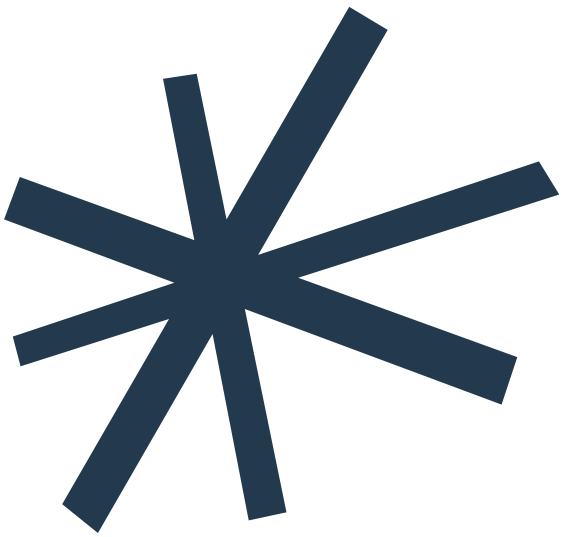
mirova
Investing in sustainability

Our minimum standards and exclusions

This is a methodological document aimed at clarifying how Mirova establishes minimum standards and sectoral exclusions in the sustainability analysis of companies.

Last update: January 2022

An affiliate of: NATIXIS INVESTMENT MANAGERS



Mirova was created to finance economic models that aim to positively contribute to sustainable development. Much of our work is focused on attempting to identify solution providers that create positive impact, but this does not dispense us of the need to ensure that our investments always meet or exceed minimum standards including with regards to controversial activities.

Minimum standards are defined for each sector based on their key environmental and social issues and are detailed in our sectoral research papers. These are available on Mirova's website, at: https://www.mirova.com/en/research/understand.

This document summarizes our positions on major issues deemed controversial and illustrate the criteria we have implemented to ensure compliance with these positions in our analysis of companies.

It applies to all our listed equities and fixed income portfolios.

Table of Contents

Mirova does not exclude any industry on principle. All our positions are the result of an extensive analysis of environmental and social impacts. For certain sectors, this analysis may lead to the exclusion of all players in the sector.

Energy

Fossil Fuels

We consider the growth projections of fossil fuel companies to be incompatible with international climate change mitigation objectives. As the fossil fuel exploration and production industry turns toward riskier extraction techniques (e.g. deep offshore, Arctic, unconventional resources), its environmental and social risk profile is heightened.

Continued oil and coal use over the medium- to long-term is at odds with the energy transition, so we do not consider companies with substantial revenues from oil or coal eligible for investment. This applies to direct involvement in oil and coal through extraction, processing/refining, and trading. It also applies to companies that sell equipment dedicated to these processes.

Beyond extraction, electricity producers are the main coal consumers worldwide while low carbon electricity sources are becoming more and more cost competitive. As a result, electricity producers with a high share of coal in their power generation mix (and consequently, a high carbon footprint) are also excluded from our investments.

Natural gas is more complex. It can serve as a transition fuel under certain circumstances, but near complete decarbonization will be necessary over the long term to limit warming to <2°C (in line with the Paris Agreement). While new gas infrastructure may help to lower emissions over the coming years, it may also lead to lock-in effects over time, extending fossil fuel use over the long-term. Furthermore, the gas supply chain – especially in the context of unconventional extraction - is particularly risky and difficult to manage, with the potential for negative impacts on local environments and high fugitive greenhouse gas emissions, which can negate its climate benefit.

For companies involved in fossil fuel extraction, processing/refining, and trading, exclusion applies to companies with:

• >5% of revenues from coal or oil, including unconventional oil,

• >5% of revenues from unconventional gas.

For companies that produce dedicated equipment/services for the fossil fuel sector, exclusion applies to companies with >50% of revenues from these equipment/services.

For companies involved in electricity production (>10% of sales related to electricity production), exclusion applies to companies with a generation mix dominated by coal, with a carbon intensity >350 gCO_2/kWh.

Nuclear Power

Nuclear power has a CO_2 footprint equivalent to that of renewable energies because fission reactions emit no greenhouse gases. Nonetheless, it is an energy source with risks of its own:

1/ The risk of nuclear accidents. Events like Three Mile Island, Chernobyl and Fukushima have demonstrated that nuclear accidents can take place.

