Nordea

How sustainability risks affect investments

- ESG risks are material both for financial performance and long-term value creation
- Climate and nature risks are systemic to the global financial system
- ESG is a useful lens for investors to understand risks that all companies and industries are exposed to

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Conclusion

Investors are facing growing risks in their portfolios due to the effects from global warming and biodiversity loss. These risks are systemic and could destabilize the global financial system, and threaten our civilization as we know it.

Key takeaways:

The investment case for ESG is clear. **ESG risks are material for financial performance and long-term value creation**. Investors also have a key role to play in allocating capital to a more future-proof economy. Out of the ten largest risks to the world economy over the coming ten years, six are nature-related and two are social factors, according to the World Economic Forum.

Nature and the **environment** form the preconditions for life on earth and for all economic activities.

- Looking at physical risks from climate change alone, central banks roughly estimate that global GDP could be hurt by about 20 % with current climate policies at the end of the century, compared to 3 % if the world can reach net-zero emissions by 2050.
- Rough estimates from central banks indicate that between a third and half of the assets held by financial institutions are highly dependent or very highly dependent on ecosystem services.
- Globally produced capital per head doubled from 1992 to 2014, while the value of the stock of natural capital per head declined by nearly 40 %, according to the Dasgupta Review.

Social and human rights risks are embedded in the current climate and nature crises. Human capital is built with respect for social and human rights, and working conditions, which often leads to improved operational productivity and brand reputation for portfolio companies.

- According to the PRI, widespread adoption of human rights could lead to growing global prosperity through overall market returns ('beta') when beneficiaries get better living standards due to increased respect for their human rights.
- On the other hand, bad management of social risks could lead to lower operational quality and performance in the value chain, which could hurt the long-term profitability of the company and damage the brand. And to increase productivity, companies need a healthy and educated workforce. They also need good relationships with stakeholders, not least local communities affected by their operations.

Governance risks are important for investors as they impact how effectively companies are managed. Corruption and lobbying are two areas for investors to monitor. Diversity is another factor for effective decision making.

- McKinsey research indicates that diverse companies are 33 % more likely to have greater financial returns than their less diverse industry peers.

ESG risks and the opportunities that come with them present a massive business and investment opportunity to build a more resilient and sustainable future. There is enough technology, competence and capital ready to start the journey. The longer it takes, the more challenging and expensive it will be. Thus, **investors are wise to use a sustainability lens to understand the portfolio companies' risk exposure better, and how well these risks are managed and catered for in the organization**. Perfect data is not yet available and may never be, but investors can utilize the best available data from the scientific community to make more well-informed investment decisions.

As Barack Obama, the president of USA at the time, said in his speech at the historic climate summit in Paris in 2015:

"We are the first generation to feel the impact of climate change, and the last generation that can do something about it."

Why sustainability matters for investors

After the last ice age ten thousand years ago, planet Earth has lived in a fairly stable geologic epoch called the Holocene. But the world has gradually entered into a new epoch, called the Anthropocene. This popular but still unofficial name describes an epoch where human beings are changing the nature of this planet. For instance, the atmosphere, oceans, and systems of nutrient cycling have been altered on a global scale.[1] As a consequence, societies struggle with the effects from climate change, land degradation and mass extinction of species on land and in the oceans. Most economic activities in societies therefore need to develop strategies to meet these growing challenges, that have become an existential threat to our civilization as we know it.

Anthropocene has redefined the economy and how companies can be profitable over time, and generate financial returns to their investors. Companies need to create long term sustainable values both in their production processes and with their goods and services that they put on the market.[2] By doing so, they manage their risks and have the potential to identify business opportunities. By just applying best available technologies and adapting the business model to what is coming, companies could take big steps forward.

The recent risk report from the World Economic Forum is clear: out of the ten largest risks to the world economy over the coming 10 years, six are nature-related and two are social factors.[3] These can be seen from Figure 1, where environmental risk are marked green and social risks yellow. The message: **Today's crises provide an opportunity to build a green economy.** The global climate researchers also stated in the latest IPCC[4] report: **The choices and actions implemented in this decade will have impacts now and for thousands of years.**[5]

Given the challenges of the Anthropocene, investors, be it asset owners or asset managers, are wise to consider ESG factors in investment decisions. To assess risks in a proper way, investors would want to integrate ESG risks into existing risk frameworks for credit risks, market risks, or liquidity risks to name a few.

Figure 1. Global risks ranked by severity over the long term (10 years)

1	Failure to mitigate climate change
2	Failure of climate-change adaptation
3	Natural disasters and extreme weather events
4	Biodiversity loss and ecosystem collapse
5	Large-scale involuntary migration
6	Natural resource crises
7	Erosion of social cohesion and societal polarization
8	Widespread cybercrime and cyber insecurity
9	Geoeconomic confrontation
10	Large-scale environmental damage incidents

Source : World Economic Forum Global Risk Perception Survey 2022-2023

On a more general term, ESG risks are now also considered as systemic risks to the global financial system. For instance, **the US Financial Stability Oversight Council has defined climate change as an increasing threat to financial stability in the country**.[6] Central banks have analysed how global GDP will be affected in different emissions scenarios. The longer fossil fuels continues to be burned and heat the globe, the more damaging it will be for the economy. In their scenario analyses, central banks have estimated that physical costs of climate change alone could **hurt global GDP by about 20 percent with current policies at the end of the century**. **With a net-zero transition to 2050, these costs from physical impacts would be limited to about 3 percent of global GDP by 2100**.[7] However, these calculations do not include second-order effects, non-linear risks or disruptions from sudden changes in some asset prices due to e.g. flooding or fires.

