

# A journey to the heart of the sustainable city



**Joanna Parent**  
Investment Director,  
Impact Private Equity



**Sarah Maillard**  
Head of Sustainability  
Research – Private  
Markets

## *When building has to lead its revolution...*

1. In Europe, the buildings sector accounts for 36% of greenhouse gas emissions and 40% of energy consumption<sup>1</sup>. On a worldwide scale, it takes up 50% of all materials used.
2. 85 % of existing buildings today will still be inhabited and used in 2050<sup>2</sup>.
3. To stay within the scenario of global warming limited to +2°C, the CO<sub>2</sub> emissions of the real estate sector must be reduced by 75% compared with 2010 levels<sup>3</sup>.
4. With the European Green Deal, and examples of the AGECE law and RE2020 in France, legal regulations are moving in the right direction.
5. From CO<sub>2</sub> absorbent cement or organic materials to modular structures, insulation materials and home automation, the innovative solutions exist!

## Episode 2: When growth capital makes it possible to build sustainable real estate

At the heart of social and societal issues, cities and urban areas are some of the drivers of climate change, causing collateral damage to biodiversity, resources, air and health. At the forefront, the transport and construction sectors are facing a challenge of unprecedented magnitude: to transform themselves fundamentally in order to drastically reduce their impact on the environment.

In this context, Mirova's Impact Private Equity strategy focuses on solutions and technologies that will help to make sustainable cities a reality.

In this article, we take a closer look at buildings.

### CONSTRUCTION FACING ONE OF THE CHALLENGES OF THE CENTURY

#### *Destined to grow further, building impacts resources and the environment*

Responsible for nearly 75% of global CO<sub>2</sub> emissions, cities – and more generally urban activities, including buildings, whether residential, tertiary or industrial – have a major impact on the environment.<sup>4</sup>

Against a background of an increasing world population and growing urbanisation (from 30% in 1950 to 55% in 2018, forecasts predict that 70% of the population will be living in urban areas by 2050),<sup>5</sup> demand for housing is set to rise strongly.

The global construction sector accounted for \$10.7 trillion in output in 2020 and could grow by 42% between 2020 and 2030<sup>6</sup>.

This outlook should be considered alongside two other observations:

- ▶ 1. Across the European Union, buildings account for 40% of the continent's energy consumption and 36% of its greenhouse gas emissions<sup>1</sup> – consumption and emissions resulting from construction, renovation

1. [https://ec.europa.eu/info/news/focus-energy-efficiency-buildings-2020-feb-17\\_fr](https://ec.europa.eu/info/news/focus-energy-efficiency-buildings-2020-feb-17_fr)

2. Agir pour le Climat: "European directive on the energy performance of buildings"

3. OECD, International Energy Agency, 2020

4. UNEP, Cities and Climate Change

5. United Nations, "68% of the world population is likely to live in urban zones by 2050, according to the UN".

6. Marsh, Guy Carpenter, Oxford Economics "Future of Construction: a global forecast for construction to 2030".



and demolition activities, but also, and above all, from the use of the buildings themselves.

- ▶ **2. A large majority of the EU's building stock is energy inefficient and still mainly supplied by fossil fuels**<sup>7</sup>. 85% of these buildings existing today will still be inhabited and used in 2050<sup>2</sup>, at a time when Europe should have achieved carbon neutrality, as defined by the Green Deal<sup>8</sup> (launched in 2019 by the European Commission with the goal of making Europe climate neutral by 2050).

**It has therefore become urgent to act... and many tasks lie ahead before the job is done!**

### *An energy-consuming and pollutant-emitting sector*

**In its construction phase, the building industry uses materials which are energy-intensive to produce:** the production of steel, concrete or glass often involves the burning of fossil resources, which emit greenhouse gases.

**In its use phase, the building also generates CO<sub>2</sub> emissions:** these can be direct, via the consumption of oil or gas for heating for example, or indirect, via the consumption of electricity for lighting or air conditioning in particular.