2/ Management of nuclear waste. Even after reprocessing, by-products of fission result in radioactive waste that remain dangerous for hundreds of thousands of years.

These risks mean that nuclear power is not appropriate in many contexts. Political stability is essential, a high level of technical know-how, and strong, independent nuclear regulatory bodies are essential.

We apply a case-by-case analysis of the strategies pursued by actors within the nuclear industry, especially when they are present in countries where the industry is insufficiently monitored.

Specific case for green bonds

For the case of green bonds issued by companies involved in energy and electricity production, we conduct a specific analysis. We do not consider an investment in a green bond equivalent to an investment in the issuer itself but rather in the green projects stated in the use of proceeds. To be considered as eligible to our investments, the green bond has to comply with the following criteria:

1/ positive contribution of the use of proceeds to environmental objectives,

2/ good management of environmental and social risks linked to underlying projects along their life cycle,

3/ alignment with the issuer's overall energy transition strategy.

Food and Agriculture

Palm Oil

At its current scale, palm oil production and use lead to considerable environmental and social problems: deforestation, climate change, biodiversity loss, infringement on indigenous rights, and negative health impacts. Even so, it can support development and help to meet global needs.

Coupled with the increasing demand for vegetable oils, the prominence of palm oil in the world markets indicates that its demand will only continue to grow, reinforcing the need to address the social and environmental issues it raises. As a result, traceability and sustainable supply of palm oil represent a significant area of engagement with companies from this sector.

Exclusion applies to palm oil producers failing to meet the following criteria:

1/ Subscription to the RSPO (Roundtable on Sustainable Palm Oil), with all production certified.

2/ A broad commitment to avoid deforestation and protect peatlands.

Although sustainable palm oil production is an indirect issue for companies positioned downstream of the agriculture value chain, we systematically incorporate palm oil in our review of their supply chain management.

Our requirements in terms of traceability and sustainable supply represent a significant area of engagement with companies from this sector.

Genetic Engineering

While we acknowledge the public mistrust surrounding GMOs and, more broadly, vegetable biotechnology, we believe these technologies have an often-overlooked role to play in ensuring food security and improving nutrition. Given that it can lead to more efficient plant breeding, offering possibilities beyond what can be achieved using conventional techniques, we do not consider biotechnology use as a reason for exclusion in and of itself.

But most of the GMOs marketed today support conventional farming practices as herbicide-tolerant or insect-resistant crops. We thus consider them akin to conventional agrochemicals which tend to create negative effects on ecosystems and do not present any environmental or social benefit.

We apply a case-by-case analysis of the strategies pursued by actors involved in genetic engineering, looking specifically at their commitment to appropriate risk management and transparency around the potential impacts of their products.

Agrochemicals

Agrochemicals are becoming increasingly controversial due to their impacts on the health of farmers, end-users, and local communities. Local bans on certain products, lawsuits from farmers indicating the harmful effect of products, and an increasing number of scientific studies suggest causality between the use of agrochemicals and serious illness.

We analyse the strategies pursued by the actors in the sector on a case-by-case basis, focusing on their product mix, health and safety policies, implementation of the precautionary principle, and communication to users.

Exclusion applies to companies with >5% of revenues from chemicals banned for sale in certain markets, with no phase-out target over the next three years.

Health and Addiction

Tobacco

The tobacco epidemic is one of the biggest and most serious global public health threats – its effects counteracting the advances in health made in the past. The World Health Organisation estimates that tobacco is killing around 8 million people a year around the world[1].

In 2005, the WHO Framework Convention on Tobacco Control (WHO FCTC) came into force. Its main objective is to protect present and future generations from the devastating health, social, environmental, and economic consequences of tobacco consumption and exposure. Ratified by 174 countries covering 90% of the world's population, the WHO FCTC is a legally binding treaty by which these countries commit to developing and implementing a series of evidence-based tobacco control measures to regulate the tobacco industry, reduce demand for tobacco and provide alternatives to those involved in growing and producing tobacco.

Exclusion applies to companies with >0% sales from tobacco[2] production or companies with 5% sales from tobacco retail and wholesale.

Alcohol

Alcohol-producing and retailing companies face significant risk related to harmful social effects stemming from their products. The World Health Organisation suggests that alcohol overuse can lead to a wide range of acute and chronic health effects[3].