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[1] Anthropocene Epoch | Definition & Evidence | Britannica
[2] Every company has a business model for how to create value. Investors can push for more sustainable business models.
[3] The Global Risks Report 2023 calls for a greener economy | World Economic Forum (weforum.org)
[4] IPCC stands for Intergovernmental Panel on Climate Change, and is the United Nations body for assessing the science related to climate change.
[5] IPCC_AR6_SYR_SPM.pdf article C1.
[6] FACT-SHEET-The-Financial-Stability-Oversight-Councils-Response-to-Climate-Related-Financial-Risk.pdf (treasury.gov)
[7] ngfs_climate_scenarios_for_central_banks_and_supervisors_.pdf.pdf page 21.

Double materiality

Sustainable development is sometimes referred to as **economic activities to satisfy people's needs today, that do not harm future generations' ability to fulfil their needs.** The financial system is crucial in facilitating economic growth and development. However, positive economic contributions from companies or projects in an investment portfolio, such as job creation or health care products, do not offset the responsibility of the same actors to manage their negative impacts on people or natural resources.

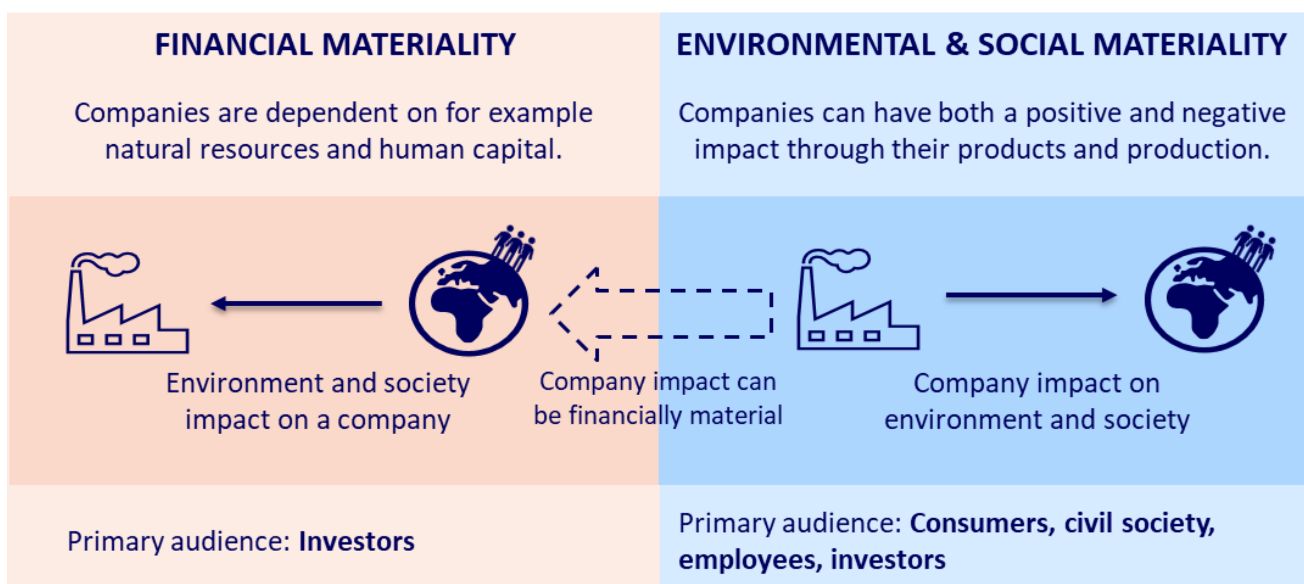
Investors usually talk about "ESG", standing for Environmental, Social and Governance aspects of a company's economic activities. It is a proxy for sustainability, but often focuses more on the production processes than on the final products of a company. In the concept of sustainability or ESG, covering so many different topics, an important aspect is **double materiality** or double dependencies for companies. This is visualized in Figure 2.

On one hand, the companies need input of natural resources and ecosystem services (E). They also need a productive workforce that is safe and healthy (S), and internal governance structures that are effective and lead to compliance with laws and regulations (G). On the other hand, companies' operations and products affect the environment and society in various degrees. Pollution, waste and land use impact the environment and the people living there (E and S). Working conditions and human rights standards are social factors that impact people (S). Anti-corruption practices, tax payments and management compensation are examples of governance factors (G) that impact society and sometimes even the environment (e.g. corruption that leads to illegal deforestation or contamination of water, or taxes that could be used to restore polluted land).