**Heating** alone accounts for more than a third of the energy consumption of a building.<sup>9</sup>

This observation comes with another fact: whether used for heating or **air conditioning**, insulation equipment or foam can contain **refrigerants (hydrofluorocarbons, or HFCs)**, whose global warming potential may be 140 to 11,700 times that of CO<sub>2</sub>.<sup>10</sup>

This situation is likely to be exacerbated by climate change, with temperature regulation requirements, particularly through air conditioning, expected to increase significantly.

The IPCC estimates that by 2050, 1.6 billion people living in more than 970 cities will be exposed to extremely high temperatures on a regular basis – a phenomenon that is compounded by urban heat island effects and recurrent flooding, endangering infrastructure and people.

To stay within the +2°C global warming scenario, CO<sub>2</sub> emissions from the building sector must be reduced by 75% compared to 2010 levels<sup>3</sup>. Action must therefore be taken throughout the entire life cycle: design, construction, renovation and use, since 80% of a building's greenhouse gas emissions come from the use<sup>11</sup> that is made of it every day.

**More globally, it is the sector as a whole that must reinvent itself around "eco-construction" or ecological construction. Compared to "traditional" buildings, eco-construction consumes less energy, materials and resources, helps to reduce air, water, and soil pollution, and aims to blend naturally into its environment.**

7. Kadri Simson, European Commissioner for Energy

8. <https://www.vie-publique.fr/eclairage/272297-pacte-vert-et-paquet-climat-lue-vise-la-neutralite-carbone-des-2050>

9. AIE

10. <https://www.ccacoalition.org/fr/slcp/hydrofluorocarbons-hfcs>

11. Journal of Cleaner Production, "Calculation of a building's life cycle carbon emissions"

## *A polluting and high raw material consuming sector*

**Constructing a building is one of the most resource-intensive heavy industrial processes.** According to an OECD study conducted in 2018, materials top the list of users of non-renewable and insufficiently recycled raw materials.

**Non-metallic minerals** such as **sand, gravel, limestone and crushed rock** used by the construction sector **account for nearly 50% of all materials used today**, across all economic sectors.

The organisation also estimates that, on a global scale, **this use of raw materials will double by 2060**, due to a twofold increase in the population and its higher standard of living.

**In addition to causing their gradual exhaustion** (as in the case of sand, for example, for which **shortages** are already being observed in the Middle East<sup>12</sup>), the extraction of these natural resources has a triple impact: **energy consumption, pollution and loss of local biodiversity.**

**Whether in its construction or renovation phase, construction also generates different types of potential pollution, including:**

- ▶ **Volatile organic compounds (VOCs)**, produced by industrial paint and coating operations. By reacting with nitrous oxides (NOx) present in the urban environment, they create ground-level ozone molecules, which are detrimental to health.
- ▶ **Or asbestos**<sup>13</sup> which generates risks to public health and the environment.

Finally, urban sprawl and the artificialisation of land for the construction of new buildings poses the problem of soil sealing which contributes to its deterioration. Soil sealing increases the risk of flooding and water shortages, contributes to global warming and threatens diversity.

**Here too, action must be taken at all levels: procurement methods, optimisation of the use of raw materials during the construction process, recycling of waste from both the construction and dismantling of buildings, etc. These are all levers that can be activated through innovation, in a context driven by a favourable regulatory environment.**



## *The only remedy: an in-depth transformation of the real estate sector*

**The entire real estate sector must reinvent itself: suppliers, designers, developers, builders, companies in charge of insulation, maintenance and renovation... each have their part to play. And the equation, while simple to formulate, is proving to be complex to solve:**

- ▶ **The aim is to meet growing demand** for housing and for industrial and tertiary buildings for a world population...
- ▶ **...while drastically reducing the impact of construction** on the environment and health.

