

Management of sustainability risks

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1 Preamble

We live in a world that has become more interactive, connected and fast-moving than ever before. Global challenges such as urbanisation, scarce resources, climate change, the widening gap between rich and poor, as well as the shift in economic power from the Western world to emerging countries, are opening up opportunities but also posing risks. Against this background, traditional risk models are no longer sufficient to adequately cover all risks. Our focus is on the early detection, measurement and management of sustainability risks. We analyse the potential negative effects of our business activities on the environment and society as well as the associated risks. These are then systematically integrated into our business decisions.

As a management company, the way we structure our investment policies has a major influence on society and the environment. When delegating asset management activities, in particular to Zürcher Kantonalbank, we ensure that our high standards of sustainability are met. These asset managers systematically integrate sustainability aspects into their investment processes with the aim of making more informed investment decisions for clients.

2 Identified sustainability risks

2.1 Climate change

Climate change is one of the greatest challenges of our time. The world's main environmental and social challenges, such as population growth, energy security, loss of biodiversity and access to drinking water and food, are closely linked to climate change. The transition to a low-carbon economy is essential. Climate change involves risks for society as well as companies.

Physical risks include isolated extreme weather events and their consequences, as well as long-term changes in climatic conditions. Physical risks can also have indirect consequences, such as climate-related migration, the collapse of supply chains and armed conflicts.

Transition risks are risks that arise for companies due to imminent structural change. Policies, social paradigm shifts and disruptive technologies can call into question the existence of entire industries.

2.2 Coal extraction and reserves

The combustion of lignite (brown coal) in a power plant generates approximately 1,000 grams of carbon dioxide per kilowatt hour of energy. In the case of gas, the released carbon dioxide is around 60% less at 400 grams, and for wind energy the savings are around 99.3% at 7 grams. The climate crisis and the commitment of countries, companies and investors to abide by the Paris Agreement can lead to the problem of "stranded assets" in the case of coal. Stranded assets, as defined by the International Energy Agency, are assets that cease to yield economic returns long before the end of their economic life.

The risk of stranded assets in the coal industry could be due to a number of factors, from shifts in demand to renewable energies, lack of political support from the government and falling costs for investments in renewable energies. According to some estimates, the volume of stranded assets could amount to up to USD 900 billion worldwide. This raises the question of the financial consequences for companies and ultimately investors.

2.3 Decline in biodiversity

The decline in biodiversity has many different causes, and in many cases it is not easy to map them to a specific sector. Agriculture, forestry, fishing and fish farming are linked to the development of biodiversity. Risks also include the release of genetically modified organisms. However, the decline in biodiversity is also closely linked to climate change. The clearing of rainforests is one of the largest sources of climate change, accounting for around 20% of global net emissions. Deforestation drastically limits the natural carbon sequestration of ecosystems, which in turn exacerbates climate change. This creates a negative spiral. Global warming caused by climate change also has an impact on marine

life. If temperatures rise by 2 degrees Celsius compared with the pre-industrial level, practically all coral reefs will be lost. Rising temperatures are killing entire ecosystems in the oceans.

Biodiversity and economic activity are closely linked. The financial impact of biodiversity loss is significant, as global economic growth is based on a biological foundation. According to the OECD, the annual benefit that people derive from ecosystems is USD 125–140 trillion. This is more than one-and-a-half times global GDP. This entails significant risks for investors. Industries such as agrochemicals, which have a direct, negative impact on biodiversity, are exposed to increased risk from regulation and litigation. Other industries such as fisheries could see their commercial viability disappear.

2.4 Violation of human rights

Investors' responsibility for respecting human rights is set out in the UN Guiding Principles on Business and Human Rights (UNGPs). The expectations of clients, governments and wider society have increased in tandem with the urgency of these concerns. We see it as our social responsibility – within our sphere of influence – to protect the internationally applicable human rights of the United Nations, including the right to life, freedom, security, fair working conditions, equal opportunities and the rights of children, through our investments.

