# PFAS: Forever Chemicals – Investor Briefing

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**Executive Summary** 

First Sentier MUFG Sustainable Investment Institute

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Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) are a group of chemicals whose typical properties – including chemical inertness, temperature resistance, and oil, water and stain-repellence – make them extremely useful in a broad range of consumer and industrial applications. Some of the major industry sectors using PFAS include aerospace and defence, automotive, aviation, textiles, construction, household products, electronics, food processing, food packaging and medical devices.

However, the properties that make PFAS so useful have also led to global concern about their adverse health and environmental impacts. PFAS are resistant to environmental degradation and may persist in the environment longer than any other humanmade chemical. Exposure to PFAS from contaminated drinking water and food has been linked with multiple adverse human health impacts including endocrine disruption, increased cholesterol, higher risk of certain cancers, thyroid issues, reduced birth weights, lower responsiveness to vaccines and cardiovascular disease. PFAS exposure has also been shown to cause adverse effects in species including invertebrates, fish, amphibians, birds, reptiles, mammals, and plants.

The regulatory focus on PFAS is growing, with an increasing number of jurisdictions considering phasing out and banning these substances. For example:

- The European Union (EU) is considering a proposal that would ban PFAS from all applications for which there are available substitutes. For applications currently without alternatives, derogations of up to 12 years are being proposed by the EU, with the expectation that substitutes would be developed during this time.
- Bans on PFAS-containing firefighting foam are being introduced in the EU, New Zealand, and several US states, while regulators are restricting the use of PFAS in consumer applications such as food packaging, cosmetics, and textiles.
- It is likely that PFAS-related drinking water standards will be tightened in Europe and North America, alongside greater regulation of wastewater discharges.

The adverse health and environmental impact of PFAS contamination in the environment (in water, soil, and air) and the use of PFAS in industrial and consumer products has become a global concern.

# What can investors expect to see on regulation?

While there is evidence of tightening regulation across multiple geographies, there is also significant uncertainty as to the likely extent and pace of regulation. Regulations and their implementation timelines are likely to remain fragmented and inconsistent as regulators try to balance the need to curb PFAS through phase-out and stricter emissions management, while also minimising potential economic disruptions.

There is also significant litigation risk. While the most significant cases have been in the US, recent lawsuits in countries such as Sweden and the Netherlands suggest that other countries might see increased legal activity in the coming years.

# What can investors expect to see on litigation?

As cases continue to grow, there is likely to be an expanding variety of defendants (producers and product manufacturers across sectors), plaintiffs (individuals, water utilities, state attorney generals) and types of claims (class action, personal and property damage, environmental pollution, consumer product liability).

There are currently over 6,000 cases in the multidistrict litigation (MDL) - a form of legal proceeding designed to help US federal courts efficiently manage multiple related cases filed in different jurisdictions. These cases in the MDL fall into three categories:

Regulation and litigation present potentially material risks to PFAS chemical producers and to a host of product manufacturing sectors. The companies in these sectors face uncertainties with respect to market access and revenue streams for PFAS-containing products, as well as impending regulation and increased litigation costs. Meanwhile, there are new opportunities for waste management, water treatment

- Personal injury plaintiffs claiming injury from exposure to PFAS;
- 2. Actions filed by individual states by Attorney Generals for natural resource and other damages; and
- 3. Public water supplier plaintiffs seeking drinking water testing and remediation costs.

There is still a considerable amount of litigation to unfold, and potential liabilities are open-ended. This may prompt companies to settle and avoid substantial verdicts.

and environmental testing service providers. Companies will be expected to pursue a range of mitigation measures to manage these risks and to capitalise on new market opportunities. These risks and opportunities are summarised in Box 1. Box 2 summarises the key actions that investors can take to encourage companies to better manage the risks and opportunities presented by PFAS.



#### Box 1: Risks and Opportunities

Investors wishing to incorporate PFAS-related risks and opportunities into their investment research and decision making should pay particular consideration to PFAS producers, product manufacturers using PFAS, and waste management, water treatment and environmental testing service providers.



## **PFAS** producers

#### Risks:

- Reduced Demand and Profitability leading to potential lost revenues and lower overall profits, especially in the EU due to the proposed restriction on PFAS.
- Increased Costs owing to new regulatory requirements, such as stricter reporting under the Toxic Substances Control Act (TSCA) in the US, and tighter wastewater standards.
- Producers may face lawsuits and penalties for violations of regulations or environmental damage caused by PFAS.

### Opportunities for Frontrunners

Companies leading the development and commercialisation of safe and effective alternatives to PFAS can create new revenue streams and gain a competitive advantage.



# Product Manufacturers

# Risks:

- New regulations pushing for PFAS phase-out will require manufacturers to reformulate products with alternative materials, necessitating extensive research, development, and production efforts and **increased overall costs**, particularly for applications lacking readily available substitutes.
- Additionally, stricter reporting requirements (e.g., TSCA) and wastewater regulations will further increase compliance costs for manufacturers.
- Lawsuits related to PFAS use in products may result in additional financial burdens.

### Opportunities to Differentiate Products

Manufacturers who can develop and launch PFAS-free products can gain a competitive advantage by catering to the growing demand for safer alternatives.



# Waste Management, Water Treatment and Environmental Testing Service Providers

Risks:

 Waste management companies may need to manage costs related to remediation, such as addressing leachate from landfills, and stricter waste standards.

### **Opportunities**

Opportunities are emerging in the form of increased demand for:

- Water and wastewater treatment upgrades;
- Development of new PFAS destruction technologies;
- Remediation services; and
- Expanded analytical testing capabilities and capacity.

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### Box 2: Actions for Investors

Investors can encourage companies to:

- Acknowledge PFAS-related risks as an important issue for their businesses.
- Map their supply chains to identify where and why PFAS are used and to understand whether PFAS substitutes are available.
- Make commitments to phase out the production and use of PFAS, formalising this in a policy statement.
- Develop time-bound plans with objectives and targets for the phase-out of PFAS, and improved emissions management and remediation.
- Establish a governance framework to oversee progress against their targets.

- Provide timely reporting on their management of PFAS and the impacts arising from the use of PFAS.
- Invest in R&D into PFAS-substitutes and, where appropriate, in infrastructure, such as upgrades to wastewater management and waste management systems to reduce emissions.

Investors can enhance their influence by partnering with other investors and key stakeholders, such as NGOs, to accelerate the phase-out of PFAS. These partnerships can coordinate efforts to promote the adoption of safer, sustainable alternatives, especially where regulatory measures lag. For example, the Investor Initiative on Hazardous Chemicals (IIHC), supported by Swedish NGO ChemSec, actively engages with major global manufacturers.

Investors can also play a role in policy engagement, encouraging international collaboration as well as supporting regional and country-level regulatory efforts on PFAS.



# About the Institute

The First Sentier MUFG Sustainable Investment Institute (the Institute) aims to provide research on topics that can advance sustainable investing. The Institute is jointly supported by First Sentier Investors and Mitsubishi UFJ Trust and Banking Corporation, a consolidated subsidiary of MUFG.

As investors, both First Sentier Investors and MUFG recognise our collective responsibility to society and that investment decisions should be made with consideration to our communities both now and in the future.

The Institute commissions research on Environmental, Societal and Governance (ESG) issues, looking in detail at a specific topic from different viewpoints. The Institute recognises that investors are now looking in far greater depth, and with far greater focus, at issues relating to sustainability and sustainable investing. These issues are often complex and require deep analysis to break down the contributing factors. If as investors we can better understand these factors, we will be better placed to consider our investment decisions and use our influence to drive positive change for the benefit of the environment and society.

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