Although regulations and incentives remain disparate and are mainly focused on new buildings, **the current context – particularly in terms of standards – is increasingly conducive to the development of this 21<sup>st</sup> century real estate.** Such is the case with the **European Green Deal**, through which the EU, having set itself the goal of **becoming the first climate neutral continent by 2050** – today proposes to align **the rules relating to buildings' energy performance, while decarbonising the European Union's real estate stock between now and 2050.**<sup>14</sup>

12. <https://www.dw.com/en/sand-crisis-shortage-supply-mafia/a-56714226>

13. <https://www.in.gov/idem/asbestos/health-risks-and-environmental-impacts>

14. [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_21\\_6683](https://ec.europa.eu/commission/presscorner/detail/en/IP_21_6683)



Focus on:

### *Materials and solutions for the future available on the market*

- ▶ Carbon dioxide-**absorbent cement**
- ▶ **Reuse of CO<sub>2</sub>** in the cement making process
- ▶ **Organic construction materials**
- ▶ **Wooden materials** from sustainably managed and certified forests
- ▶ **New, cement-free construction materials**
- ▶ **Modular construction**

**France, meanwhile, is also modifying its legislative framework** to improve the environmental footprint of buildings. Among the measured that can be cited are:

- ▶ **The AGEC.** The Anti-Waste for a Circular Economy Act (*Anti-Gaspillage pour une Économie Circulaire*), which passed into law on 10 February 2020, sets out an extended scope for responsibility for producers of buildings (the polluter pays principle) and stepped up the fight against fly-tipping.
- ▶ **The RE2020:** this Environmental Regulation (*Règlement Environnemental*) adopted on 1 January 2022, sets a target for the reduction of emissions by the construction sector of at least 30% by 2031, aligned on the commitments of the Paris Agreement.

**Only the transition to sustainable real estate will make it possible to solve this equation consisting of building more while making less impact.**

**Made possible by a favourable environment and the clear willingness in political and industrial spheres, this building revolution should be facilitated by major technological innovations – some of which are already underway while others are still to come.**

## **WHEN TECHNOLOGICAL INNOVATION HELP MAKE SUSTAINABLE BUILDINGS AND CITIES A REALITY**

The two main levers that can be activated rapidly are on the one hand **reducing the environmental footprint in design phase**, and on the other **improving energy efficiency in use phase**. This approach must also take into consideration the issue of adapting buildings to a new climate environment.

### **Reducing the environmental footprint in design phase**

To be fully effective – and to reduce both greenhouse gas emissions and the extraction of natural resources – this lever must be activated on three levels:

- ▶ **1. The development and use of low-carbon materials, which include:**
  - ▶ **Green cement** (see box on “Focus on EU cement manufacturers’ carbon intensity”)
  - ▶ **Plant-based wool**
    - ▶ And also **wood-based materials** from sustainably managed and certified forests.
- ▶ **3. The deployment of original and more eco-friendly construction processes**, such as modular construction which helps optimise and rationalise construction and its impacts.
- ▶ **3. The introduction by the sector’s firms of ambitious strategies to improve the energy performance of industrial processes** – strategies supplemented by the installation of more effective or more energy efficient industrial equipment (**new generation furnaces**, for example).

## Improving energy efficiency in use phase

This second lever is paramount — **and most of the efforts must be concentrated on the existing building stock, whose renewal rate in OECD countries does not exceed 2.5%.**<sup>15</sup>

While improving the energy efficiency of new buildings is now a given, **the renovation of existing buildings continues to represent a major challenge.**

**Among the most appropriate solutions, we can cite:**

- ▶ **Insulating buildings**, by targeting the main points of heat loss (roof, walls, floor, windows) while controlling airtightness, makes it possible to reduce both heating and cooling requirements.
- ▶ **Equipment such as solar water heaters or thermodynamic water heaters (based on the same principle as heat pumps), which help to significantly reduce the energy consumed compared with traditional boilers.**
- ▶ **Home automation (sensors and smart equipment in particular) helps identify energy-intensive areas, detect leaks and optimise consumption while making users more responsible for their actions.**



## THE SOLUTIONS EXIST. OUR IMPACT PRIVATE EQUITY STRATEGY CONTRIBUTES TO THEIR LARGE-SCALE DEVELOPMENT.

*A strategy to boost technological innovation and make sustainable cities a reality*

**Our private equity strategy aims to foster and support the development of innovation in mature markets** by capitalising on technological centres of excellence in Europe (with the possibility of investing up to 20% of investments in other OECD countries).

