2e/ MSEK Sales)
Handelsbanken Asset Management	1.75–2°C	<1.75°C	2–2.7°C	2–2.7°C	>3.2°C	<1.75°C	2–2.7°C	2–2.7°C	
Active Management	<1.75°C	<1.75°C	<1.75°C	–	>3.2°C	<1.75°C	2–2.7°C	2–2.7°C	13.7
Passive Management	1.75–2°C	<1.75°C	2.7–3.2°C	2–2.7°C	>3.2°C	<1.75°C	2–2.7°C	2–2.7°C	12.9

The results show that the buildout plans of coal and gas power capacity are largely in line with the goal of the Paris Agreement.

The results also show that the buildout plan of fossil fuel companies within oil production is far from aligned with the Paris Agreement. In order to be aligned with the IEA:s *Sustainable Development Scenario (SDS)* global oil production should decrease slightly over the next years. Of the few companies in which we were invested at the time for the analysis few were in line with this and the planned production trajectory was an increase of roughly 20 per cent between 2018 and 2023, according to the PACTA analysis.

As a long-term investor dedicated to sustainable development, when we identify companies with high sustainability risks, our choice is between engaging and influencing the companies to change, or to divest. Our conclusion is that our ability to impact these companies is limited, and that their reluctance to integrate climate change represents unpriced risks to our clients. This is one reason why we will be moving away from the fossil fuel sector in a majority of our funds.

The results also show that exclusion alone is not enough. In the power sector, where many companies have both renewable and fossil fuel based energy production, exclusion of companies with fossil fuel based energy production results in alignment within coal and gas power capacity, but not necessarily allocating enough capital to renewable energy production. Smarter exclusion strategies are needed in order to allow for investments in companies operating fossil fuel based energy production, but who allocate new investments in renewable energy in line with the Paris Agreement. We believe that analysis such as PACTA can help us to develop such strategies.

Within the automotive sector the PACTA-analysis indicates that almost no global automotive company is aligned with IEA:s Sustainable Development Scenario, however misalignment is not as significant as for companies active within oil production.

At Handelsbanken Asset Management we believe tools such as PACTA are an important development, helping us as an asset manager to manage risk and opportunities related to climate change. It will also help us in having more informed engagement dialogues.

Way forward

We have initiated the following actions to develop our metrics and targets related to climate risks and opportunities:

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

The Sustainable Development Scenario is fully aligned with the goal of the Paris Agreement, while at the same time delivering on the Sustainable development goals of universal access to energy (SDG 7) and reducing premature deaths from air pollution (part of SDG 3).[1]

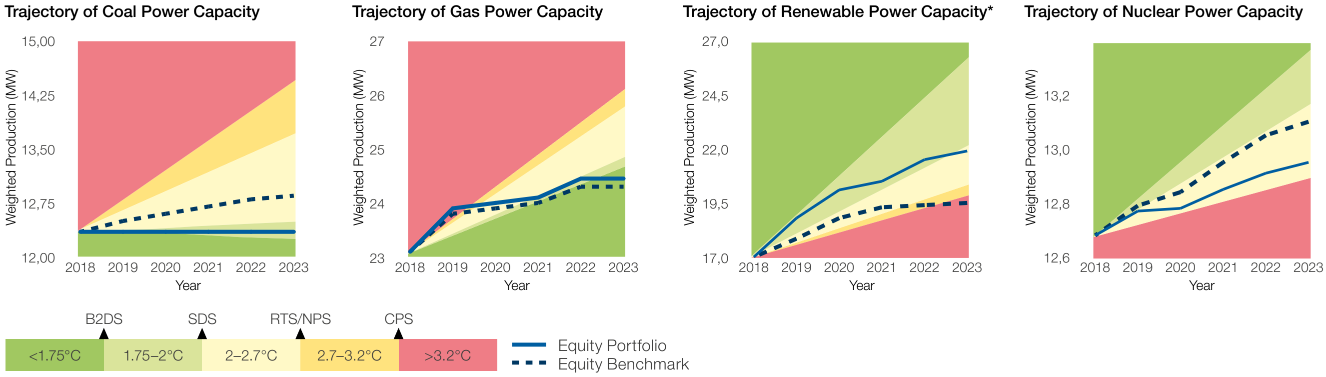
[1] iea.org/weo/weomodel/sds

Appendix

5 year trend – equity, power capacity

The alignment graphs below show the alignment of selected power technologies in the equity portfolio relative to the IEA transition scenarios: B2DS[1], SDS[2], NPS[3], CPS[4] and the global listed equity market. For each technology, the value plotted for the portfolio (solid line) is the planned evolution or 'trajectory' of installed capacity allocated to the equity portfolio over the next five years. The lines separating the color-coded background areas plot the portfolio's 'target production' for each technology under the IEA scenarios.

