

Investing For a 2°C World

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Acting as a Responsible investor

Mirova's philosophy

Combine financial performance and environmental & social value creation

Our economies face major transitions and market inefficiencies. These market inefficiencies highlight short-term financial opportunities.

A world in transition



We aim at capturing long-term opportunities while investing in issuers that provide solutions to these transitions.

Our philosophy aims at creating:



Financial performance



Environmental & social impact

The UN Sustainable Development Goals (SDGs)

Agenda 2030: the SDGs as a reference

In September 2015, the SDGs were adopted unanimously by 193 heads of state and other leaders at a summit at the UN Headquarters in New York



“Financing the SDGs requires not only money but also new types of research and investment tools which are fully dedicated to sustainability”

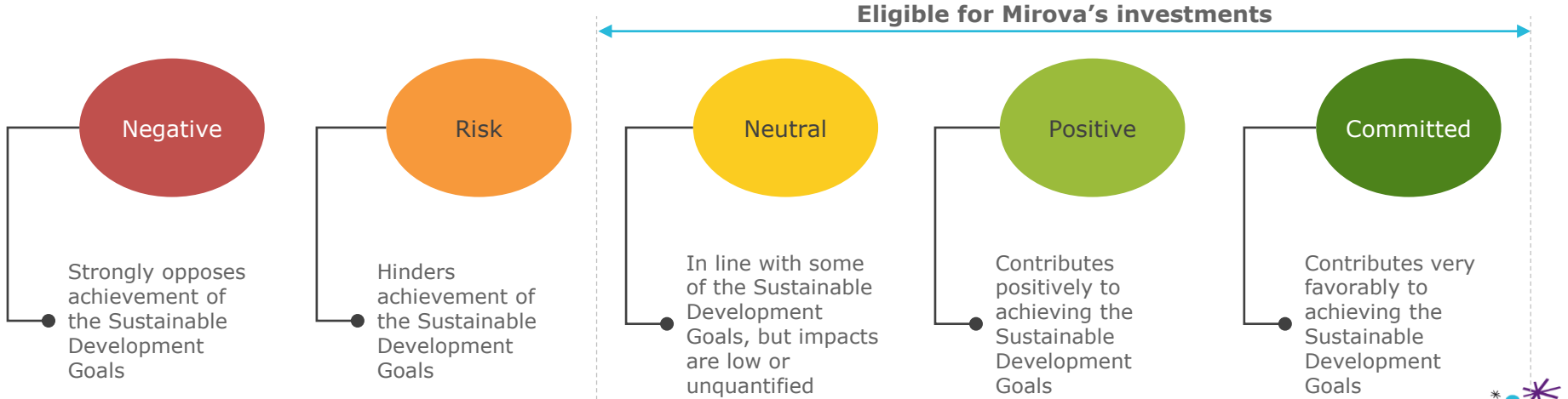
Philippe Zaouati, CEO of Mirova, Implementing and financing the UN SDGs, June 2016