In addition to corporate social responsibility, our focus is also on the financial interest of our investors. Violations of human rights can adversely affect a company's reputation and brand, and may also result in legal sanctions. The consequences can be declining sales and a reduction in the value of the company.

2.5 Manufacture of weapons

Hundreds of thousands of civilians are killed every year in armed conflicts worldwide, with a much higher number of people injured and over 60 million people displaced. In many cases the civilian population has no protection at all in the event of armed conflict. While international agreements such as international humanitarian law and the Geneva Conventions on the regulation of military necessity and avoidance of unnecessary suffering do exist, these agreements are ineffective when it comes to preventing deaths, injuries and displacement.

Given increasing instability around the world and the devastating effects of armed conflicts on local populations, we consider it our responsibility to exclude companies that are involved in the development and production of weapons from our investment universe. In line with the trend towards sustainable investments, investors are increasingly avoiding defence companies – as reflected in higher capital costs for these manufacturers.

3 How we address sustainability risks

The delegation of asset management activities also includes day-to-day management of sustainability risks. At management company level, we monitor compliance with these investment policies on an ongoing basis. The management of sustainability risks varies across the two product lines of Responsible (Article 8 SFDR) and Sustainable (Article 9 SFDR). In the case of Sustainable funds, the risks are considered on a broader basis and a more restrictive approach is taken.

The exclusions mentioned below apply to at least two-thirds of the assets of the relevant sub-fund.

3.1 Climate change

In its role as asset manager of the majority of our funds, Zürcher Kantonalbank aims to make an active contribution to climate protection through its investments. At the same time, it seeks to manage the assets entrusted to it on an optimal basis with a view to the risks and opportunities presented by imminent structural changes. For this reason, climate protection is consistently addressed across the Responsible and Sustainable product lines.

Data published by the International Panel on Climate Change (IPCC) in 2018 on the remaining CO₂e budget show that greenhouse gas emissions (CO₂e) need to decrease by 4% per year from 1 January 2020 in order to achieve the

2°C target. In 2020, Zürcher Kantonalbank set a target for the Responsible funds of a reduction in the CO₂e intensities of the portfolios of 4% per year plus economic growth.

This objective is to be achieved firstly through engagement and secondly through capital allocation. In dialogue with their management, companies are urged to formulate and implement effective CO₂e reduction targets (at least 4% p.a.). In addition, companies are encouraged to join the Science Based Targets initiative. Capital allocation ensures that the portfolios are on the right climate path: CO₂e-intensive companies and governments that do not have a strategy to reduce CO₂e emissions are replaced in favour of CO₂e-efficient companies and/or countries with ambitious reduction targets.

In addition to reducing the negative effects, the Sustainable product line is focused on creating positive solutions. The companies concerned must use their products, services and manufacturing methods to help reduce future CO₂e emissions from the global economy. Based on this investment philosophy, companies involved in the following CO₂e-intensive activities are not included in the investment universe:

- Coal mining
- Companies with coal reserves
- Operation of fossil fuel power plants
- Natural gas extraction
- Oil extraction
- Conventional car manufacturers that do not have a comprehensive strategy for the transition to the use of alternative more environmentally friendly motors Aircraft manufacturers
- Airlines
- Cruise ship operators

The Sustainable product line also excludes countries that have not ratified the Paris Climate Agreement.

3.2 Coal extraction and reserves

The combustion of fossil fuels generates CO₂e emissions, with the resulting risk being mitigated via the climate strategy. No CO₂e emissions are generated in the absence of coal extraction or combustion, however. Accordingly, the risk of stranded assets is not directly addressed in the climate strategy. Based on our estimates, thermal coal will in future play an increasingly minor role in meeting the demand for energy in the major emerging markets. It is likely that coal will continue to be used in the metal industry until it is replaced by new technologies (e.g. hydrogen). Companies that own coal reserves are exposed to the risk of stranded assets. To address this risk, companies that generate more than 5% of their annual turnover from coal extraction and sales are excluded from our Responsible funds. With the exception of metallurgical coal, companies that own coal reserves are also excluded. Sustainable products must generate 0% of sales from coal extraction. Companies with coal reserves are completely excluded.

