storebrand

Emerging Risks

Society, governments and organizations today experience a world more attuned to risk. The year 2020 saw the rise of a global pandemic, that it will take years to cope with. This document outlines two of the emerging risks Storebrand is seeking to understand better in order to formulate a response and become a more resilient organization. Our purpose is clear – we create a future to look forward to. In order to deliver on our purpose, we need to understand the emerging risks that will face us in the future, and how to mitigate these risks as best we can. This document is not intended to give the full risk picture, rather it is a deep-dive into two of the emerging risks we find material to our business, and to delivering on our purpose. As is evident from the World Economic Forums Global Risk Report from 2021, the risk landscape is evolving, and Society today, hereunder Storebrands business, our customers, suppliers and partners are exposed to a multitude of these.

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Climate risks and opportunities

Why

Climate change and the transition to a low-carbon society can have a significant impact on our business. This may be further exacerbated by changes in the Norwegian economy, which is vulnerable to falling oil prices and lower activity in the oil and gas industry. In developing our climate strategy, we looked at how Storebrand' s activities affect climate change, how climate change and climate policy can affect our business, and how we can adapt to avoid or mitigate potential negative impacts. In addition, we identified opportunities as a result of a changing climate and the transition to a low-carbon economy, what these entail for us and how we can capitalise on them in the best possible way. This is described in the chapter A driving force for sustainable investments on page 57.

The effects on investments and liabilities may be sudden in the form of market unrest, or they may unfold gradually through lower average return and persistently low interest rates. A disorderly transition also poses a risk, for instance if policy initiatives are too strong relative to technology development and investment opportunities. Vulnerability from a lower oil price and activity in the oil and gas-sector is a particular risk for Norway. A potential trigger is if the policy is abruptly strengthened to achieve Norway's goals based on the Paris agreement. A potential effect is a country-specific fall in interest rate. As part of our efforts to reduce risk, in 2020 we mapped Storebrand's exposure to the fossil sector, analyzing revenues from pension premiums, and disability coverage related to the sector and underlying industries.

We have used the recommendations of the Task Force on Climate Related Financial Disclosures (TCFD) as a framework[44] for our disclosure on climate-related financial risks. The reporting on the impact our business has on climate is reported elsewhere in this report, mainly in the chapter, Keeping our house in order on page 32, and in the chapter A driving for sustainable investments on page 57 and 59.Vi have established a TCFD index, which summarises where the information recommended through the TCFD framework is presented in this report. The index is located as an attachment on page 199.

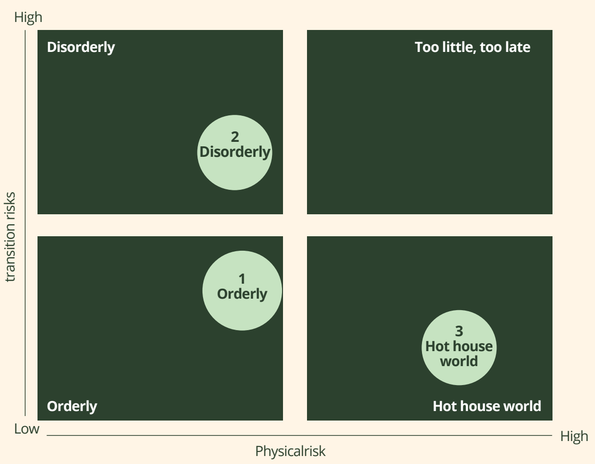
Our approach

Storebrand assesses climate risk through the same framework as other risks. The overall risk, including climate risk, is summarised in the Board's risk review. Risk assessments are broad and include reputational risks associated with Storebrand's sustainability position. In the Group's Own Risk and Solvency report (ORSA), the main objective is to assess climate risks for investments, insurance obligations and solvency margins in different scenarios.

Climate risk differs significantly from other risks, especially along two dimensions. Climate risk, especially the physical risk, is very long-term. Therefore, the risk is assessed in a longer time frame. In addition, historical events have limited relevance. Different scenarios are used as the basis for the assessment.

Storebrand has defined three scenarios based on the framework developed by Network for Greening the Financial System (NGFS). The network is established by central banks and supervisory authorities. The aim is to develop a framework for assessing and managing climate risk and encouraging the financial sector to support the transition to a low-carbon economy. The scenarios will be further developed, including quantitative stress tests, as the basis for the supervision process and analyses of financial stability.

Scenario analysis



The scenarios are based on two dimensions that affect the risk.