Environmental & Social Assessment

Basis for analysis



Mirova's Sustainability Opinion Scale

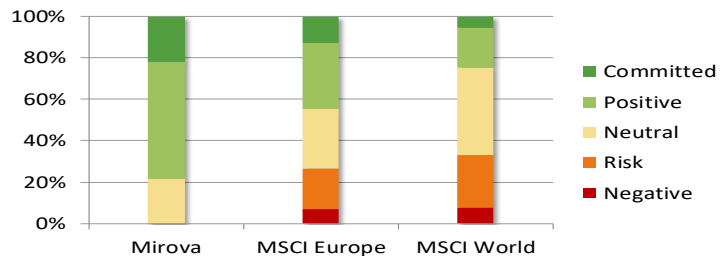


Outcome

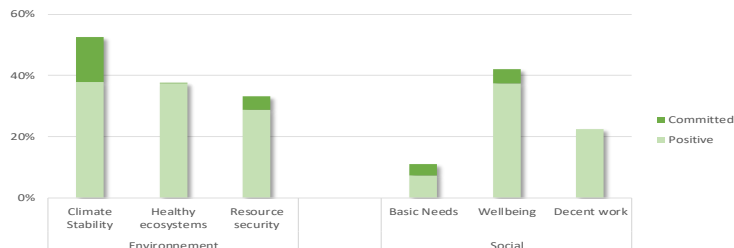
Extracts from our 2017 annual report

Sustainability reporting

Equity: Sustainability opinion breakdown



Equity: Share of positive contributors per pillar



Equity:
Physical
Impact indicator
on cl **Mirova** bility



2.2°C

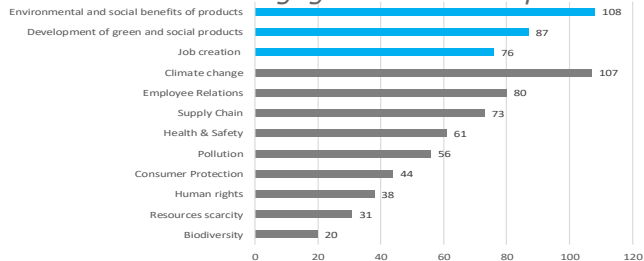
MSCI World



5.0°C

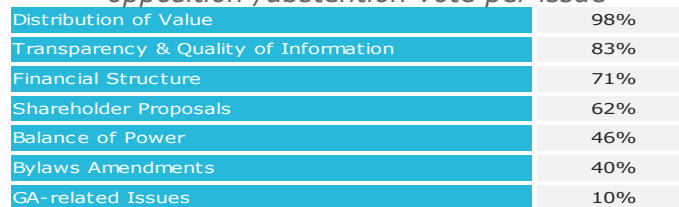
Engagement reporting

Number of engagement actions per issue



Voting right exercise reporting

Share of companies with at least one opposition /abstention vote per issue



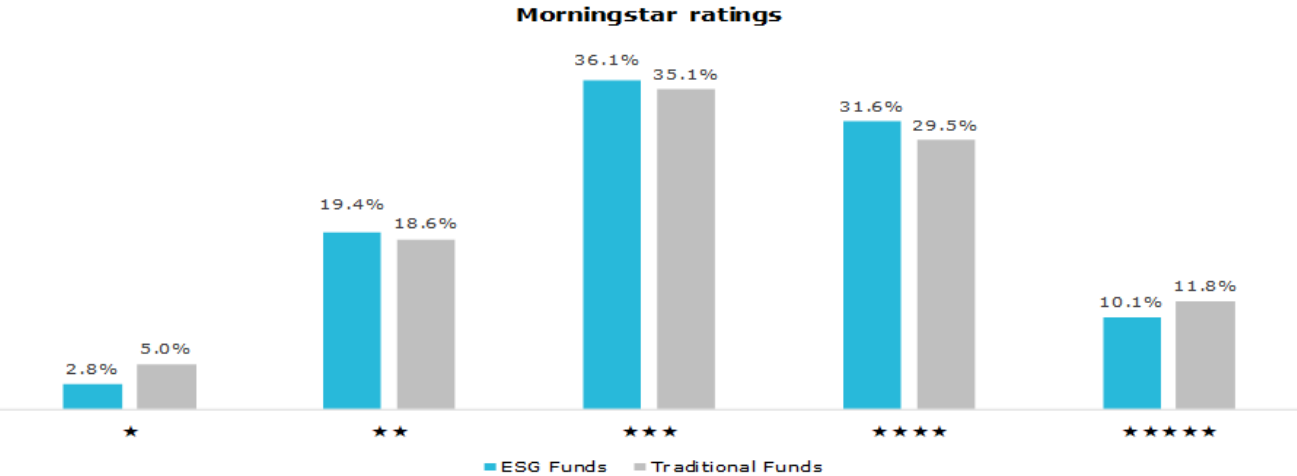
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Trade-off between Impact and Performance



Does Responsible Investment create financial value?

Figures as proof

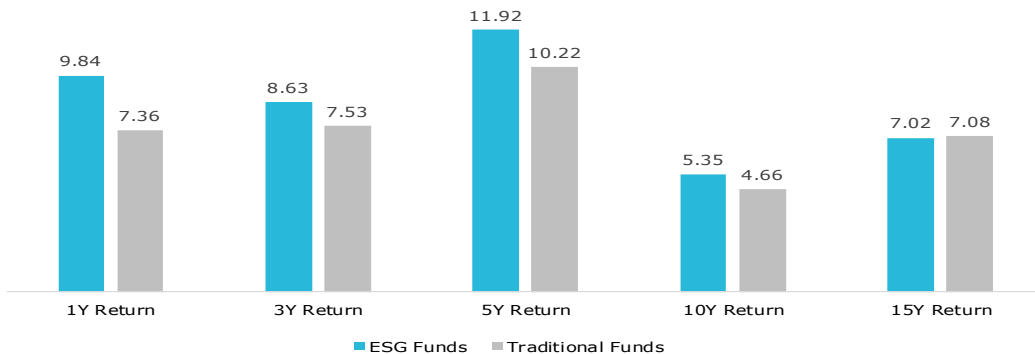


Source: Morningstar, European & Global Cross border funds (equity and fixed income categories), Morningstar ratings as of May 31, 2018. The figures given refer to previous years. Past performance is a not a reliable indicator of future performance.