3.3 Decline in biodiversity

Through the climate strategy, Responsible and Sustainable products indirectly make a significant contribution to the conservation of biodiversity. However, the direct impact of economic activities on biodiversity is also analysed in the course of ESG integration and included in the investment decision. In the corresponding industries (e.g. food, textiles), for example, the risks of industrial agriculture such as monocultures and agrochemicals for biodiversity as well as the negative effects of the production of persistent organic pollutants (POPs) are comprehensively analysed. One component of the ESG score developed by Zürcher Kantonalbank, which serves to identify ESG laggards, assesses the loss of biodiversity resulting from the dispersion and deposition of pollutants. Controversies in the area of biodiversity are also visualised in the form of a traffic light system and made available to investment experts.

Violations of the environmental principles of the UN Global Compact (United Nations Standard on Human and Labour Rights, Environmental Standards and Anti-Corruption) lead to exclusion:

- Businesses should support a precautionary approach to environmental challenges (Principle 7).
- Businesses should undertake initiatives to promote greater environmental responsibility (Principle 8).
- Businesses should encourage the development and diffusion of environmentally friendly technologies (Principle 9).

In the Sustainable product line, the decline in biodiversity is also supplemented by the three areas of unsustainable forestry, unsustainable fishing and fish farming, as well as the release of GMOs.

The Forest Stewardship Council (FSC) has defined criteria for the sustainable use of forests. Forestry companies can have their production certified according to these criteria. Commitment to the FSC criteria and certification is a prerequisite for consideration in Sustainable products. Founded in 2004 at the initiative of the WWF, the Round Table on Sustainable Palm Oil (RSPO) – as central organisation – seeks to promote sustainable cultivation methods for palm oil, thereby limiting environmental and biodiversity damage. Forest management and the paper industry are generally excluded from the investment universe. If a company aligns itself with the FSC criteria, operates palm oil plantations with RSPO certification, and has not been shown to have been involved in deforestation in the past, it can be included in the investment universe.

The Marine Stewardship Council (MSC) and the Aquaculture Stewardship Council (ASC), as internationally active non-profit organisations, have developed standards for sustainable fishing and fish farming. MSC certification takes into account the conservation and restoration of healthy fish stocks, conservation of the marine ecosystem, fisheries management systems that reflect national and international laws and directives, as well as the avoidance of bycatch. The Aquaculture Stewardship Council (ASC) has established minimum criteria for the responsible cultivation of fish and seafood, with a focus on stock density and marine biology aspects (e.g. no unnecessary use of antibiotics or chemicals). As the requirements of the ASC are still insufficient, additional organic certification for aquaculture is necessary. Companies involved in fish farming, fishing and fish trading are generally excluded from the investment universe. Where there is evidence that fishing is carried out with the aim of MSC certification and fish farming with a view to obtaining organic certification, companies may be proposed for inclusion in the investment universe.

Genetic engineering carries the risk that transgenic organisms (animals, plants and microorganisms) will multiply and spread once released. This results in various problem areas, such as the unwanted spread of genetically modified organisms in the environment, harmful effects on biodiversity, the environment and human health. Most genetically modified organisms are plants, well over 90% of which are now either resistant to herbicide or contain toxins to insects (known as Bt crops). The global prevalence of these two characteristics entails serious problems (e.g. health risks for humans and animals, loss of biodiversity, emergence of resistant weeds and harmful insects). Despite intensive research, the genetic production of plants with other properties, such as drought or disease resistance, has shown very little success to date. Genetically produced plants are patented, which has resulted in the global market for transgenic seeds being controlled by a few transnational agricultural companies. Farmers can no longer extract their seeds from their harvest and develop them further, as had been the case since ancient times. New dependencies are arising. At the same time, the biodiversity of crops is shrinking. Another major criticism of transgenic plants is that their introduction at the very least makes non-genetic farming much more difficult: pollen from transgenic plants can be carried by the wind, bees or other animals over a wide area and cross with previously genetic-free crops as well as related wild herbs. The release of genetically modified organisms into the environment therefore needs to be stopped. Companies that release transgenic organisms or develop genetically modified plants, animals and microorganisms are therefore excluded from the Sustainable products investment universe.