The dotted line shows the planned trajectory of installed capacity in the specific technology for the listed equity market, scaled to the same starting point as the portfolio.



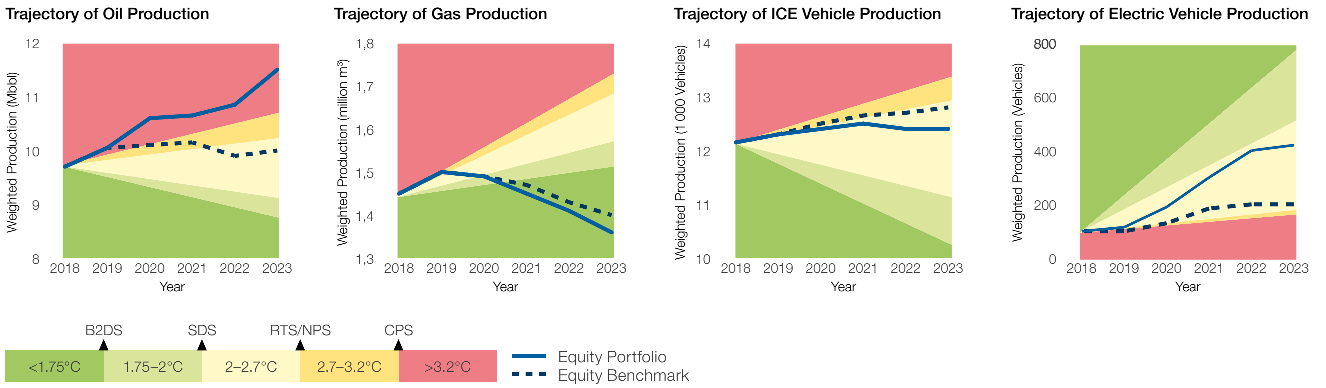
* Due to differences in assumptions about the technology mix within the renewable power sector between the B2DS and SDS, the SDS appears more ambitious for renewable energy than the B2DS. However power generation from renewables is still expected to be greater in the B2DS despite the reduced capacity.

5 year trend – equity fossil fuels and automotive

The alignment graphs below show the alignment of selected fossil fuels and automobile technologies in the equity portfolio relative to the IEA scenarios: B2DS, SDS, NPS, CPS and the global equity market. For each technology, the value plotted for the portfolio (solid line) is the planned evolution or 'trajectory' of fossil fuel production (top graphs) or automobile production (bottom graphs) allocated to the equity portfolio over the next five years.

The lines separating the color-coded background areas plot the portfolio's target production for each technology under the IEA scenarios. The dotted line shows planned production in the specific technology for the listed equity market, scaled to the same starting point as the portfolio.

Fossil Fuel Sector



[1] The IEA:s Beyond 2 Degrees Scenario.
[2] The IEA:s Sustainable Development Scenario.
[3] The IEA:s New Policies Scenario.
[4] The IEA:s Current Policies Scenario.

Alignment in 2023

The table below show the carbon footprint and the alignment of selected technologies in 2023 of individual funds relative to the IEA scenarios: B2DS, SDS, NPS, CPS and associated temperature increase. For each technology, the value in the cell is the planned evolution or 'trajectory' of production buildout allocated to the equity portfolio in 2023. Empty cells means the fund has no exposure to the technology. The PACTA-analysis has been performed on assets under management as of 2018-10-14 and the Carbon footprint measurement as of 2018-06-30.