The rationale of double materiality can be translated to multiple risks and opportunities for companies in different sectors and geographic locations. And it goes hand in hand with economic theory, describing companies as entities that should create value to their various stakeholders without imposing costs or damages to others.

Companies covered by the Corporate Sustainability Reporting Directive (CSRD), will have to report on their material negative impacts on people and nature. Also, they will have to report on material financial risks and opportunities such as new regulation for energy use, droughts, or brand reputation.[8] This will for investors imply increased transparency about companies' impact and enabling more well-informed investment decisions.

Figure 2. Double materiality



Source: Nordea, adapted from Ksapa.org: Understanding the Concept of Double Materiality

[8] How to conduct a Double Materiality Assessment in 7+1 steps? (nordesg.de)

Using an ESG lens to identify company risks

Investors analyse companies from an array of perspectives to get an idea of their ability to generate future earnings. What risks they are exposed to and how they manage them is a key factor.

Sustainability and ESG risks are in fact just words that allow us to break down and specify broad risk types that are already addressed when analysing a company's business model or processes. These risks include operational risks, market risks and regulatory risks. Still, they are sometimes complex and shed light to a problem with many faces.

For instance, take biodiversity loss which is a typical environmental risk. It is linked to land rights (political and governance risk) and poverty (social risk) in rural areas, but also to consumption patterns in the rich world (market risk). Not seldom, the problem is fuelled by corruption both in the value chain and in the countries involved (governance risk). **ESG risks are in other words often intertwined.** Violations of environmental laws and human rights are in general more likely to occur in countries where corruption levels are high, and governments are weak. These violations could also challenge the mere licence to operate for a company, for instance if there is a conflict around the use of ground water or land rights. Operational risks due to social unrest in the supply chain could also lead to delays in the production line, customers that turn to competitors, lower credit rating and higher cost of capital.

According to the EU Sustainable Finance Disclosure Regulation[9] 'Sustainability risk' means:

"An environmental, social or governance event or condition that, if it occurs, could cause an actual or a potential material negative impact on the value of the investment."

Corporate Sustainability

ESG became a concept for the financial industry as a response to the work that had been ongoing for many years in the corporate world, then called CSR, standing for Corporate Social Responsibility. CSR was the work a company conducted beyond regulatory requirements, to fulfil its role as a responsible citizen. Over time, some companies called this work only CR (Corporate Responsibility) or CS (Corporate Sustainability). For investors, CSR is translated to ESG. Extended research throughout the years clearly shows that corporate sustainability is a proxy for sound business and good investment. Companies that are good at managing or reducing their ESG risks often have lower cost of capital and higher operational performance. Good sustainability practices also tend to influence the stock price positively.[10]

There are many examples illustrating this if we just go back some years, such as corruption scandals or accidents where people or the environment were badly hit. We might remember the explosion of the BP oil rig Deepwater Horizon in the Gulf of Mexico in 2010. Apart from the social and environmental catastrophes, the share price was halved.

Brand reputation and goodwill

For investors, the company value is central in the financial assessment, and any risk to the value is considered. The brand name is strongly tied to the valuation of the company, and valuation is dependent on the overall perception on the market of the company. Brand and reputation affect for example credit rating, customer demand and talent attraction. In a Deloitte report from 2022, over 2,000 C-suite executives across 21 countries were asked about their concerns and actions on climate change and environmental sustainability. They agreed that **environmental-sustainability efforts have a positive impact on employee morale and well-being (84%), as well as employee recruitment and retention (77%).**[11]

[9] Regulation (EU) 2019/2088 Of The European Parliament And Of The Council Of 27 November 2019 on sustainability-related disclosures in the financial services sector, Article 2 (22).
[10] From the Stockholder to the Stakeholder: How Sustainability Can Drive Financial Outperformance by Gordon L. Clark, Andreas Feiner, Michael Viehs :: SSRN
[11] 2022 Deloitte CxO Sustainability Report | Deloitte Global