- How serious will the impact of global warming be? (physical risk)
- Is the transition controlled or disorderly? (transition risk)

Storebrand has committed to the Paris Agreement's goal of limiting global warming to 1.5 degrees and will work for a controlled transition, similar to scenario A.

44) Further details on climate risks and opportunities can be found in Storebrand's Sustainability Library https://www.storebrand.no/en/sustainability/sustainability-library

Scenario analysis
Storebrand has used the NGFS framework and associated scenarios to assess climate risk. The scenarios used can be simplified as follows:

1) Controlled:
Climate policy is restructured swiftly and with force with the aim of reaching zero emissions by 2050 and limiting global warming to 1.5 degrees. The restructuring is facilitated by the fact that carbon capture becomes technically and economically viable to some extent.

2) Delayed:
Varying degrees of climate crisis understanding, complex decision-making and limited technology developments delay a coordinated restructuring of climate policy in relation to the goals of the Paris Agreement. From about 2025, clearer signs of negative climate change are increasing acceptance of costs of severe austerity. Overall, the restructuring will be large enough for global warming to remain below 2 degrees.

3) Warm world:
Greenhouse emissions continue to grow, based on continuance of already existing emission-reduction measures. Low sense of crisis, lack of coordination and short-term policy priorities mean that already adopted future restrictions are implemented to a lesser extent. By 2050, emissions are higher than present levels and global warming will be above 3 degrees.

The economic implications of the potentially catastrophic climatic changes of scenario 3 cannot be quantified in a meaningful way. Therefore, we have based our assessment on the consequences of the scenarios controlled (1.5 °C) and delayed (> 2 °C). Based on these two scenarios, we have identified potential risks and assessed them in short (1-3 years) and long term (3-10 years). [45)]

Overall findings

Physical climate risk

Physical climate change lead to lower returns, both for equities, bonds and property investments. The risk is mainly long-term and most prevalent if climate change is dramatic, expressed in scenario 3. Insurance obligations can also be negatively affected. Storebrand exposure to climate change through direct insurance is very low. Yet, limited economic growth can cause interest rates to remain lower than they would otherwise. This has a negative impact on our guaranteed obligations. The combination of lower returns on assets, and higher insurance liabilities could negatively affect our solvency margin. The effect can hit abruptly in the form of market turmoil, or over time in the form of lower average returns and persistently low interest rates.

In practice, climate effects on returns and interest rates are very difficult to isolate from other effects. The risk is therefore considered to be covered by the capital requirements for market risk. The scenarios for negative development in the financial market and persistently low interest rates are also relevant to climate risk, where climate change and climate policy could be affected by potentially contributing underlying causes.

Transition risk

Transition risk can affect investment returns, even in the short and medium term. Given a rapid transition to a low-carbon economy, exemplified in scenario 1, there is a risk that the oil and gas sector will be particularly affected. Storebrand has adapted its investments to reduce its climate footprint, and a large part of our investments are in fossil-free funds. A large proportion of our real estate investments have green certificates. This contributes to reduced climate risk. On the other hand, there is a risk that future returns for investments in solution companies are overvalued. The risk is greatest if the transition to a low-carbon society is delayed, as expressed in scenario 2. There may be a risk of overvalued valuations also in scenario 1, for example, if powerful government initiatives and restrictions are implemented faster than technology development and investment opportunities.

Transition risks can also lead to reduced economic growth, lower investment returns and increased insurance liabilities as a result of lower interest rates. The Norwegian economy is particularly vulnerable to developments in oil prices and activity in the oil and oil services sector. Overall, the transition risk is greatest with a delayed, but more restrictive approach, as expressed in scenario 2. In the short term, we find the swift and forceful climate policy restructures needed in scenario 1 to pose the greatest risk.

Storebrand is particularly exposed to developments in the Norwegian economy because higher levels of unemployment normally lead to increased levels of disability. Limited economic growth over time also poses a risk to Storebrand, given that it results in reduced growth in wages and employment, and thus lower growth in pension premiums. The fossil sector poses a particular risk. A review of the customer base shows that Storebrand has a significant exposure, both against disability coverage and pension savings premiums related to employees associated with companies in the fossil sectors.

Asset management

Our asset management's largest climate-related financial risks and opportunities are believed to lie in the transition to a low-emission society. Climate policy and regulations, more rigorous emission requirements, a changed cost structure and market preferences may affect our investments. Our most important initiatives to mitigate these risks and capitalise on potential opportunities are listed below and, in the chapter driving force for sustainable investments.