Overview results PACTA-analysis		Power				Fossil fuels		Automotive			
	Criteria[1]	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	Carbon footprint (tCO_2e/MSEK Sales)[4]	Carbon footprint benchmark[3] (tCO_2e/MSEK Sales)[4]
Handelsbanken Asset Management		1.75–2°C	<1.75°C	2–2.7°C	2–2.7°C	>3.2°C	<1.75°C	2–2.7°C	2–2.7°C		
Active Management		<1.75°C	<1.75°C	<1.75°C	–	>3.2°C	<1.75°C	2–2.7°C	2–2.7°C	13.7	
Passive Management		1.75–2°C	<1.75°C	2.7–3.2°C	2–2.7°C	>3.2°C	<1.75°C	2–2.7°C	2–2.7°C	12.9	
USA Index		1.75–2°C	2–2.7°C	>3.2°C	2–2.7°C	2.7–3.2°C	<1.75°C	2–2.7°C	2–2.7°C	19.7	21.3
Global Index Criteria	x	–	–	–	–	<1.75°C	<1.75°C	2–2.7°C	2–2.7°C	8.6	26.4
Europa Index		1.75–2°C	<1.75°C	1.75–2°C	2–2.7°C	>3.2°C	1.75–2°C	2–2.7°C	1.75–2°C	21.6	23.1
Emerging Markets Index		2–2.7°C	<1.75°C	>3.2°C	<1.75°C	1.75–2°C	<1.75°C	>3.2°C	>3.2°C	32.0	45.7
Global Småbolag Index Criteria	x	–	–	<1.75°C	–	–	–	–	–	13.5	21.1
Norden Index Criteria	x	–	<1.75°C	–	–	–	–	–	–	19.9	23.2
Norge Index		–	–	–	–	>3.2°C	<1.75°C	–	–		
Sverige Index Criteria	x	–	–	<1.75°C	–	–	–	–	–	8.8	8.7
Sverigefond Index		–	–	<1.75°C	–	>3.2°C	1.75–2°C	–	–	8.7	
Sverige OMXSB Index		–	–	–	–	>3.2°C	1.75–2°C	–	–	8.8	
Global Dynamisk 90	x	–	–	–	–	–	<1.75°C	2–2.7°C	>3.2°C		
Xact Högutdelande	x	–	–	–	–	–	–	–	–	4.2	9.2
Xact Norden 30		–	–	–	–	>3.2°C	<1.75°C	–	–	18.0	
Xact OBX		–	–	–	–	>3.2°C	<1.75°C	–	–	45.7	
Xact OMX		–	–	–	–	–	–	–	–	5.7	
Xact Sverige	x	–	–	–	–	–	–	–	–	8.7	
Amerika Småbolag Tema	x	–	–	–	–	–	–	–	–	9.0	20.1
Amerika Tema	x	–	–	–	–	<1.75°C	<1.75°C	–	–	6.7	21.3
Asien Tema		–	–	–	–	–	–	2–2.7°C	2.7–3.2°C	37.3	42.0
AstraZeneca Allemansfond		–	–	–	–	–	–	–	–		
Bosparfond Bostadsrätterna	x	–	–	–	–	–	–	–	–		
Brasilien		–	–	–	–	–	–	–	–	5.4	69.2
EMEA Tema	x	–	–	>3.2°C	–	–	–	–	–		
Europa Selektiv		–	–	–	–	–	–	–	–	8.4	24.4
Europa Tema	x	–	–	<1.75°C	–	–	–	–	–	6.2	23.1
Finlandsfond		–	–	–	–	–	–	–	–	25.5	31.6
Global Selektiv		–	–	–	–	–	–	–	–	4.7	26.2
Global Selektiv	x	–	–	–	–	–	–	–	–	2.1	26.2
Global Selektiv Hedge		–	–	–	–	–	–	–	–		
Global Tema	x	–	–	–	–	–	–	–	–	5.3	26.4
Hållbar Energi	x	–	<1.75°C	<1.75°C	–	–	–	–	–	11.2	29.5
Hållbarhet Hedge Criteria	x	–	–	<1.75°C	–	–	–	–	–		
Hälsovård Tema	x	–	–	–	–	–	–	–	–	2.2	2.0
Japan Tema	x	–	–	–	–	–	–	–	–	4.5	23.9
Kinafond		–	–	–	–	<1.75°C	<1.75°C	2–2.7°C	2.7–3.2°C	25.9	36.8
Latinamerikafond		–	–	–	–	–	–	–	–	4.9	37.9
Microcap Sverige		–	–	–	–	–	–	–	–		
Norden Selektiv		–	–	–	–	–	–	–	–	6.4	20.8
Nordenfond		–	–	–	–	>3.2°C	<1.75°C	–	–	25.4	20.8
Nordiska Småbolag		–	–	–	–	–	–	–	–	14.5	13.7
Norge		–	–	–	–	>3.2°C	<1.75°C	–	–	33.8	45.9
Rysslandsfond[2]		–	–	–	–	>3.2°C	2.7–3.2°C	–	–		
Svenska Småbolagsfond		–	–	–	–	–	–	–	–	16.1	15.6
Sverige Selektiv		–	–	–	–	–	–	–	–		
Sverigefond	x	–	–	–	–	–	–	–	–	8.4	8.7
Tillväxtmarknad Tema	x	-	-	-	-	-	-	-	-	3.6	45.7

[1] All of the Criteria funds exclude companies in which the primary business operations are within controversial sectors such as fossil fuels, alcohol, tobacco, commercial gambling, war materials and pornography.
[2] The fund has been merged into EMEA Tema (8/12/2018).
[3] Unscreened benchmark.
[4] The carbon footprint provides a historic snapshot of the emissions from the companies that make up the fund's equity portfolio. The calculations are not comprehensive and do not include indirect emissions. The metric says nothing about how the portfolio contributes to a low-carbon society. For further information about the metric, see Guidance for fund management companies' reporting of funds' carbon footprints

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