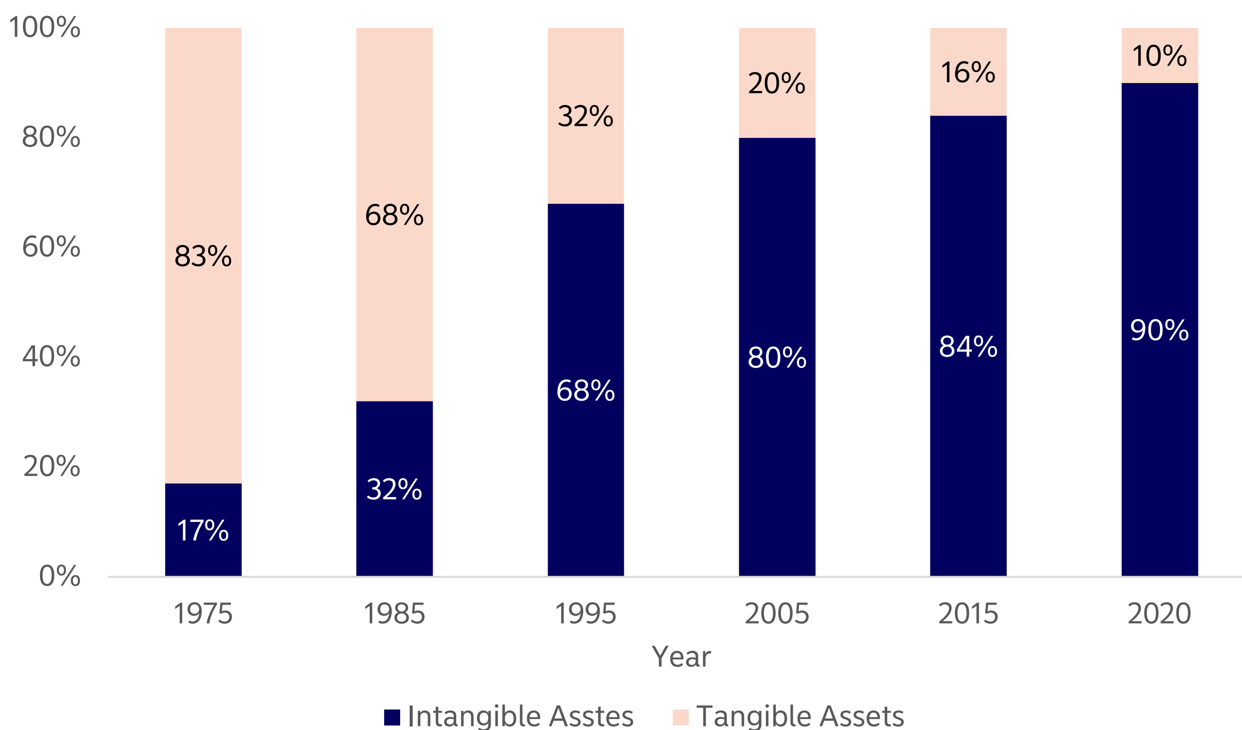
The company brand often takes years to build but can lose value in seconds if not properly managing their ESG risks and incidents. Unsafe products, accidents in factories or pollution of drinking water are cases that have been highlighted in the recent years.

The operational loss from such incidents, e.g., production loss or fines are in many cases a minor cost compared to the impact on the company brand. Customers sometimes react instantly on news on bad corporate behaviour, which even could lead to boycott. This highlights the importance of sustainability for the value of the company brand. The price of a company does not only consist of the value of the traditional balance sheet and cash flows etc., but on many other assets that are not so easily assessed. One of these so-called **intangible assets** is goodwill, and could form a considerable part of the balance sheet in case of an acquisition. Figure 3 illustrates how intangible assets have increased since 1975.

If top management creates a culture where sustainability is both a potential risk area and a business driver, it could lead to robust ESG risk management all along the value chain. This may then catalyse sustainable innovation and build a stronger business and brand. Examples of companies that have experienced this include Nike, Nestlé and Siemens. They all struggled with bad reputation and cold hands from investors after violations of labour rights, human rights or severe cases of corruption. To regain trust, they had to work hard for years. And it paid off. They got high ESG scores from external rating firms (that assess companies' management of ESG risks) and could lead by example to others on how to manage major ESG risks.

From these and other stories, investors can learn that commitment from top management and time are important factors for companies to succeed in managing ESG risks as well as building their brand. Also, they have to build an organization fit for purpose and employ the right people. Investors would want to understand and monitor these risks, and have a central role to play as owners, to make these changes happen. In the next section the most important ESG risks will be described.

Figure 3. Intangible vs tangible assets 1975-2020 in S&P 500



Source: Ocean Tomo (2020), LLCC Intangible Asset Market Value Study

Typical ESG risks that could affect future earnings

To get a broad risk picture, investors would want to assess the most important sustainability or ESG risks in companies' value chains, including risks associated with their products. These risks are summarized in Figure 4 and described below.

Figure 4. Typical ESG risks

Source: Nordea

Environmental risks

Climate change

The effects from global warming are detrimental to our economy today. Floodings, droughts, wildfires and other consequences threaten our civilization as we know it including all businesses and investments. In 2015, the Paris Agreement[12] was established with the goal to keep global warming to well below two degrees Celsius compared to pre-industrial levels. In early 2023, the planet had already reached 1,1 degrees warming compared to 1880, according to NASA.[13] While a lot of efforts are being made, the world is still not doing nearly enough to combat temperature rise. The over 9,000 companies at the MSCI ACWI IMI Index (a leading world index for listed equity) are on average on a trajectory of 2,9 degrees Celsius.[14]

According to the latest synthesis report from the IPCC[15], **every decimal of reduced temperature rise counts**. Looking at physical risks from climate change alone, central banks roughly estimate that global GDP could be hurt by about 20 % with current climate policies at the end of the century, compared to 3 % if the world can reach net-zero emissions by 2050[16].

