Swisscanto
Asset Management
International S.A.

Handling Sustainability Risks

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Table of contents

1 Preamble **4**
2 Identified sustainability risks **4**
2.1 Climate change 4
2.2 Coal extraction and reserves 4
2.3 Decline in species diversity 4
2.4 Violation of human rights 5
2.5 Weapon manufacturing 5
3 How we address sustainability risks **5**
3.1 Climate change 5
3.2 Coal extraction and reserves 6
3.3 Decline in species diversity 7
3.4 Violation of human rights 8
3.5 Weapon manufacturing 8
4 Integration in the risk framework **9**
4.1 First line of defence 9
4.2 Second line of defence 9
4.3 Third line of defence 9
5 Conclusion **9**

1 Preamble

We live in a world that has become more interactive, connected and faster than ever before. Global challenges such as urbanisation, resource scarcity, climate change, the widening gap between the rich and poor and shifting 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. We count on early detection, measurement and management of sustainability risks. We analyse possible negative effects of our business activities on the environment and society as well as the associated risks. These are systematically integrated into our business decisions.

As a management company, we have a great impact on society and the environment in how we design our investment policies. 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 customers.

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-greenhouse gas economy is essential. This entails risks for society as well as companies.

Physical risks include both 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 or 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 states, companies and investors to abide by the Paris Agreement can lead to the problem of "stranded assets" in 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 $900 billion worldwide. This raises the question of the financial consequences for companies and ultimately investors.

2.3 Decline in species diversity

The decline in biodiversity has many different causes, and in many cases it is not easy to map them to a specific sector. 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. Deforestation of rainforests is one of the largest sources of climate change and accounts for around 20% of global net emissions. The clearing of rainforests 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 to 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 $125–140 trillion. This is more than one-and-a-half times global GDP. This entails significant risks for investors. Industries, such as the agrochemical sector, which have a direct negative impact on biodiversity, are exposed to increased risk from regulation and litigation. The commercial basis could be removed from other industries, such as fisheries.

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 and urgency of customers, governments and wider society have increased. We see it as our social responsibility that, within our sphere of influence, we 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, with our investments.

In addition to corporate social responsibility, focus also lies 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 company value.

2.5 Weapon manufacturing

Worldwide, hundreds of thousands of civilians are killed every year in armed conflicts; many people are injured and over 60 million people are displaced. The civilian population is often exposed to armed conflicts without any protection. While there are international agreements such as international humanitarian law or the Geneva Conventions to regulate military necessity and avoid unnecessary suffering, these agreements are ineffective when it comes to preventing deaths, injuries and displacement.

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

3 How we address sustainability risks

The delegation of asset management activities also delegates day-to-day management of sustainability risks. At the management company level, we monitor compliance with these investment policies on an ongoing basis. The handling of sustainability risks varies across the two product lines Responsible (Article 8 SFDR) and Sustainable (Article 9 SFDR), for example. In the case of the Sustainable funds, the risks are considered more broadly and more restrictive handling is applied.
The exclusions mentioned below apply to at least two-thirds of the assets of the relevant sub-fund.

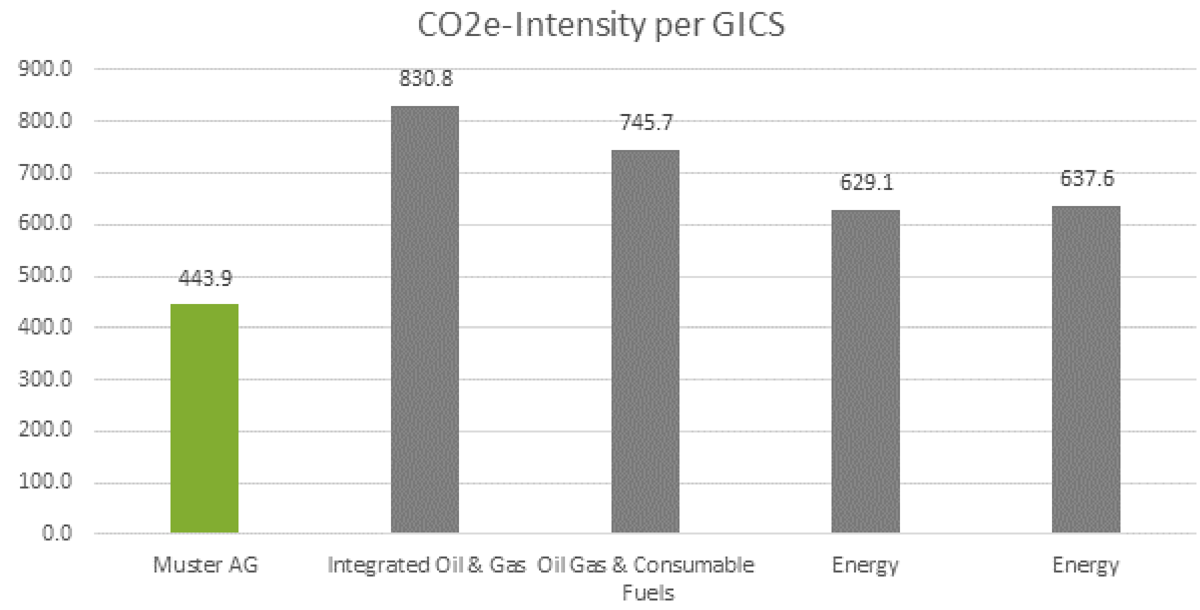
3.1 Climate change

Zürcher Kantonalbank, in its role as asset manager of the majority of our funds, aims on the one hand to actively contribute to climate protection with its investments and, on the other hand, to optimally manage the assets entrusted to it in view of the imminent major structural changes in terms of risks and opportunities. For this reason, climate protection is consistently addressed in the Responsible and Sustainable product lines.