1 World Health Organisation, Fact Sheet Tobacco, last updated on 26 July 2021
https://www.who.int/news-room/fact-sheets/detail/tobacco
2 Including alternative to nicotine products
3 World Health Organisation, Fact Sheet Alcohol, last updated on 21 September 2018
https://www.who.int/news-room/fact-sheets/detail/alcohol

However, we consider that certain groups are the most exposed to risks of overuse and negative health effects: consumers of companies' low-end product ranges, consumers in areas where the company has large operations but is subject to limited regulation, and/or young people. We believe that companies with risk management frameworks in place to limit the risks associated with the alcohol use of these consumer groups may be able to substantially reduce their negative social impacts and risk exposure.

Since industry self-regulation is the main force driving mitigation of social risk for companies involved in alcohol production (i.e. large companies mainly act together within industry initiatives to tackle this issue), companies have a major responsibility to promote responsible marketing and distribution practices, tailored to their product ranges and markets.

Exclusion applies to alcohol producers or retailers failing to meet the following criteria:

1/ Transparency about how the company ensures responsible marketing practices in high-risk markets (i.e. countries with limited regulation, low-end product ranges, etc.), and regarding high-risk population.

2/ Detailed risk mappings and social risk management plans.

Cannabis

Cannabis contains a variety of different compounds, namely cannabidiol (CBD) and tetra-hydro-cannabinol (THC). CBD is not psychoactive but is used as a medicinal ingredient. THC is a psychoactive substance with various legal standings, depending on the country or state.

Consumer goods: Companies producing, and marketing cannabis-based foods, beverages, and cosmetics have limited risks associated with the use of their products because they generally only contain CBD (no psychoactive component). However, there is still very little knowledge around the true positive and negative effects of these products over the long term, and no regulation marketing.

At the moment, industry self-regulation is the predominant means of monitoring cannabis use in consumer goods. We focus on companies' marketing policies and practices on a case-by-case basis in order to assess their risk management profile, especially in countries where regulation around cannabis in consumer goods is scarce.

Pharmaceutical cannabis-based products: health authorities have issued stringent regulation regarding the medical applications of pharmaceutical cannabis-based products. Use is limited to certain specific health conditions, full medical trials are required; these medicines must be approved, licensed, and prescribed.

The sustainability assessment of cannabis-based pharmaceutical companies follows the same principles as the broader pharmaceutical industry; cannabis-based pharmaceuticals will not be considered controversial products.

Recreational cannabis-based products: in jurisdictions where permissible by law, companies can sell THC-containing cannabis products for recreational use. At present, the World Health Organization discourages the protracted use of cannabis due to reported acute and chronic health effects, and reports that substance abuse is recurrent among young consumers[4].

All companies exclusively involved in producing and retailing recreational cannabis are excluded from our investments.

Sugar-Sweetened Beverages

Sugar-sweetened beverages create significant, negative impacts on human health, especially because of their connection with obesity and type 2 diabetes. The World Health Organisation recommends that the consumption of added sugars be limited to 5-10% of daily energy intake[5]. However, actual sugar consumption is substantially higher (and rising) in many countries. Sugar-sweetened beverages are a major contributor to excess sugar consumption. Furthermore, as calories in liquid form are not registered by the digestive system in the same manner as calories in solid form, those that consume sugary beverages tend to take in more calories than those who don't.

To minimise the public health impacts of sugar consumption, regulators have started implementing taxes on highly sweetened products and beverages to reduce consumption of these products. However, we have yet to see stronger restrictions (e.g. banning the sale of these products to consumers under a certain age) as for the sale of alcohol and tobacco. Companies have responded by working to decrease the sugar in their products, in part by developing alternatives sweetened with low-calorie sweeteners. Since studies have not yet been conclusive on whether low-calorie sweeteners are healthier than the sugars they replace, we consider them equivalent to sugar as a precaution.

Companies that sell products with added sugar in solid form are not necessarily excluded, but are instead subject to a case-by-case analysis, including 1) a strategy to decrease the sugar, salt, and fat in their products with time-bounded targets, 2) a transparent and third-party verified measurement of their products' nutritional profile, 3) responsible marketing practices that promote a healthy lifestyle and limit marketing of sugary products to children, and 4) transparent nutrition labels.