The Sustainable product line excludes countries that have not ratified the United Nations Convention on Biological Diversity (CBD).

3.4 Violation of human rights

Responsible and Sustainable products address companies that violate the UN Global Compact principles (United Nations Standard on Human and Labour Rights, Environmental Standards and Anti-Corruption). Data from independent third parties is used for screening. The UN Global Compact violations are checked in detail again by our analysts. As part of the engagement, we seek dialogue and encourage companies to change their behaviour. If this does not happen, the company is excluded from the investment universes. Companies that produce, manage or publish pornographic content (e.g. pornographic films, magazines, websites) are also excluded.

In addition to the exclusion criteria for company activities, securities that come from countries on which sanctions have been imposed by Switzerland, the EU or the US (OFAC) due to security aspects or violations of human rights are also excluded from our Responsible and Sustainable investment universes.

Sustainable products also exclude countries that violate fundamental human rights. The degree of democracy and freedom in the individual countries is an important criterion in this connection. This is determined based on the Freedom House index. The indicator uses various parameters – namely free elections, freedom of expression and religion, freedom of assembly, equality before the law and guaranteed property rights – to determine the relevant liberties in the respective countries. Countries that are considered "not free" are excluded from the Sustainable investment universe. In our view, the use of the death penalty is also incompatible with human rights. In the case of products in the Sustainable line, therefore, we do not invest in countries that conduct this ethically and legally controversial practice.

3.5 Manufacture of weapons

Weapons manufacturers are excluded in the case of Responsible as well as Sustainable products. This includes manufacturers of prohibited weapons such as cluster bombs, anti-personnel and landmines, biological and chemical weapons, nuclear weapons, enriched uranium, blinding laser weapons and incendiary weapons. Here we apply a turnover threshold of 0%. Companies that generate more than 5% of their turnover from the production of conventional weapons (firearms, ammunition, military hardware) are also excluded.

In the case of Sustainable products, the turnover threshold for conventional weapons is also set at 0%. Countries using more than 4% of their gross domestic product for military expenditure are also excluded.

4 Integration into the risk framework

Sustainability risks – as with financial risks – are addressed in a three-stage risk model. Sustainability issues can give rise to various risks. Sustainability risks therefore do not form a separate risk class but can be specifically addressed.

4.1 First line of defence

Risk management is embedded at operating level, i.e. by portfolio and line managers (risk owners). This control process includes daily pre- and post-trade transaction checks and monitoring compliance of investment guidelines with the portfolio management system, as well as daily performance checks, including checking individual positions for relative outliers. Line managers regularly review all portfolios together with the portfolio manager. Part of this process is to identify deviations from our strategy and question the reasons.

4.2 Second line of defence

Preventive risk management is the responsibility of the Management Company. Sustainability risks are identified, assessed, controlled and monitored by formulating and implementing a risk policy that focuses, among other things, on preventing greenwashing or market risks driven by sustainability aspects.

The risk management department has a responsibility to clients, supervisory authorities and auditors.

4.3 Third line of defence

This control process includes a regular review of monitoring methods and instruments by internal and external auditing.

5 Conclusion

Risks associated with sustainability issues can have an impact on the market value and reputation of a company. We consider climate change, the risk of stranded assets for coal, the decline in biodiversity, violations of human rights and the production of weapons to be the main sustainability risks. In addition to our social and environmental responsibility, our task as management company is also to protect investors from risks. When delegating asset management activities, we ensure that risks are identified and adequately addressed at the investment process level. Risk management is optimally implemented with a three-stage risk model.