Does Responsible Investment create financial value?

Figures as proof

Average Return - Global Equity Funds



- ▶ Comparison over 5 years is positive for portfolio management with ESG criteria
- ▶ Limits :
 - ▶ Limited number of ESG funds compared to non ESG funds
- ▶ As with any style of management, some funds perform well while other do not.

Nb of funds	1Y Return	3Y Return	5Y Return	10Y Return	15Y Return
ESG Funds	108	89	76	51	33
Traditional Funds	1141	1014	892	606	376

Source: Morningstar, European & Global Cross border funds (Global equity funds: Investment area = Global, Global Ex-UK, Global Ex-US, Global Ex-Japan, Global Ex-Euroland) Performances as of December 31, 2017.

The figures given refer to previous years. Past performance is a not a reliable indicator of future performance.

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Climate: What is at stake ?

Indices climate footprint

Most representative indices of the world or European economy, such as the MSCI World or the MSCI Europe are carbon intensive

+4.6°C

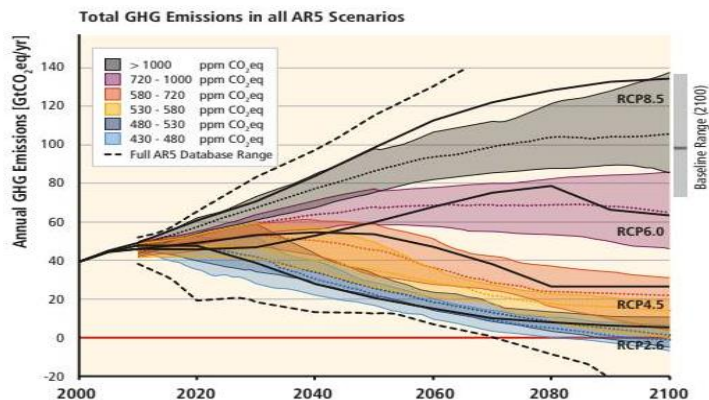
The climate footprint for the
MSCI Europe