Exclusion applies to companies with >10% sales derived from sugar sweetened beverages.

4 World Health Organisation, Fact Sheet Tobacco, last updated on 11 November 2016 https://www.who.int/teams/mental-health-and-substance-use/alcohol-drugs-and-addictive-behaviours/drugs-psychoactive/cannabis
5 World Health Organisation, WHO calls on countries to reduce sugars intake among adults and children, 4 March 2015 https://www.who.int/news/item/04-03-2015-who-calls-on-countries-to-reduce-sugars-intake-among-adults-and-children

Gambling

Gambling companies' business creates substantial social risks, namely addiction and over-indebtedness. We do not consider any company exposed to gambling as having sufficient policies to properly address the social risks linked to their activities.

Exclusion applies to companies with >5% sales derived from gambling.

Fundamental Rights

Military equipment and weapons

In our view, military equipment can play a role in both war and peace; they are not excluded on principle. The term "military equipment" includes all weapons, weapon systems, platforms, and ammunitions. Military equipment also refers to products which have not been designed for combat such as vehicles, military clothing, protection items etc. Although military equipment can contribute to peacekeeping, weapons must not be used on a discretionary basis or against civilians.

For this reason, our exclusion only targets weapons for which non-reexportation cannot be ensured.

Weapons are defined as products, or components:

- **Key for lethality**/ essential in the offensiveness of these products. In other words, that have been developed for military purposes and designed to injure/kill human.
- **Tailor-made:** developed primarily to be integrated into a weapon system.

Exportability is qualified when the company cannot guarantee that their products will not be exported or re-exported to high-risk, undemocratic countries, where they may be used against civilians.

Exclusion applies to companies with:

- **>0% sales derived from re-exportable weapons (as defined above);**
- **>0% sales of banned or controversial weapons such as antipersonnel mines, cluster munitions, biological and chemical weapons, depleted uranium, and nuclear weapons.**

No exclusion applies to other military equipment not considered key for lethality (vehicles, soldiers protections, GPS etc) or for which non-reexportability can be ensured.

Adult Entertainment

Companies involved in producing and retailing adult entertainment are exposed to high social risk, especially related to human trafficking. We have not identified any companies involved in this industry within our investment universe. Nevertheless, we consider that no company in the sector has developed sufficient policies to properly address its social risks.

Exclusion applies to companies with >5% sales derived from adult entertainment.

Animal testing

In the pharmaceutical industry -

While animal testing can appear to be irrelevant and cruel in some industries, the development of medical products continues to require pre-clinical tests, usually performed on animals due to the lack of relevant alternative. Pharmaceutical companies performing animal testing are not excluded yet are instead expected to formalize an ambitious commitment to the three “Rs” (Reduction, Refinement, Replacement) which entails the minimization of experiments on animals whenever substitute tests are possible, the avoidance of animal suffering and a commitment towards finding alternatives to animal testing. Companies are also expected to invest in the development of alternatives to animal testing using in vitro methods or advanced computer-modelling techniques.

In cosmetic or retail industry –

Animal testing in other industries persists, even though some market such as the European Union have started to ban animal testing for cosmetics for example. In the past, China required by the law to test imported products on animal, such regulation slowly changing. Consequently, we expect companies to commit not to test their products on animals unless it is stipulated by legal regulations or accepted alternative test methods obtaining the necessary safety data are not available. We also expect the formalisation of the strategy to implement the three “Rs”.

We apply a case-by-case analysis of the strategies implemented by companies in these sectors, looking specifically at their commitment to reduce the number of tests conducted on animals and to develop relevant and effective alternatives. We engage with companies to ensure the development and implementation of robust 3Rs policies.

Stem cell research

Stem cell refers to cells that can be self-renewed, multiply infinitely and differentiate into all types of human cells. Stem cells research carry the potential to actively contribute to addressing unmet medical needs, by improving the understanding of a disease occurrence, by offering opportunities in the development of transplant and regenerative medicine or in diabetes, Parkinson's or Alzheimer's diseases treatments. As of today, only a small number of stem cells treatments have been authorized by national regulators,

and cautious should be exercised due to the remaining lack of scientific evidence of stem cells therapy's safety[6].