From the data published in 2018 by the IPCC on the remaining CO_2e budget, it can be deduced that greenhouse emissions (CO_2e) must decrease by 4% per year from 1 January 2020 in order to achieve the 2°C target. Zürcher

Kantonalbank set itself the goal in 2020 for the Responsible funds to reduce the CO_2e intensities of the portfolios by 4% per year plus economic growth.

This objective should be achieved on the one hand through commitment and, on the other hand, through capital allocation. In dialogue with management, companies are urged to formulate and implement effective CO_2e 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: CO_2e-intensive companies and states that do not have a strategy to reduce their CO_2e emissions are replaced in favour of CO_2e-efficient companies and/or states with ambitious reduction targets. The data is available to the portfolio managers in their daily work.



Source: ISS

In addition to reducing the negative effects, the Sustainable product line focuses on creating positive solutions. Companies should use their products, services and manufacturing methods to help reduce CO_2e emissions from the global economy in the future. Based on this investment philosophy, companies involved in the following CO_2e-intensive activities are not part of the investment universe:

- Operation of fossil-fuel power stations
- Extraction of natural gas
- Oil extraction
- Automotive manufacturers
- Aircraft manufacturers
- Airlines
- Cruise companies

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 CO_2e emissions. The resulting risk is mitigated by the climate strategy. However, as long as coal is not extracted and incinerated, no CO_2e emissions are generated. The risk of stranded assets is therefore not addressed directly in the climate strategy. In our estimates, thermal coal will play a smaller and smaller role in the major emerging markets in the future to meet the demand for energy. Coal in the metal industry is likely to persist temporarily until it is replaced there with new technologies (e.g. hydrogen). Companies that own coal reserves carry the risk of stranded assets. To address this risk, we exclude companies in our Responsible and Sustainable funds that generate more than 5% of their annual turnover from coal extraction and sales. With the exception of metallurgical coal, companies that own coal reserves and use them for their own consumption (e.g. power generation) are also excluded.

3.3 Decline in species diversity
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 products of the Sustainable line, the decline in biodiversity is also supplemented by the three areas of unsustainable forestry, unsustainable fishing and fish farming, and 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) seeks to promote sustainable cultivation methods for palm oil as a central organisation, 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 adversely affected in the past by deforestation, it can be included in the investment universe.

The internationally active non-profit organisations the Marine Stewardship Council (MSC) and the Aquaculture Stewardship Council (ASC) have developed standards for sustainable fishing and fish farming. MSC certification takes into account the conservation and restoration of healthy fish stocks, the conservation of the marine ecosystem, fisheries management systems taking into account national and international laws and directives, and the avoidance of by-catch. The Aquaculture Stewardship Council (ASC) has established minimum criteria for the responsible cultivation of fish and seafood. Among other things, the focus is on stock density and marine biological aspects (e.g. no unnecessary use of antibiotics and 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 trade 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) once released will multiply and spread. 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, of which well over 90% 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, the emergence of resistant weeds and harmful insects). Despite intensive research, the genetic production of plants with other properties, such as drought resistance or disease resistance, has hardly been successful to date. Genetically produced plants are patented. This 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 has been the case since ancient times. New dependencies arise. At the same time, the biodiversity of crops is shrinking. Another major criticism of transgenic plants is that their introduction makes non-genetic farming at least tremendously more difficult: pollen from transgenic plants can be distributed widely with the wind, bees or other animals and cross with previously genetic-free crops, as well as in related wild herbs. The release of genetically modified organisms into the environment must therefore be rejected. Companies that release transgenic organisms or develop genetically modified plants, animals and microorganisms are therefore excluded from the investment universe of Sustainable products.

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, we also exclude securities from our Responsible and Sustainable investment universes that come from states that are sanctioned by Switzerland, the EU or the USA (OFAC) due to security aspects or violations of human rights.

Sustainable products also exclude states that violate fundamental human rights. The degree of democracy and freedom in the individual countries is an important criterion in this connection. We use Freedom House's Freedom Index to determine this. 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. Accordingly, we do not invest in countries that conduct this ethically, criminally and controversial practice in the Sustainable product line.

3.5 Weapon manufacturing

Weapon manufacturers are excluded in both the Responsible and 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. We apply a revenue 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 the Sustainable products, the revenue threshold for conventional weapons is also set to 0%. Countries using more than 4 percent of their gross domestic product for military expenditure are also excluded.

4 Integration in the risk framework

Sustainability risks – as well as financial risks – are addressed in a three-stage risk model.

4.1 First line of defence

Risk management at the operational level, i.e. by portfolio managers and line managers (risk owners). This control process includes, among other things, scenario analyses, daily transaction controls (pre- and post-trade) and monitoring compliance with investment policies with the portfolio management system, as well as daily performance monitoring including a review of 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 carried out by the management company. It formulates and implements the risk policy and strategies for asset management and identifies, assesses, measures and monitors the risks and is also responsible for the risk management function vis-à-vis customers, supervisory authorities and auditors.

4.3 Third line of defence

This control process includes the regular review of the 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 risks in the area of sustainability. As a management company, in addition to our social and environmental responsibility, we also have the task of protecting 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.