> The UN Secretary-General Antonio Guterres commented on the IPCC report on March 20, 2023:
>
> ***"Humanity is walking on a thin layer of ice, and this ice is melting fast"***

Mitigation (reduce emissions), and adaptation (adapt to the effects of climate change) are two main strategies for companies to manage climate change risks. How well they are positioned to both physical risks (e.g. flooding, erosion, storms) and transition risks (e.g. new regulation, disruptive

[12] The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016.
[13] The National Aeronautics and Space Administration in the U.S. Home – Climate Change: Vital Signs of the Planet (nasa.gov)
[14] MSCI Net-Zero Tracker October 2022
[15] Urgent climate action can secure a liveable future for all — IPCC
[16] NGFS Scenarios for central banks and supervisors

technologies) is important for investors to consider in the financial analysis.
In addition to being a significant risk, climate change mitigation and adaptation also presents opportunities for investors. They can for example spur the energy transition across societies: directly through loans and credits, and indirectly through investments in companies and projects. In other words, **we have the greatest opportunity in history to enhance returns by investing in the sustainability revolution,** including the energy transition, according to Al Gore.

Biodiversity, natural capital and ecosystem services

Natural capital alludes to everything in nature that humans can derive value from, be it farmland, rocks or water. Biodiversity addresses all that is living on earth - on land or in the lakes and oceans. Ecosystem services are all the processes and outputs that nature provides us with. These include provisioning services (food, water), regulating services (waste water treatment, pollution control), supporting services (shelter), and cultural services (recreation and tourism).[17]

Humankind is totally dependent on the natural resources that planet Earth provides us with. Therefore, the investment case to protect or restore natural capital is clear. After climate, biodiversity has recently risen as a fundamental investment area in the financial industry.

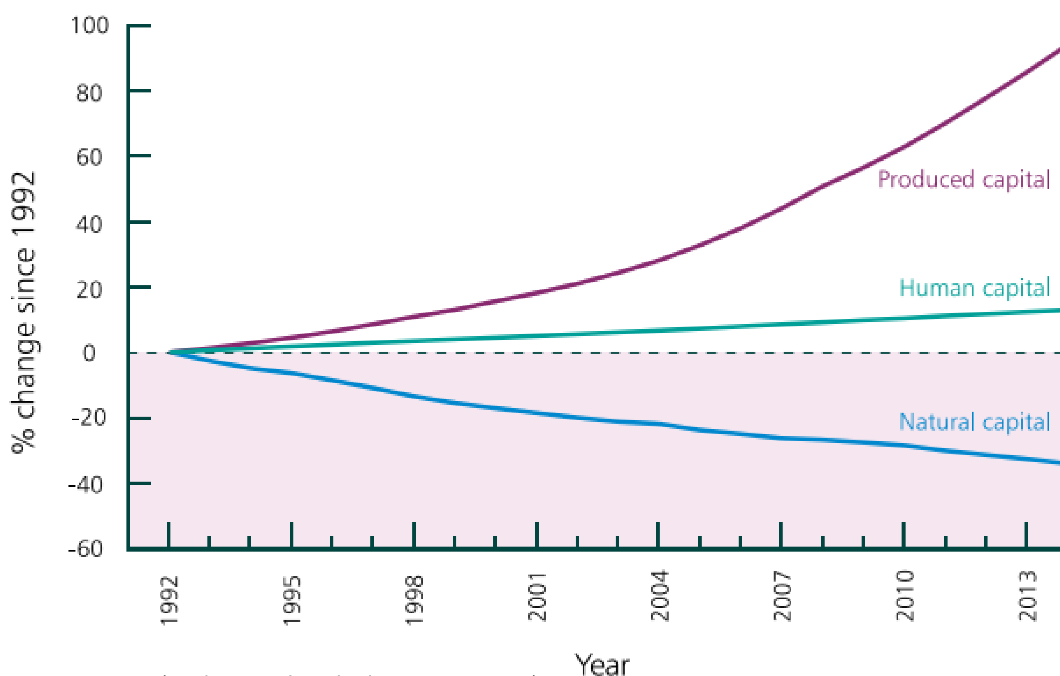
The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) lists the strongest drivers of biodiversity loss.

These are, in falling order:

1. changes in land and sea use (e.g. deforestation, soil artificialisation, etc.);
2. direct exploitation of certain organisms (e.g. overfishing);
3. climate change;
4. pollution;
5. invasive alien species.

The world is currently experiencing the largest loss of life since the dinosaurs due to human activity.
During a period of only 22 years (1992-2014) , natural capital per head declined by nearly 40%, counted as the market value for minerals and fossil fuels, agricultural land, forests as sources of timber, and fisheries. See Figure 5. This has created political will to act. The world leaders agreed in December 2022 in Montreal that 30 per cent of the Earth's surface and 30 per cent of degraded ecosystems shall be protected by 2030.[18] The European Union will most likely require companies to disclose transition plans for biodiversity to comply with the biodiversity strategy of no net loss in 2030.[19]

Figure 5. Global Wealth Per Capita, 1992 to 2014



Source: Managi and Kumar (2018), The Dasgupta Review

[17] Ecosystem Services: Definition, Examples and a Simple Explanation (scienceabc.com)
[18] COP15: Nations Adopt Four Goals, 23 Targets for 2030 In Landmark UN Biodiversity Agreement | Convention on Biological Diversity (cbd.int)
[19] Biodiversity strategy for 2030 (europa.eu)

Investors are wise to consider to what extent companies impact natural capital or biodiversity and ecosystem services, and how dependent they are on nature in their value-creating process (i.e. the double materiality). Engagement processes can be used to revise business models or operations so that these will start to restore and protect biodiversity, since financial returns are at stake. The health of the oceans, and the extinction of most edible fish species due to overfishing, are examples of growing concerns also for investors.