Assessing Climate impact

Most representative indices are carbon intensive

Emissions Scenarios



Source: IPCC a. 2014

MSCI World



3.8

MSCI Europe



4.6

MSCI Emu



4.3

S&P 500



3.5

Source: Mirova / Carbone4 – data as of December 31st, 2018

4

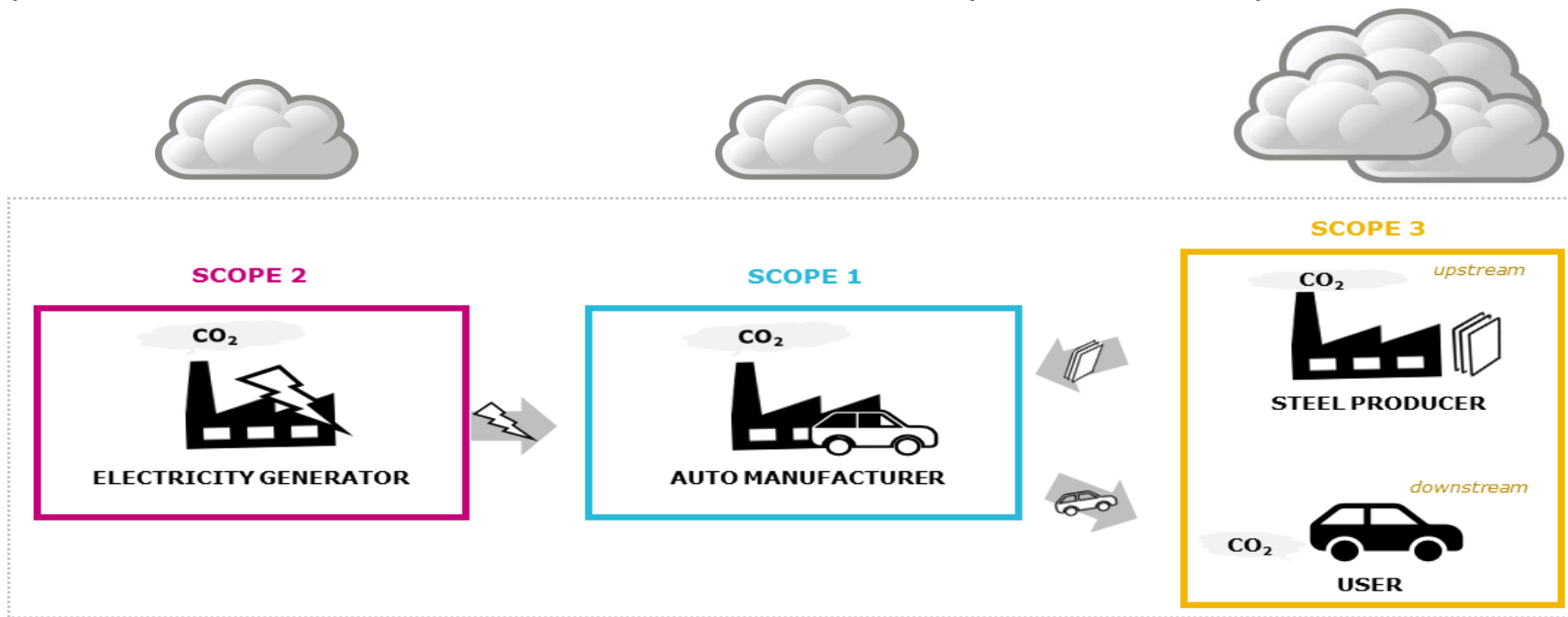


Carbon Footprint and Climate funds

Carbon footprint

Carbon Impact Analysis

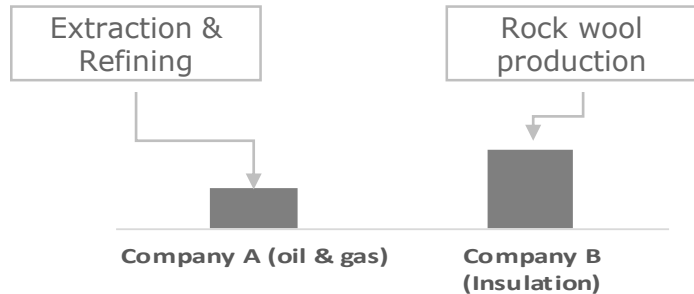
Simplified Schematic of an Automobile Manufacturer's Lifecycle Carbon Footprint