Building on a deep understanding of the market's needs and potential through close collaboration with our ESG team, we invest in companies offering **proven technology with significant impact** to accelerate their commercial deployment.

Our **different investment verticals** and their **geographical scope** allow us to address **several complementary solutions** contributing to the emergence of a sustainable city.

We bring our passion for impact, our strong personal convictions and our expertise to the companies we support, sitting on their Boards of Directors to help build value-creating governance, deliver sustainable growth and improve their resilience.

15. OECD, 2019

“

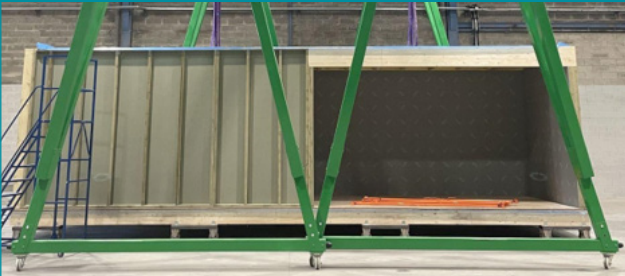
*We invest in companies whose entrepreneurial intelligence and capacity for innovation have yielded proven technologies to address environmental issues.*

”

## WHEN THE SOLUTIONS EXIST:

Focus on an example of innovative investment performed by our teams

### VESTACK: *specialist in low-carbon construction*



- ▶ **Activity:** a vertically integrated company providing turnkey solutions from design (open access in-house software plug-in) to construction of low-carbon buildings made of mostly bio-sourced materials.
- ▶ **Founded:** 2019
- ▶ **Founders:** Sylvain BOGEAT, Jean-Christophe PIERRON, Nicolas GUINEBRETIERE
- ▶ **Location:** France

To find out more about Vestack: [www.vestack.com](http://www.vestack.com)

Breakthrough technology:  
an integrated solution from design to construction

**Vestack's value proposition is to integrate design, engineering, and production relying on a "design for manufacturing software" in order to prefabricate 90% of buildings off-site.**

Vestack industrial approach allows to shorten construction cycle twice and to cut CO<sub>2</sub> emissions by 2/3 without any extra costs (versus standard construction)<sup>16</sup>.

Vestack solution allows to address different types of uses, from residential to public buildings: multifamily residential, housing estates, student accommodation, nursing homes, kindergardens & education, offices...

16. Source: Vestack



## At a glance: Mirova's Environmental Impact Private Equity strategy

**Our belief: Accelerating and scaling up positive impact drives strong financial performance. In other words, impact feeds performance.**

**A goal:** accelerate the scale-up of innovative and positively impactful environmental solutions.

**Significant potential:** the shortfall in funding is estimated at around **USD 2,500 billion per year**<sup>1</sup>.

### A multi-themed approach:

1. Agri-Agro technology
2. Circular economy
3. Renewable energy
4. Sustainable cities
5. Natural resources

### Selective targeting:

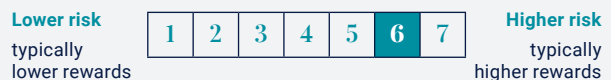
- ▶ Companies with a **business model directly addressing at least one of the targeted SDGs**<sup>2</sup>.
- ▶ **Proven innovative solutions and technologies.**
- ▶ Companies which are implementing (or intending to implement) **rigorous ESG**<sup>3</sup> standards.
- ▶ Companies with a **proven business model.**
- ▶ Companies that are **profitable or about to become so.**
- ▶ **"Capital Acceleration"** equity raising campaigns to supply capital to companies in growth phase.

**To summarise, a strategy aimed at both institutional and private investors offering 3 key advantages:**

- ▶ a **wide impact spectrum** enabling our investors to contribute to multiple Sustainable Development Goals;
- ▶ a **handpicked selection of target companies**, from a rich and varied range;
- ▶ an attractive and diversified **risk/return profile.**

**Main risks:** capital loss risks, discretionary management risk, valuation risk, counterparty risk, liquidity risk, sustainability risk, ESG risk, country risk, operational risk, regulatory risk, currency risk, credit risk, currency risk, interest rate risk, investment strategy risk.