Although it is not really meaningful to put a numeric value on nature, there are some telling figures that could illustrate the magnitude in monetary terms. For instance, **between a third and half of the assets held by financial institutions are highly or very highly dependent on ecosystem services,** according to studies by central banks[20]. Also, when ecosystems collapse or diminish it could have cascading effects along supply chains. This could then lead to inflationary pressures and even systemic financial risks. The issue of **diminishing amounts of pollinators could alone cost the agriculture sector USD 577 billion per annum**, research suggests.[21]

It is important to remember that there are potential conflicts between biodiversity and climate mitigation. One example is solar panels put on arable land in a way that hinders food production. Since both crises need to be managed urgently, we cannot afford to solve one of them by worsening the other. In the case of arable land, there are ways to combine farming with solar panels. On the other hand, these crises can be solved in tandem, since measures to improve biodiversity often lead to climate mitigation. One example is when drained peatlands are restored to wetlands. They capture carbon dioxide, clean and store the surrounding water, retain nutrients in the ground and provide home for species, both plants, birdlife and animals.

Fresh water

Financial risks linked to water-stressed areas are increasing. **By 2030, demand for water will be 40 higher than the supply.** Companies are the world's largest water users, with almost two-thirds of all freshwater resources going into corporate supply chains, from food to chemicals.[22] The agriculture sector withdraws 72% of the fresh water globally, and 3.2 billion people live in rural areas with severe shortage of water.[23] Mining, beverage and apparel industries are other examples of water-intensive sectors. Investors are wise to monitor and engage with companies on water risks, to protect portfolio assets. As an example, the large semiconductor firm TSMC could risk its licence to operate in Taiwan if not improving its water management.[24]

There are available technologies and farming methods that could reduce water consumption substantially, such as drip irrigation or agroforestry, but they need to be applied at scale. Many sectors also pollute water resources, both fresh water and ocean water. Climate change aggravates the water shortage in the world, and water shortage is a factor in social unrest and conflicts between countries hit by drought in already dry areas, such as the Middle East.

Another way to illustrate the difference between value and price is a quote from Mark Carney, the former governor of the bank of England:

"Water, which is essential for life, is virtually free but diamonds, which have limited value beyond their beauty, are $$$. Why do markets rate Amazon as one of the most valuable firms, yet the value of the Amazon appears on no ledger until it's stripped into farmland."

Source: The Reith Lectures 2020, Lecture 1

Pollution, waste management and hazardous materials

Most extraction of natural resource, manufacturing or even use of goods lead to negative effects on nature. Emissions to air, soil and water of pollutants like pesticides, heavy metals or chemicals affect the health of people, flora and fauna. Also, some products lead to harmful emissions, for instance from washing machines or combustion engine vehicles, or consumer goods that turn into microplastics. Resource-intensive sectors often handle bulk material, and may produce big volumes of waste. Such companies are found in for instance the mining, steel and cement, and construction sectors. Other examples include petrochemicals (including plastics), agriculture, forestry, pulp and paper, energy, textile and infrastructure sectors. Sometimes the waste or emissions are hazardous

[20] OMFIF
[21] BaFin - Guidance Notices - Guidance Notice on Dealing with Sustainability Risks page 12
[22] Why businesses must act together to alleviate the global water crisis | World Economic Forum (weforum.org)
[23] Water Scarcity | UN-Water (unwater.org)
[24] Epic drought in Taiwan pits farmers against high-tech factories for water | NPR Illinois

and must be handled in a controlled way, with permission from the authorities.

Regulations will make it more costly for companies to damage scarce natural resources. Investors are wise to map the risks in the value chains of sectors with high risks of pollution and waste, and look at geographies. The highest risks are likely found in countries where the implementation of environmental legislation is weak, and health and safety standards for the workers are low. To manage and mitigate these risks, investors can investigate if companies demonstrate robust systems for pollution prevention, material efficiency and recycling, and phasing out some toxic substances. Also, management systems should include grievance mechanisms for local communities, so that they can claim their right to compensation if their health or livelihoods are badly affected by the company operations.

Social risks

Human and labour rights and conditions

Social issues and human rights are often a more complex area for businesses to work with compared to for instance energy efficiency. Therefore, human rights have long been neglected as a value driver. However, it has become more relevant for investors since globalization took off in the 1990s. Many companies outsourced their production to supply chains in China and other low-cost and low-income markets, where social and human rights were less respected than in their home markets. After the recent Covid pandemic and political winds calling for protectionism, like the US Inflation Reduction Act, many companies have started to change their business models and relocate production to get more control over their supply chains. Potentially, it could lead to lower social risks in these companies.