Through Storebrand' s climate strategy for investments, and our commitments through Net Zero Asset Owner Alliance, our target is to ensure that our investment portfolio shall be climate neutral by 2050. Part of the commitment is for Storebrand to set intermediate targets for emission reductions and report on target achievement.

45) Since climate risk is integrated into our structured framework for risk assessment that only operates with these two time horizons, we have not included risk that could be felt in the even longer term, ie. in ten years or more

We have established a framework with the following targets for 2025:

- **Emission targets for equity, corporate bonds, and real estate investments:** In line with the IPCC's 1.5°C scenarios and commitments communicated through Storebrand's climate strategy and the Net Zero Asset Owner Alliance (NZAOA), we aim to reduce the carbon footprint[46)] in the Storebrand Group's total equities, corporate bond, and real estate investments by at least 32 per cent by 2025 with the base year in 2018. [47)]

- **Climate reduction objectives for high emission sectors:** Storebrand will set targets for emissions reductions for high-emission sectors during the first half of 2021 [48)]. See our equity exposure to high emission sectors below.

- **Be an active owner and driving force:** Storebrand Asset Management (SAM) leads Storebrand's work with active ownership. In line with SAM's strategy for active ownership, particular focus will be placed on our active ownership and engagements with the 20 companies where we own the largest emissions.[49)] This will mainly be done in cooperation with other investors in initiatives such as Climate Action 100+.

- **Reorient capital towards solution companies:** Storebrand's target is that 15% of our total investments will be invested in what we define as solutions by 2025. It includes equity investments in solution companies,[50)] green bonds, certified green property and investments in green infrastructure.

- **Engage customers and offer solutions:** Storebrand aims to engage customers and offer products and solutions that ensure more capital in invested in solutions and less capital is invested in high-emission companies and sectors.

Targets and metrics

- Carbon footprint in equity investments: 12 tonnes CO2equivalents per NOK/SEK 1 million in sales income (compared to 18 index) [51)]
- Carbon footprint in bond investments: 9 tonnes CO2equivalents per NOK/SEK 1 million in sales income (compared to 16 index) [51)]
- Carbon intensity in real estate investments: 7.9 tonnes CO2equivalents per m^2
- Exposure to high emission sectors NOK 32.2 billion / 8 per cent of total assets
- Number of active company engagements related to climate and environmental-related risks and opportunities: 433
- Number of companies that have been excluded due to severe climate and environmental damage: 139

In 2020 we launched a new climate strategy. This entails, among other things, that Storebrand will no longer invest in companies that receive more than 5 per cent of their revenues from coal, oil sands-based activities, are involved in severe and/or systematically unsustainable production of palm oil, soy, cattle and timber. This can reduce deforestation risk in portfolios, in line with our deforestation policy, or in companies that deliberately and systematically work against the goals and targets enshrined in the Paris Agreement[52)], for example through lobbying. In addition, by 2025 our investment portfolio shall be completely free from companies that contribute to illegal deforestation. We currently survey all companies at high risk of contributing to deforestation and will report annually on this process from 2021.

Additional measurement parameters and measurements can be found in the chapter a driving force for sustainable investments.

Sector-specified exposure to high emission sectors

Sector [53)]	2018 (Bn NOK)	2019 (Bn NOK)	2020 (Bn NOK)	Change 2018-2020 (Bn NOK)
Aluminum	1,2	1,2	1,5	0,2
Aviation	3,1	3,6	3,3	0,1
Cement	0,3	0,4	0,6	0,3
Chemicals	6,8	8,0	9,8	3,0
Energy	15,8	12,2	7,0	-8,8
Heavy duty automobiles	0,6	0,9	1,1	0,5
Light duty automobiles	3,7	3,8	4,3	0,6
Shipping	0,9	0,6	0,7	-0,2
Steel	0,8	1,1	1,4	0,7
Utilities	4,6	2,9	2,5	-2,1
Total	**37,7**	**34,6**	**32,2**	**-5,5**

46) Calculated as Weighted Average Carbon Intensity.See calculation methodology in Definitions from page 225.

47) This means relative emission reductions. The methodology used is weighted average carbon intensity (tonnes CO2e per NOK 1 million in sales income) for shares and bonds and carbon intensity for real estate investments (CO2 per m2).