### Risk and reward profile<sup>4</sup>:



To find out more: visit our dedicated page on our website.



1. United Nations - Sustainable Development Goals Business Forum

2. The United Nations Sustainable Development Goals (SDGs) define 17 priorities for socially equitable, environmentally safe, economically prosperous, inclusive and predictable development by 2030.

3. Environmental Social Governance

4. The scale (profile) of risk and return is an indicator rated from 1 to 7 and corresponds to increasing levels of risk and returns. It results from a regulatory methodology based on annualised volatility, calculated over 5 years. Monitored periodically, the indicator can evolve.

## Legal information

**These strategies are exposed to risk of capital loss. The information presented above is neither a contractual document nor intended to be an investment advice. Access to the products and services presented here may be restricted to some persons or in some countries.**

**Mirova is an asset-management company dedicated to sustainable investment and an affiliate of Natixis Investment Managers.**

Thanks to its conviction-led management style, Mirova's objective is to combine a quest for long-term value creation with sustainable development. Pioneers in many areas of sustainable finance, Mirova's talents are committed to innovation in order to provide their clients with high environmental and social impact solutions. Mirova and its affiliates manage €28.6 billion as of 31 December 2021. Mirova has been awarded the B Corp\* label and the status of "mission led company". \*References to a ranking, award or label do not prejudice the future performance of the fund or the manager.

**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 subscribe for, or buy, or concede 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 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 has 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 bears 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 any other reason. Mirova reserves the right to modify or remove this information at any time without notice.

The information contained in this document is the property of Mirova. The distribution, possession or delivery of this document in some jurisdictions may be limited or prohibited by law. Persons receiving this document are asked to learn about the existence of such limitations or prohibitions and to comply with them. Mirova voting and engagement policy as well as transparency code are available on its website : [www.mirova.com](http://www.mirova.com).

Non-contractual document, issued in June 2022.

This material has been provided for information purposes only to investment service providers or other Professional Clients, Qualified or Institutional Investors and, when required by local regulation, only at their written request.

This material must not be used with Retail Investors. To obtain a summary of investor rights in the official language of your jurisdiction, please consult the legal documentation section of the website ([im.natixis.com/intl/intl-fund-documents](http://im.natixis.com/intl/intl-fund-documents)).

**In the E.U.:** Provided by Natixis Investment Managers International or one of its branch offices listed below. Natixis Investment Managers International is a portfolio management company authorized by the Autorité des Marchés Financiers (French Financial Markets Authority - AMF) under no. GP 90-009, and a public limited company (société anonyme) registered in the Paris Trade and Companies Register under no. 329 450 738. Registered office: 43 avenue Pierre Mendès France, 75013 Paris. Italy: Natixis Investment Managers International Succursale Italiana, Registered office: Via San Clemente 1, 20122 Milan, Italy. Netherlands: Natixis Investment Managers International, Netherlands (Registration number 000050438298). Registered office: Stadsplateau 7, 3521AZ Utrecht, the Netherlands. Sweden: Natixis Investment Managers International, Nordics Filial (Registration number 516412-8372- Swedish Companies Registration Office). Registered office: Kungsgatan 48 5tr, Stockholm 111 35, Sweden. **Or,** Provided by Natixis Investment Managers S.A. or one of its branch offices listed below. Natixis Investment Managers S.A. is a Luxembourg management company that is authorized by the Commission de Surveillance du Secteur Financier and is incorporated under Luxembourg laws and registered under n. B 115843. Registered office of Natixis Investment Managers S.A.: 2, rue Jean Monnet, L-2180 Luxembourg, Grand Duchy of Luxembourg. Germany: Natixis Investment Managers S.A., Zweigniederlassung Deutschland (Registration number: HRB 885 41). Registered office: Senckenberganlage 21, 60325 Frankfurt am Main. Belgium: Natixis Investment Managers S.A., Belgian Branch, Gare Maritime, Rue Picard 7, Bte 100, 1000 Bruxelles, Belgium. Spain: Natixis Investment Managers, Sucursal en España, Serrano n°90, 6th Floor, 28006 Madrid, Spain.