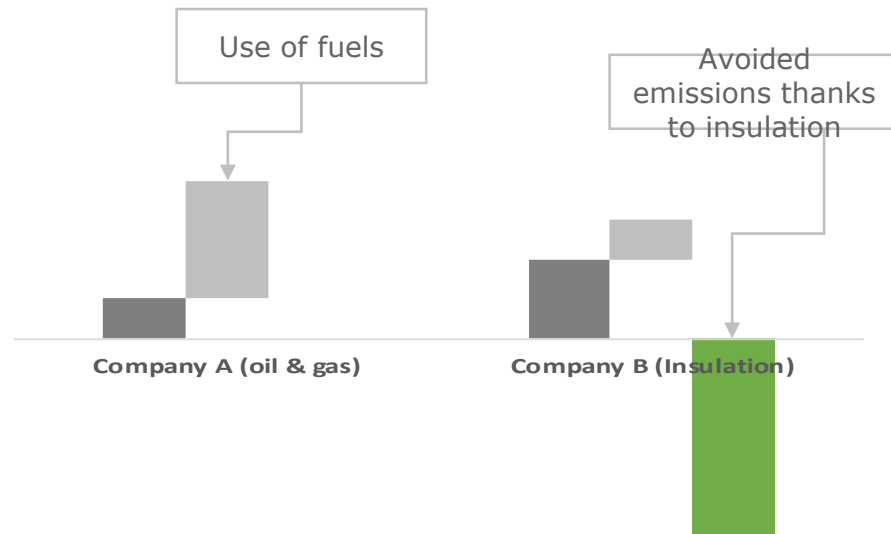
Carbon footprint

Key concept

Current carbon methodologies



Life cycle approach

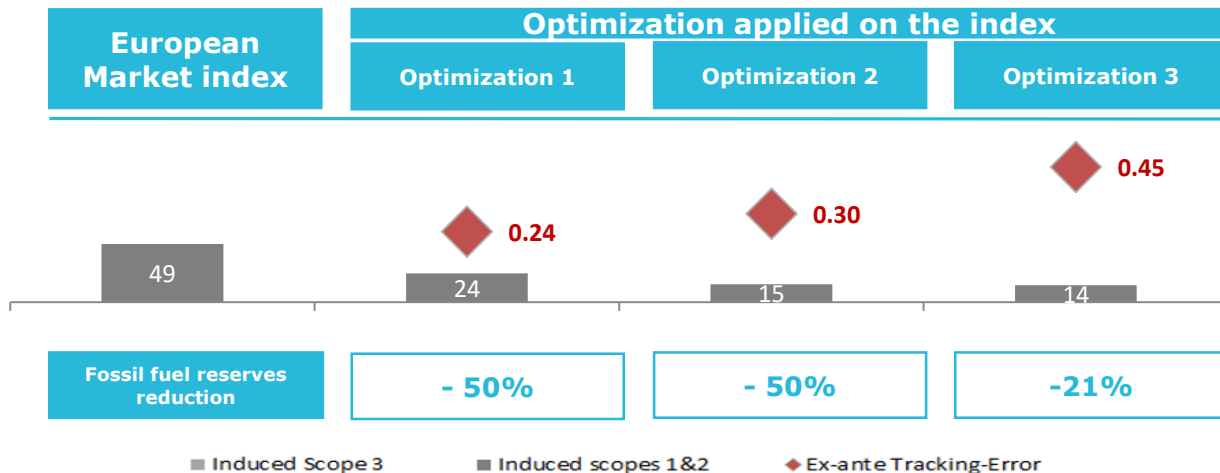


■ scope 1/2 ■ scope 3 ■ Avoided emissions

What exists already

Are passive investment and impact really compatible?

Low-carbon index providers are not lying...

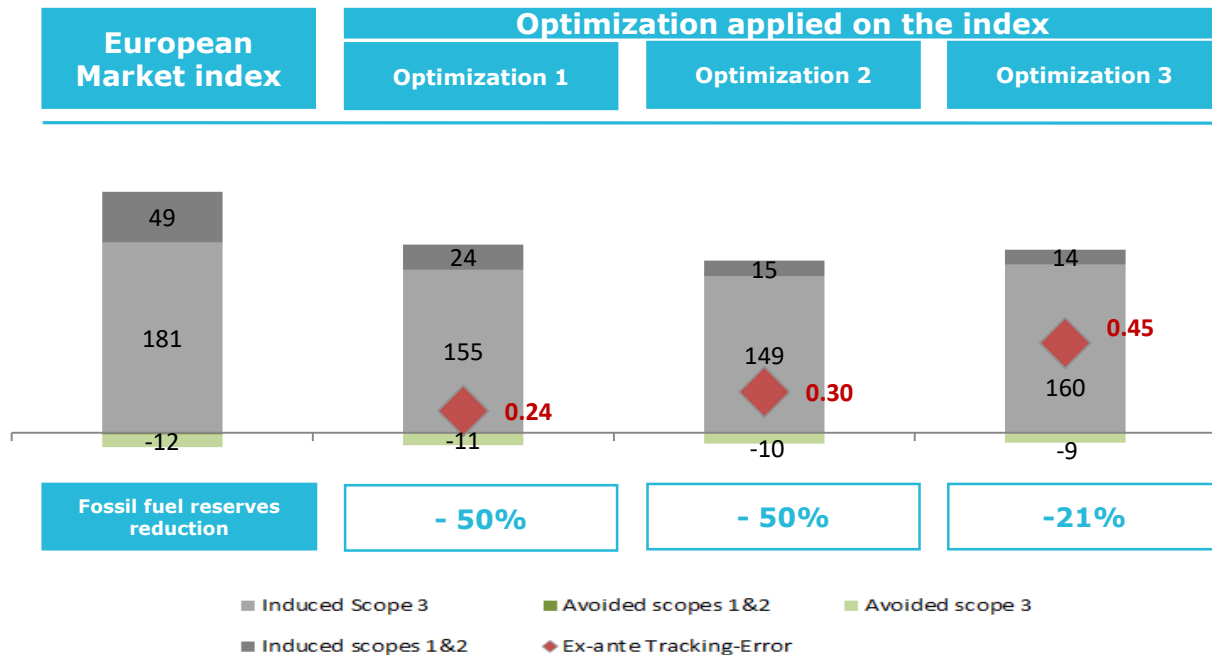


Important reductions in direct carbon intensity & fossil fuel reserves are compatible with very low levels of tracking-error

What exists already

Are passive investment and impact really compatible?