Most stem cells are collected from embryos or foetal tissues. Indeed, while adult stem cells exist, they may not produce all other cell types, remain sensitive to environmental hazards, or may contain errors resulting from the process of cells replication. The development of "induced pluripotent stem (IPS) cells" (cells which have been reprogrammed back into an embryonic state) is promising, yet such cells still struggle in delivering similar benefits. Thus, at this point, no relevant other alternative has been identified to conduct this research.

International bodies such as the World Health Organization are still calling for stronger international regulation on stem cells research and therapies. Regarding embryos research for example, in France, the regulation imposes to use embryos only from in vitro fertilization for which the parental project was finally abandoned. Some countries such as Germany prohibits research on human embryos, yet, working with imported of embryonic stem cell lines is permitted if the stem cells line has been created prior a certain cut-off date[7]. Stem cells may also be collected from tissues of aborted foetus. In this case, the regulation is often tied up with political and ideological considerations. For example, in 2019, the US had passed a law forbidding the new acquisition of human foetal tissue from voluntary abortions. Since the President Biden's election, the past regulation was reversed. However, the Sustainable Development Goals (SDG 5.6) clearly include abortion rights under the "universal access to sexual and reproductive health and reproductive rights[4].Considering the lack of standardized regulation, it is difficult to solely rely on national laws to enforce minimum ethical standards. The International Society for Stem Cell Research (ISSCR)[8] issued specific Guidelines. While they lack in political enforcement, we consider many of these guidelines as essential to ensure minimum standards of ethics.

- **Existence of a scientific oversight process** to review and to raise potential bioethics dilemma about, among others, procurement of embryos. The role of the instance is also to assess the scientific rationale of the research proposal. Indeed, stem cells research should solely serve a medical purpose and should not be used in any genetic manipulation, human reproductive cloning projects, or chimera creation projects.
- **Informed consent:** Voluntary informed consent should always be provided by donors. Perfect transparency on the origin of stem cells is necessary to initiate research.
- The prerequisite for an ethical sourcing of stem cells is that foetal tissue **should strictly rely on donation** following an abortion or stillbirth. In what regards research should only be conducted from in vitro embryo for which parental project would have been abandoned. The creation of a stem cell line can be approved for the study of specific pathologies but should remain under the control of the oversight body.

[6] *Bulletin – World Health Organization; 2017 Regulating the stem cell industry: needs and responsibilities https://www.who.int/bulletin/volumes/95/9/16-189977.pdf*

[7] *Regulation of stem cell research in Germany – EuroStemCell https://www.eurostemcell.org/regulation-stem-cell-research-germany*

[8] *ISSCR Guidelines for Stem Cell Research and Clinical Translation https://www.isscr.org/docs/default-source/all-isscr-guidelines/2021-guidelines/isscr-guidelines-for-stem-cell-research-and-clinical-translation-2021.pdf?sfvrsn=979d58b1_4*

- **No incentive** should exist to encourage women to donate embryos or foetal tissues. No remuneration or compensation should be allowed to encourage the harvesting of embryos.

No specific exclusion applies for companies conducting stem-cell research. However, companies are expected to comply with stringent ethical standards including those mentioned above and to provide relevant evidence the research is conducted for a medical purpose (without relevant alternative available). Assessment is done on a case-by-case basis, with a specific focus on companies exposed to less regulated areas and is included in our engagement with the companies.

Governance and International Conventions

Tax Havens

When companies pay taxes, the private sector is essentially contributing to the social development of a country. Through this mechanism, companies can participate in governmental budgets for social development and contribute to the public good.

- However, there are still some jurisdictions that facilitate tax fraud and avoidance, reducing companies' positive social contribution through tax payments. We also carefully consider to what extent companies participate in tax optimization. Since information on tax payments and jurisdictions is often inaccessible and we seek to analyse strategies on a case-by-case basis, tax optimization represents a major topic within our engagements.

Exclusion applies to companies registered, incorporated or headquartered in a tax haven as defined and maintained by the European Commission.

UN Global Compact's principles and/or OECD guidelines

Beyond involvement in controversial activities, companies analysed by Mirova as in serious breach of *UN Global Compact's principles and/or OECD guidelines* for international companies are also excluded on the grounds of problematic practices around human rights, labour rights, environment, business ethics and corruption issues.