When assessing human rights risks, experts often talk about **salient risks.** Salient human rights risks are those that could lead to the **most severe negative impact on people** by a company's operations or business relationships. Some companies have reported on their salient human rights issues. Ericsson identified privacy as a salient human rights risk. Unilever identified forced labour in the supply chain as one of their major, salient risks. Anglo American saw health and safety as a salient risk hard to remedy. [25] **Remediation** is a key word for companies when managing human rights risks to ensure affected people are compensated.

Social risks are addressed by many international standards and norms. These set ground rules for working hours, living wages, health & safety, discrimination, modern slavery, freedom of association and collective bargaining to name a few. Digital rights, such as freedom of expression and privacy, as well as indigenous rights and community relations are other important social factors. The UN Guiding Principles on Business and Human Rights (UNGPs) define the corporate responsibility for adverse social impacts in the value chain.[26,27] The UNGPs are a useful tool for businesses to detect where in their supply chain there are high risks of breaching human and social rights. Investors are wise to use the UNGPs to assess the social risks on a portfolio level. A good sign of how well the investee companies are managing their social risks is to what extent they apply the UNGPs and do a proper human rights due diligence in their value chains.

Another social challenge is the extreme income gaps in societies that can cause social unrest and conflict. The trend today in the world is that income gaps increase within countries. The richest 10 % of the global population earned 52 % of global income in 2021, whereas the poorest half of the population earned 8.5% of it. **The poorest half owned only 2% of the global wealth, compared to the richest 10% of the global population who owned 76% of all wealth.**[28]

With risks come opportunities. According to the PRI, **widespread adoption of human rights could lead to growing global prosperity** through overall market returns ('beta') when beneficiaries get better living standards due to increased respect for their human rights.[29] On the other hand, **bad management of social risks could lead to lower operational quality and performance in the supply chain,** which could hurt the long-term profitability of the company. To increase productivity, a company needs a healthy and educated workforce.

[25] Salient Human Rights Issues : UN Guiding Principles Reporting Framework (ungpreporting.org)
[26] The UN Guiding Principles on Business and Human Rights : UN Guiding Principles Reporting Framework (ungpreporting.org)
[27] Other relevant international standards are UN Global Compact's ten principles and the OECD Guidelines for Multinational Enterprises, as well as new regulations from the EU (Corporate Sustainability Reporting Directive and the Directive on Corporate Sustainability Due Diligence).
[28] CIMA Executive remuneration schemes and sustainability.pdf (cimaglobal.com)
[29] Why and how investors should act on human rights | (unpri.org)

Community relations

The licence to operate for a company is often dependent on how communities adjacent to the local operating sites are affected, and compensated if their land or water has been contaminated or withdrawn. Bad behaviour could be costly for companies. To reduce risks, a proper human rights due diligence is needed, that also includes indigenous rights. Due diligence in the value chain is mandatory in the upcoming EU directive CSDD. Mitigation of adverse impacts, including access to remedy, is part of the new regulation. Breaches could lead to sanctions from Member States. Investors thus will have an even stronger incentive to monitor social risks in their portfolios.

Governance risks

Corruption

Several companies have throughout the years been charged with substantial fines after corruption cases have been revealed. Examples include the Enron and WorldCom accounting fraud scandals, that ended with them going bankrupt in 2001 and 2002. In general, corruption cases hurt both the companies' reputation and profits, which is damaging also for the shareholders. **About 5% of global GDP is lost in corruption every year.** [30]

In countries plagued with extensive corruption, it is a challenge for companies to implement also environmental or social improvements.[31] Companies may even have to exit regions and countries where political corruption makes it very difficult to operate. This was the case for Skanska, a Swedish construction company, that after a corruption scandal in Brazil in 2014 decided to withdraw from the whole continent. A transnational or multinational company must therefore be conscious and have robust structures in place. As an example, some companies have paid their workers on construction sites directly and not via a supplier, to be sure that the wages get into the right pockets.

Consequently, investors are wise to monitor the corruption risks closely in their portfolios to protect them from value destruction. Guidance for how to map and monitor corruption risks is provided by for instance Global Compact, OECD and Transparency International.

Board composition

Board composition, board and management diversity, and remuneration are other typical G factors. If well managed, these topics can strengthen the company. When assumptions or beliefs in a board or management room are not challenged, there is a risk that important perspectives are left out when making decisions. Research, e.g., from Harvard Law School, finds **correlation between board diversity and companies' financial performance**.[32] Several studies point in the same direction.