... but they don't give the global picture

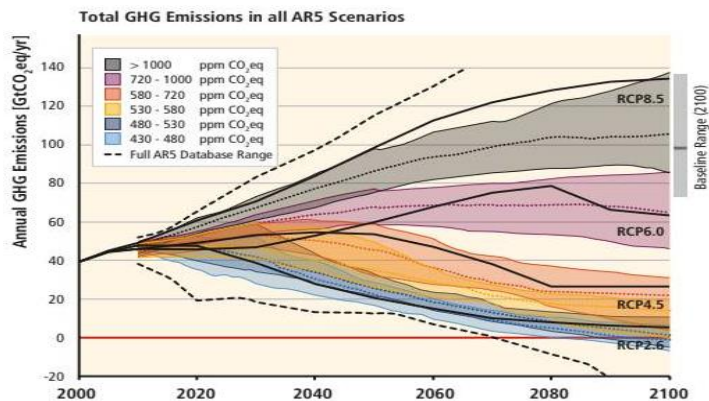


- ▶ Overall carbon intensity is far from a 50% decrease, showing no significant correlation between direct and indirect emissions
- ▶ Avoided emissions are also decreasing, showing no improvement in the performance of the optimised portfolios regarding climate change, but rather more « neutrality »

What can be achieved

Ambitious scenario alignment and carbon neutrality

Emissions Scenarios



Source: IPCC a. 2014

Active thematic climate strategy



1.5 C

Carbon Neutral Strategy



1.5 C

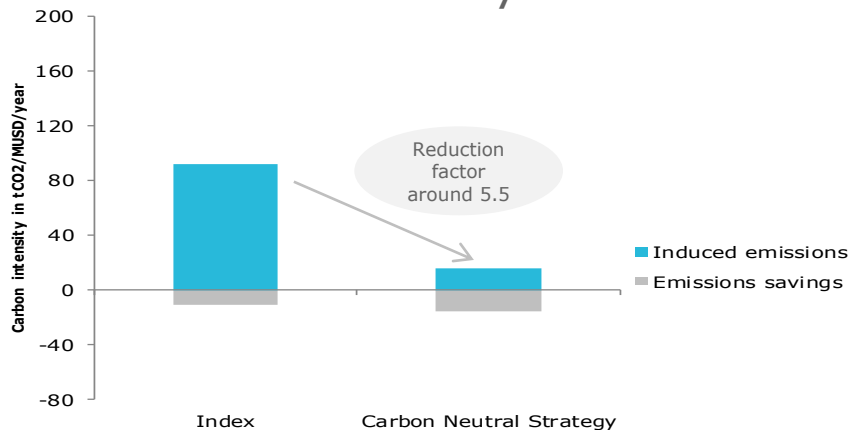
Source: Mirova / Carbone4

Climate-aware investment strategies have to go **beyond the replication of major indices**, as no index is currently in line with the +2°C objective

What can be achieved

Ambitious scenario alignment and carbon neutrality

▶ Carbon Neutrality



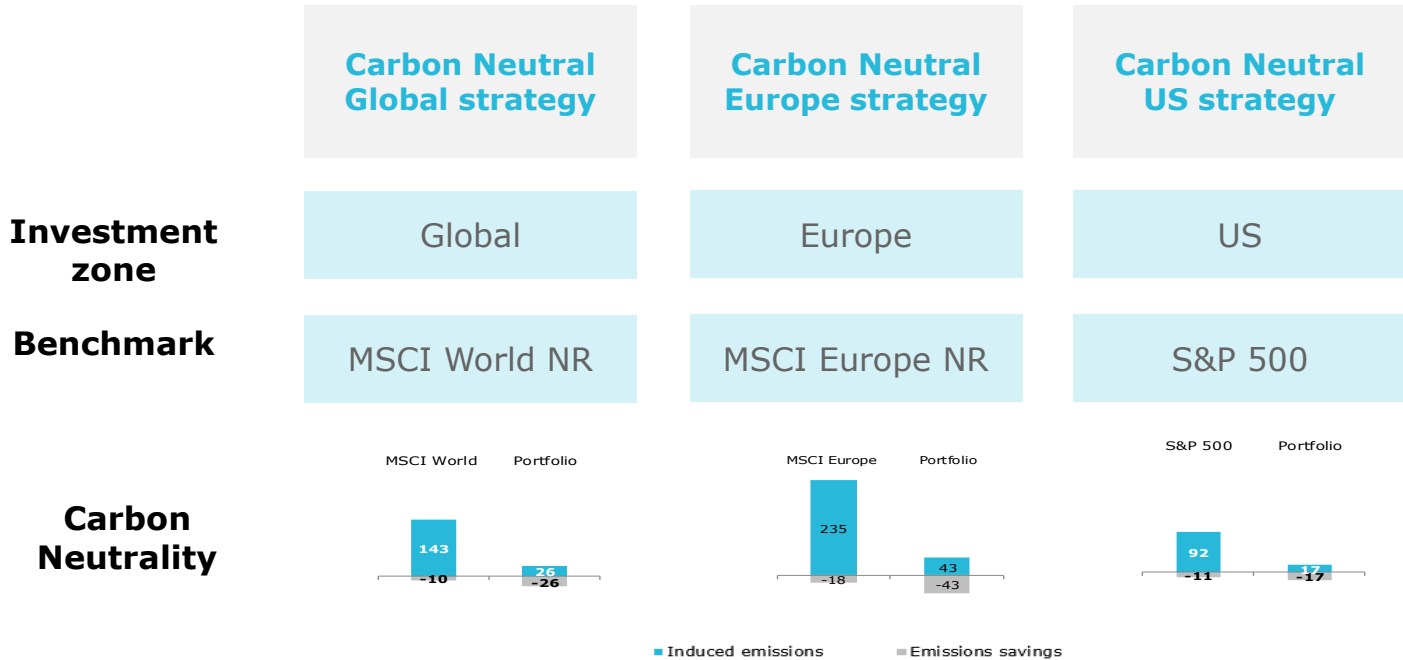
▶ How to achieve it:

- ▶ Minimize **Risks** through a **systematic approach**
 - ▶ Reduce exposure to induced carbon emissions
 - ▶ Avoid ESG risks
 - ▶ Stay within a limited risk budget
- ▶ Maximize **Opportunities** thanks to a **discretionary approach**
 - ▶ More exposure to green assets (renewable energy, energy efficiency) with adequate financial quality

The aim of such a strategy is to outperform a market index if the price of carbon* increases over time

*The price of carbon can take different forms. It can be a shadow, an explicit or an implicit price. (World Resources Institute, 2015)

Mirova's offer



Source: Mirova / Carbone 4

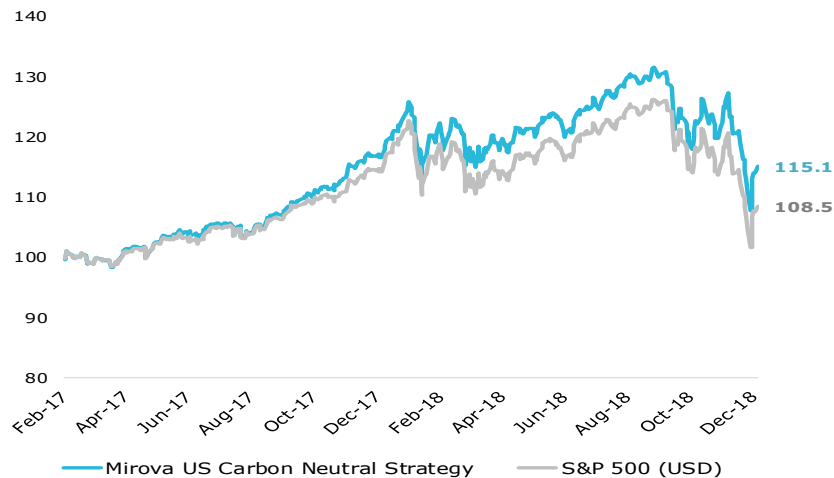
Mirova US Carbon Neutral Equity Strategy

Key metrics of the portfolio as of December 31, 2018

Key figures

- Tracking error (ex-post): **2%**
- Information Ratio: **1.79**
- Active share: **56%**
- Nb of holdings: **128**

Gross performance (USD)



Performance data shown represents past performance and is not a guarantee of future results

- ▶ Main Risks : The strategy is exposed to the risk of capital loss, geographic concentration, portfolio concentration, Equity securities and small, mid and large capitalization companies.

Source : Mirova, Carbone 4

Investment in this strategy is subject to capital loss risk.

Mirova US Carbon Neutral Equity Strategy



Key metrics of the portfolio as of December 31, 2018

Carbon Footprint

Induced Emissions
(t eq. CO2 / million €)

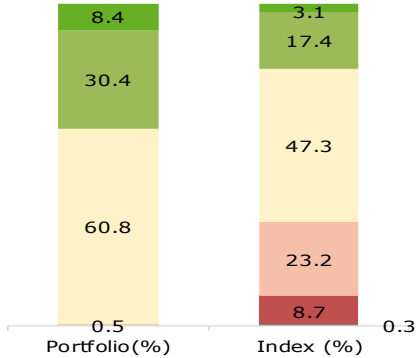
Avoided Emissions
(t eq. CO2 / million €)

Data coverage
(% portfolio)

	Portfolio	Index
	 1.5°C	 3.5°C
Induced Emissions	20	85
Avoided Emissions	21	9
Data coverage	100%	99%

Sustainability opinion

- Committed
- Positive
- Neutral
- Risk
- Negative
- [Unassigned]



Source : Mirova, Carbone 4
Investment in this strategy is subject to capital loss risk.