**In Switzerland:** Provided for information purposes only by Natixis Investment Managers, Switzerland Sàrl, Rue du Vieux Collège 10, 1204 Geneva, Switzerland or its representative office in Zurich, Schweizergasse 6, 8001 Zürich.

**In the British Isles:** Provided by Natixis Investment Managers UK Limited which is authorised and regulated by the UK Financial Conduct Authority (register no. 190258) - registered office: Natixis Investment Managers UK Limited, One Carter Lane, London, EC4V 5ER. When permitted, the distribution of this material is intended to be made to persons as described as follows: in the United Kingdom: this material is intended to be communicated to and/or directed at investment professionals and professional investors only; in Ireland: this material is intended to be communicated to and/or directed at professional investors only; in Guernsey: this material is intended to be communicated to and/or directed at only financial services providers which hold a license from the Guernsey Financial Services Commission; in Jersey: this material is intended to be communicated to and/or directed at professional investors only; in the Isle of Man: this material is intended to be communicated to and/or directed at only financial services providers which hold a license from the Isle of Man Financial Services Authority or insurers authorised under section 8 of the Insurance Act 2008.

**In the DIFC:** Provided in and from the DIFC financial district by Natixis Investment Managers Middle East (DIFC Branch) which is regulated by the DFSA. Related financial products or services are only available to persons who have sufficient financial experience and understanding to participate in financial markets within the DIFC, and qualify as Professional Clients or Market Counterparties as defined by the DFSA. No other Person should act upon this material. Registered office: Unit L10-02, Level 10, ICD Brookfield Place, DIFC, PO Box 506752, Dubai, United Arab Emirates

**In Japan:** Provided by Natixis Investment Managers Japan Co., Ltd. Registration No.: Director-General of the Kanto Local Financial Bureau (kinsho) No.425. Content of Business: The Company conducts investment management business, investment advisory and agency business and Type II Financial Instruments Business as a Financial Instruments Business Operator.



**In Taiwan:** Provided by Natixis Investment Managers Securities Investment Consulting (Taipei) Co., Ltd., a Securities Investment Consulting Enterprise regulated by the Financial Supervisory Commission of the R.O.C. Registered address: 34F., No. 68, Sec. 5, Zhongxiao East Road, Xinyi Dist., Taipei City 11065, Taiwan (R.O.C.), license number 2020 FSC SICE No. 025, Tel. +886 2 8789 2788.

**In Singapore:** Provided by Natixis Investment Managers Singapore Limited (company registration no. 199801044D) to distributors and qualified investors for information purpose only.

**In Hong Kong:** Provided by Natixis Investment Managers Hong Kong Limited to professional investors for information purpose only.

**In Australia:** Provided by Natixis Investment Managers Australia Pty Limited (ABN 60 088 786 289) (AFSL No. 246830) and is intended for the general information of financial advisers and wholesale clients only.

**In New Zealand:** This document is intended for the general information of New Zealand wholesale investors only and does not constitute financial advice. This is not a regulated offer for the purposes of the Financial Markets Conduct Act 2013 (FMCA) and is only available to New Zealand investors who have certified that they meet the requirements in the FMCA for wholesale investors. Natixis Investment Managers Australia Pty Limited is not a registered financial service provider in New Zealand.

**In Colombia:** Provided by Natixis Investment Managers International Oficina de Representación (Colombia) to professional clients for informational purposes only as permitted under Decree 2555 of 2010. Any products, services or investments referred to herein are rendered exclusively outside of Colombia. This material does not constitute a public offering in Colombia and is addressed to less than 100 specifically identified investors.

**In Latin America:** Provided by Natixis Investment Managers International.

**In Uruguay:** Provided by Natixis Investment Managers Uruguay S.A., a duly registered investment advisor, authorised and supervised by the Central Bank of Uruguay. Office: San Lucar 1491, Montevideo, Uruguay, CP 11500. The sale or offer of any units of a fund qualifies as a private placement pursuant to section 2 of Uruguayan law 18,627.