In 2018, a McKinsey's report stated:

"Diverse companies are 33% more likely to have greater financial returns than their less-diverse industry peers."[33]

In another report, Boston Consulting Group reported that:

"companies with above-average diversity at the management level generate 19% higher innovation revenues than companies with below-average diversity.[34]

In many countries, top management is also represented in the board, and the CEO is the same person as the chairperson. This is by many shareholders seen as a problem, since the board then cannot fully exercise its power over management. That could lead to strategic decisions that benefit management but not shareholders, and fuel corruptive practices. Independent directors would mitigate these risks. Investors are wise to be aware of the current board structure and should push for increased diversity. But to have an effect, the board also has to create a culture that is open to all these diverse perspectives and ideas.[35]

Compensation to senior management

It is well studied in management literature that the tone from the top is important to create good corporate culture.[36] If senior management is busy creating compensation schemes to benefit themselves by taking risks, it could be against the long-term interest of shareholders.[37]

[30] UN Global Compact
[31] Business integrity - Our priorities - Transparency.org
[32] Board Diversity: No Longer Optional (harvard.edu)
[33] McKinsey
[34] How Diverse Leadership Teams Boost Innovation (bcg.com)
[35] Board Diversity and Effectiveness | London Business School
[36] Ethics & Compliance: Tone at the Top | Deloitte US
[37] The World #InequalityReport 2022

Keep it simple: indicators that lead to change

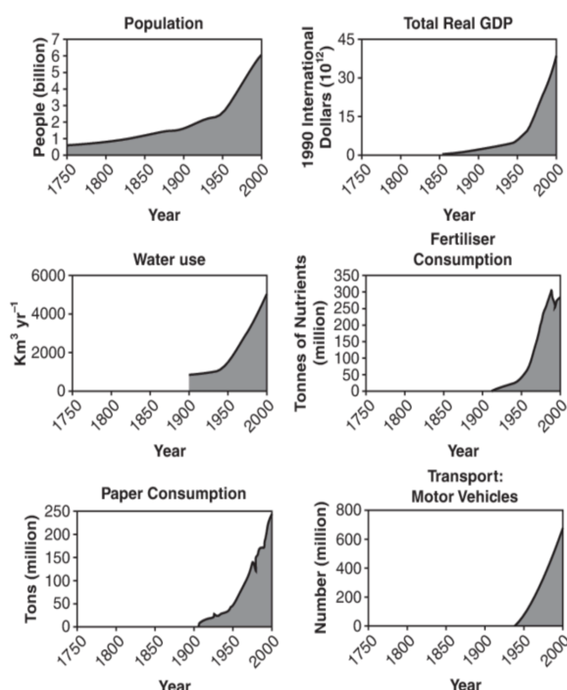
Given the high relevance of ESG risks for companies' financial performance, investors are wise to utilize the best available data to guide their investment decisions. ESG risks also represent a business opportunity and investors have an important role in financing the transitions to a more sustainable economy

Instead of waiting for the perfect data (that will never emerge), investors can focus on measuring the **exposure** to relevant and salient ESG risks. Combined with **the company management approach** to these risks, investors could assess and act on the financial risks in their portfolios. In fact, this is how sustainable and responsible investors used to work 20 years ago, before the digital revolution took place.

Meaningful metrics and data already exist within the scientific community e.g. InVEST[38] and can be used in risk models. As many central banks have stated, the climate and nature crises are **systemic risks** comprising all geographies, sectors and supply chains. Consequently, large transnational corporations are by their nature exposed to these risks, some more than others. Investors are wise to monitor these risks in order to protect the value of assets. If managing other people's money, it is part of the fiduciary duty to incorporate ESG risks.

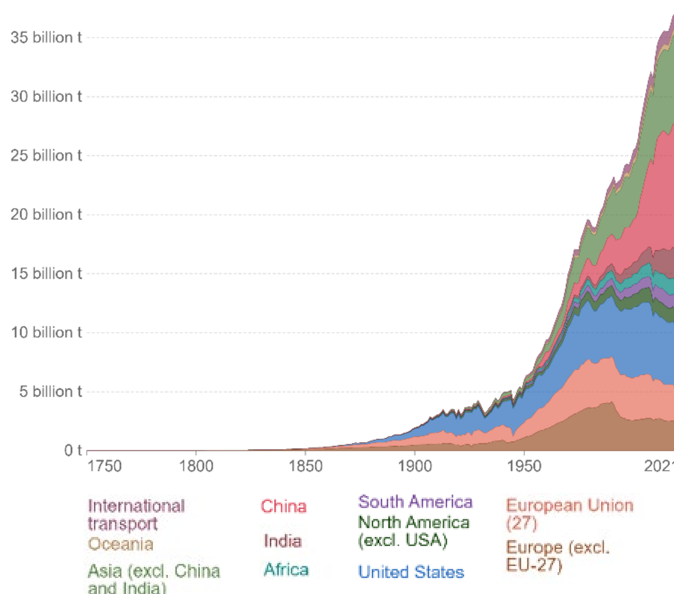
Figure 6 illustrates how the economic development depends on nature. Worth to mention is that **half of the total historic global emissions of greenhouse gases have been released after 1990.**[39] This can also be seen from Figure 7.

Figure 6. Accelerating development year 1750-2000



Source: White, Rudy and Gareau: "Environments Natures and Social Theory"

Figure 7. Annual CO_2 emissions by region



Source: Our World Data based on the global Carbon Project (2023). Note: fossil fuel and industry emissions. Land use change is not included.

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