48) Based on Net Zero Asset Owner Alliance's list of high-emission sectors, which includes the table with our specified exposure on page 70

49) Calculated on the share of owned share capital in the company multiplied by the company's total Scope 1-2 emissions

50) See definition page 225

Real estate investments

Storebrand has direct real estate investments equivalent to NOK 49 billion, which constitutes 5 per cent of assets under management. Physical risk is largely related to the effects of extreme weather on physical assets.

Transitional risks are linked to uncertainty about long-term changes. We expect the real estate sector to be subject to new requirements related to energy efficiency and climate impact. Our ability to adapt to these requirements is essential for us to manage risk and capitalise on market opportunities. In 2020, Storebrand's property subsidiary, in collaboration with the The Science Based Targets Initiative (SBTi), tested their methodology for setting science-based targets in line with the1.5 degree target of the Paris Agreement. The aim of the pilot project was to establish a target, and an associated emission pathway to 2050. The pilot project was part of a report published in connection with SBTi launching its methodology to set science-based emission targets for financial institutions. The pilot project and the associated target includes intermediate targets on the road to carbon neutrality in 2050, and is a management tool that will be used in our further work on transition risk in the property portfolio.

Risk-reducing measures that we have already implemented include property certification and rating through the Global Real Estate Sustainability Benchmark (GRESB). [54)]

Through 2020, we have been working on a project to develop a tool for climate accounting and forecasting for real estate, which is due to be completed in 2021. SPP Fastigheter, Storebrand' s Swedish subsidiary in real estate investments, conducted an assessment in 2020 of its exposure to physical climate risk, mainly increased rainfall and flooding for all its properties. The analysis indicates that a couple of properties in the portfolio are at medium flooding risk, and work is underway to assess potential adaptation measures at these properties

Targets and metrics

- Long-term target of 100 per cent environmentally certified property. The share of direct real estate investments that had green certificates in 2020 was 43 per cent. The target is to increase this to 74 per cent by 2025.
- Sustainability rating of all real estate: Our direct real estate investments are rated by GRESB in four different portfolios, and the portfolios are among the best in the Nordic region. The score increased almost 4 per cent in 2020 from 82 in 2019, to an average of 85 out of 100. With that, three out of four portfolios are ranked in the top 20 per cent globally, and awarded the maximum 5 stars.
- Commitment to energy efficiency and greenhouse gas emissions: Continuous improvements in energy efficiency are achieved through several measures to optimise operations. The total carbon emissions in direct real estate investments continued to decrease, ending at 8 456 tons of CO2equivalents in 2020, or 7.9kg CO2e/m2. The goal for 2025 is to reduce this to 6.5kg CO2e/m^2.

Additional measurement parameters and targets relevant to climate-related risks related to real estate investments can be found on pages 59 and 65.

Insurance

The direct impact of climate change on Storebrand's insurance obligations is limited because our business is largely based on reassurance where the terms of the agreement are adjusted annually. As a responsible insurance company, we still have a responsibility to assist our customers in securing themselves and their assets against potential climate risks. The biggest climate-related financial risk to our property and non-life insurance business is increased insurance settlements related to climate-related damage. In the long term, rising sea levels and changes in weather patterns can also have an impact. Risks associated with changing customer behaviour, technological developments and new regulations will also affect the property and non-life insurance market.

Our main measures to reduce climate risk are the following:

- **Risk assessment and pricing:** Climate factors are included in risk assessment and pricing in the underwriting process.
- **Exposure mapping and reinsurance:** We reinsure assets in areas with high exposure to physical risk associated with climate change.
- **Diversified risk through national plan:** Participation in Norwegian natural perils pool is statutory and provides joint reinsurance protection linked to property insurance for real estate and housing.
- **Pilot project under the auspices of UNEP FI:** As one of 18 insurance companies, we have participated in a project for further development of standardised reporting for insurance providers in accordance with TCFD. We participated in the working group which analysed physical risk related to increased rainfall and flooding. The work resulted in a report launched in January 2021.[55)]
- **Rewarding damage prevention**: We actively communicate with our customers, encouraging damage prevention measures, such as securing property during periods prone to flooding

Measurements and measurement parameters

- Share of insurance premiums from electric car insurance: 18,8 per cent in 2020
- Our suppliers should have set targets for emissions cuts in the short and long term by 2025
- All suppliers must be climate neutral by 2025

54) GRESB assesses and rates real estate investments with respect to ESG performance and delivers standardised and validated data to capital markets.