**In Mexico:** Provided by Natixis IM Mexico, S. de R.L. de C.V., which is not a regulated financial entity, securities intermediary, or an investment manager in terms of the Mexican Securities Market Law (Ley del Mercado de Valores) and is not registered with the Comisión Nacional Bancaria y de Valores (CNBV) or any other Mexican authority. Any products, services or investments referred to herein that require authorization or license are rendered exclusively outside of Mexico. While shares of certain ETFs may be listed in the Sistema Internacional de Cotizaciones (SIC), such listing does not represent a public offering of securities in Mexico, and therefore the accuracy of this information has not been confirmed by the CNBV. Natixis Investment Managers is an entity organized under the laws of France and is not authorized by or registered with the CNBV or any other Mexican authority. Any reference contained herein to "Investment Managers" is made to Natixis Investment Managers and/or any of its investment management subsidiaries, which are also not authorized by or registered with the CNBV or any other Mexican authority.

**In Brazil:** Provided to a specific identified investment professional for information purposes only by Natixis Investment Managers International. This communication cannot be distributed other than to the identified addressee. Further, this communication should not be construed as a public offer of any securities or any related financial instruments. Natixis Investment Managers International is a portfolio management company authorized by the Autorité des Marchés Financiers (French Financial Markets Authority - AMF) under no. GP 90-009, and a public limited company (société anonyme) registered in the Paris Trade and Companies Register under no. 329 450 738. Registered office: 43 avenue Pierre Mendès France, 75013 Paris.

The above referenced entities are business development units of Natixis Investment Managers, the holding company of a diverse line-up of specialised investment management and distribution entities worldwide. The investment management subsidiaries of Natixis Investment Managers conduct any regulated activities only in and from the jurisdictions in which they are licensed or authorized. Their services and the products they manage are not available to all investors in all jurisdictions. It is the responsibility of each investment service provider to ensure that the offering or sale of fund shares or third party investment services to its clients complies with the relevant national law.

The provision of this material and/or reference to specific securities, sectors, or markets within this material does not constitute investment advice, or a recommendation or an offer to buy or to sell any security, or an offer of any regulated financial activity. Investors should consider the investment objectives, risks and expenses of any investment carefully before investing. The analyses, opinions, and certain of the investment themes and processes referenced herein represent the views of the portfolio manager(s) as of the date indicated. These, as well as the portfolio holdings and characteristics shown, are subject to change. There can be no assurance that developments will transpire as may be forecasted in this material. The analyses and opinions expressed by external third parties are independent and does not necessarily reflect those of Natixis Investment Managers. Past performance information presented is not indicative of future performance.

Although Natixis Investment Managers believes the information provided in this material to be reliable, including that from third party sources, it does not guarantee the accuracy, adequacy, or completeness of such information. This material may not be distributed, published, or reproduced, in whole or in part.

All amounts shown are expressed in USD unless otherwise indicated.

Natixis Investment Managers may decide to terminate its marketing arrangements for this fund in accordance with the relevant legislation.

---

## MIROVA

Portfolio management company

French Public Limited liability company

Regulated by AMF under n°GP 02-014

RCS Paris n°394 648 216

Registered Office: 59, Avenue Pierre Mendès France  
75013 Paris

Mirova is an affiliate of Natixis Investment Managers.

Find out more on: [www.mirova.com](http://www.mirova.com)

Linkedin: <https://www.linkedin.com/company/Mirova/>

Twitter: [https://twitter.com/Mirova\\_RI](https://twitter.com/Mirova_RI)

## NATIXIS INVESTMENT MANAGERS

French Public Limited liability company

RCS Paris n°453 952 681

Registered Office: 43, Avenue Pierre Mendès France  
75013 Paris

Natixis Investment Managers is a subsidiary of Natixis.

Find out more on: [www.im.natixis.com](http://www.im.natixis.com)

Linkedin: <https://www.linkedin.com/company/natixis-investment-managers>

Twitter: <https://twitter.com/natixisim>