LEGAL INFORMATION

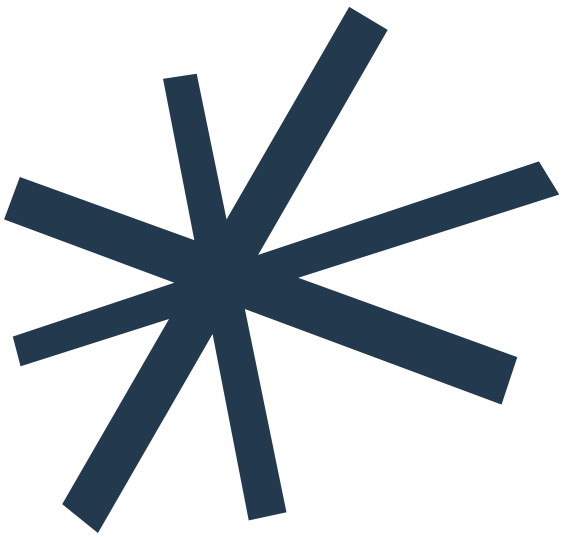
This document is a non-contractual document for information purposes only.

This document does not constitute, or form part of any offer, or solicitation, or recommendation to buy, or concede, or subscribe for any shares issued or to be issued by the funds managed by Mirova investment management company. The presented services do not take into account any investment objective, financial situation or specific need of a particular recipient. Mirova and its affiliates shall not be held liable for any financial loss or for any decision taken on the basis of the information contained in this document, and shall not provide any consulting service, notably in the area of investment services.

The information contained in this document is based on present circumstances, intentions and guidelines, and may require subsequent modifications. Although Mirova and its affiliates have taken all reasonable precautions to verify that the information contained in this document comes from reliable sources, a significant amount of this information comes from publicly available sources and/or has been provided or prepared by third parties. Mirova and its affiliates bear no responsibility for the descriptions and summaries contained in this document. No reliance may be placed for any purpose whatsoever on the validity, accuracy, durability or completeness of the information or opinion contained in this document, or any other information provided in relation to the Fund. Recipients should also note that this document contains forward-looking information, issued on the date of this presentation. Mirova makes no commitment to update or revise any forward-looking information, whether due to new information, future events or to any other reason. Mirova and its affiliates reserve the right to modify or remove this information at any time without notice.

The information contained in this document is the property of Mirova and its affiliates. The distribution, possession or delivery of this document in some jurisdictions may be limited or prohibited by law. Each Recipient must ensure he complies with these requirements and prohibitions.

Non-contractual document, issued in January, 2022



Mirova

French Public Limited liability company with board of Directors
Regulated by AMF under n°GP 02-014
RCS Paris n°394 648 216
Registered Office: 59, Avenue Pierre Mendes France – 75013 – Paris
Mirova is an affiliate of Natixis Investment Managers.

Natixis Investment Managers

French Public Limited liability company
RCS Paris n°453 952 681
Registered Office: 43, Avenue Pierre Mendes France – 75013 – Paris
Natixis Investment Managers is a subsidiary of Natixis.

Natixis Investment Managers International

French Public Limited liability company
Regulated by AMF under n° GP 90-009
RCS Paris n°329 450 738
Registered Office: 43, Avenue Pierre Mendes France – 75013 – Paris

Natixis Investment Managers International is an affiliate of Natixis Investment Managers.

Mirova US

888 Boylston Street, Boston, MA 02199
Mirova US is a U.S. - based investment advisor that is wholly owned by Mirova. Mirova is operated in the U.S. through Mirova US.
Investment advisory services are offered in the U.S. solely through Mirova US, which manages all US investor and client accounts.. Mirova US and Mirova entered into an agreement whereby Mirova provides Mirova US investment and research expertise, which Mirova US then combines with its own expertise, and services when providing advice to clients. Mirova US is registered with the US Securities and Exchange Commission as an investment adviser, under the Investment Advisers Act of 1940, as amended. Unlike Mirova US, the Participating Affiliates are not registered as Investment Advisers with the Securities and Exchange Commission (“SEC”).

Mirova UK Limited
UK Private limited company
Company registration number: 7740692 – Authorised and Regulated by the Financial Conduct Authority ("FCA") under number 800963
Registered office: 18 St Swithins Lance, London, EC4A 8AD
The services of Mirova UK Limited are only available to professional clients and eligible counterparties. They are not available to retail clients. Mirova UK Limited is wholly owned by Mirova.