Carbon Neutral Strategy

Main Risks

Capital Loss : Principal value and returns fluctuate over time (including as a result of currency fluctuations) so that investments, when redeemed, may be worth more or less than the original investment. There is no guarantee that the capital invested will be returned to the investor in full.

Equity Securities : Investing in equity securities involve risks associated with the unpredictable drops in a stock's value or periods of below-average performance in a given stock or in the stock market as a whole.

Financial Derivatives Instruments : A strategy may engage in derivatives transactions as part of its investment strategy for hedging and efficient portfolio management purpose. These strategies currently include the use of listed and OTC derivatives. A derivative is a contract whose price is dependent upon or derived from one or more underlying assets. The most common derivatives instruments include, without limitation, futures contracts, forward contracts, options, warrants, swaps and convertibles securities. The value of a derivative instrument is determined by fluctuations in its underlying asset. The most common underlying assets include stocks, bonds, currencies, interest rates and market indexes. The use of derivatives for investment purposes may create greater risk for the strategy s than using derivatives solely for hedging purposes. These instruments are volatile and may be subject to various types of risks, including but not limited to market risk, liquidity risk, credit risk, counterparty risk, legal and operations risks. Furthermore, there may be an imperfect correlation between derivatives instruments used as hedging vehicles and the investments or market sectors to be hedged. This might result in an imperfect hedge of these risks and a potential loss of capital.

Counterparty risk: One or more counterparty(ies) used to swap transactions, foreign currency forwards or other contracts may default on their obligations under such swap, forward or other contract, and as a result, the Sub-Funds may not realize the expected benefit of such swap, forward or other contract. Furthermore and in the case of insolvency or failure of any counterparty, a Sub-Fund might recover, even in respect of property specifically traceable to it, only a pro-rata share of all property available for distribution to all of such party's creditors and/or customers. Such an amount may be less than the amounts owed to the Strategy.

Exchange Rates: Some Sub-Funds are invested in securities denominated in a number of different currencies other than their reference currency. Changes in foreign currency exchange rates will affect the value of some securities held by such Sub-Funds.

- ▶ **Currency risk at share class level** - For unhedged Share Classes denominated in currencies different from the Fund's Currency, the Share Class value follows fluctuations of the exchange rate between the Shares Class currency and the Fund's Reference Currency, which can generate additional volatility at the Share Class level.

Changes in Laws and/or Tax Regimes: Each Sub-Fund is subject to the laws and tax regime of Luxembourg. The securities held by each Sub-Fund and their issuers will be subject to the laws and tax regimes of various other countries, including a risk of tax re-characterization. Changes to any of those laws and tax regimes, or any tax treaty between Luxembourg and another country, or between various countries, could adversely affect the value to any Sub-Fund of those securities.

Carbon Neutral Strategy

Main Risks

Geographic Concentration : The Strategy may concentrate in companies of certain specific parts of the world, which involves more risk than investing more broadly. As a result, the Strategy may underperform strategies investing in other parts of the world when economies of its investment area are experiencing difficulty or its stocks are otherwise out of favor. Moreover, economies of such investment area may be significantly affected by adverse political, economic or regulatory developments.

Portfolio Concentration : Although the strategy of certain Sub-Funds of investing in a limited number of stocks has the potential to generate attractive returns over time, it may increase the volatility of such Sub-Funds' investment performance as compared to funds that invest in a larger number of stocks. If the stocks in which such Sub-Funds invest perform poorly, the Sub-Funds could incur greater losses than if it had invested in a larger number of stocks.

Capitalization Size of Companies:

- ▶ **Smaller capitalization companies** - Investments in smaller capitalization companies may involve greater risks than investments in larger companies, including fewer managerial and financial resources. Stocks of small companies may be particularly sensitive to unexpected changes in interest rates, borrowing costs and earnings. As a result of trading less frequently, stocks of smaller companies may also be subject to wider price fluctuations and may be less liquid.
- ▶ **Large capitalization companies** - Sub-Funds investing in large capitalization companies may underperform certain other stock funds (those emphasizing small company stocks, for example) during periods when large company stocks are generally out of favour. Also larger, more established companies are generally not nimble and may be unable to respond quickly to competitive challenges, such as changes in technology and consumer tastes, which may cause the Sub-Fund's performance to suffer.

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