Cybersecurity

The risk landscape for organizations, both public and private is evolving as companies are becoming ever more digitalized. Organizations are targeted by ever more sophisticated cyber threats. The emerging and ever increasing ature of Cyber risk is further exemplified by its inclusion in the World Economic Forum Global Risk Report 2020's top 10 list of long-term risks. As stated in the report: "Cyberattacks have become a common hazard for individuals and businesses: our surveys rank them as the seventh most likely and eighth most impactful risk, and the second most concerning risk for doing business globally over the next 10 years".

The risk landscape from Cybersecurity is evolving, and also the costs of cybercrime towards organizations and individuals. Accenture's annual cost of cybercrime study from 2019 indicated that the number of cyber security breaches had increased by 67% in the last five years, and that the costs of cybercrime increased by 72% in the same period. Banking, insurance, and capital markets are all among the 7 industries with the highest cost of cybersecurity according to the same study. Storebrand operates within all 3 industries, and cybersecurity is inevitably and important emerging risk factor for our business.

Storebrand is facing a major technological shift with the transition to cloud-based infrastructure. Risks increase in connection with the actual transformation, and the consequence of errors can be greater when services are provided online. At the same time, cloud-based services and infrastructure reduce the risk associated with self-developed systems and, in the long term, outdated

infrastructure. Therefore, there is a tradeoff between the risks arising from becoming an ever more digitalized, cloud-based financial services provider with the risks associated with this, and the risks associated with internally developed systems. An explicit potential impact of this emerging risk is the GDPR fines that have been introduced through European legislation, where fines of up to 4% of revenues can be given for GDPR breaches. We publicly report on the number of information security incidents in our annual report page 41.

Storebrand's IT systems are vital for operations and reliable financial reporting. Errors and disruptions may have consequences for commercial operations and can impact on the trust the Group has from both customers and shareholders. In the worst case, abnormal situations can result in penalties from the supervisory authorities. Storebrand's IT platform is characterised by complexity and integration between different specialist systems and joint systems. The operation of the IT systems has largely been outsourced to different service providers.

Description:
The threat picture is primarily characterized by external actors with financial gain as the main motive. We see an ever-increasing professionalism and capacity in their activity. We predict an increase in sophisticated threats that are difficult to detect. We see the risk of Storebrand becoming a victim of ransomware as high. Over the last year there has been an increase of companies who are attacked by ransomware. A ransomware attack is where an attacker can get access inside the digital infrastructure, e.g. by hacking, and encrypt all files and leave them inaccessible for the users. To unlock the files, the attacker demands a ransom payment. Another increasing high risk is associated with the exploitation of the supply chains. A supply chain attack is where a threat actor infiltrates a computer system or network via a partner or supplier who has legitimate access. Such attacks have become more frequent and has hit companies over a large scale, over the last couple of years.

Impact:
We see that financial institutions, like Storebrand, are targeted more often by advanced cyber-attacks, and the consequences of such attacks are becoming more and more significant. If Storebrand was to become victim of an advanced cyber-attack, this could have significant impact on our business. If there was a successful attack, a worst case scenario would be that all our files and IT systems become unavailable for a period of time or indefinitely, sensitive personal data or strategic business data could be disclosed online or used by adversaries for other criminal activities. If the IT systems were to be unavailable for a longer period, this could impact e.g. our ability to provide pensions payments or we could lose important sales and acquisitions. This could lead to a negative impact on Storebrand reputation, financial losses, fines and regulatory interventions as less as a decrease in trust from our customers and partners.

Mitigating actions:
We manage cyber risks as part of the Group's risk management process. We have defined 9 categories of cyber risk. Our strategy of mitigating cyber risks is the work we do through people, processes and technology. This includes mandatory security awareness training for all employees, annual sign-off of security rules for all employees, and security governance through an information security management system, which is implemented throughout the group. We have a framework and methodology for secure development, forums for change and patch management, as well as for assessing procurement and outsourcing. We regularly audit our vendors and suppliers. We do offensive security testing. We have technical security measures on all layers and levels. We have several tools for security administration, monitoring and management. Our large suppliers have their own security functions for monitoring security, and we have a Managed Security Service Provider (MSSP) that do security monitoring across suppliers, on premise and in cloud.

A management model has been established with close follow-up of providers and internal control activities in order to reduce the risk associated with the development, administration and operation of the IT systems, as well as information security. The protection of personal data and information security is well integrated into our internal control systems and risk management processes. We continuously assess the ongoing privacy risks that our customers are exposed to. We have established Training in information security and privacy, which is mandatory for all employees and is carried out by e-learning and in thematic groups for each department. In 2020, 85% of our employees completed the training.

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