METHODOLOGICAL NOTE · DETAILED VERSION

A framework for measuring extra-financial performance

A five-level approach, from the universe of possibilities to investor additionality.

Measuring impact at fund level

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This is a methodological document aimed at clarifying how Mirova takes into account sustainable development issues in the framework of the environmental, social and governance analysis of each sub-sector of activity.

PREFACE

Why measure impact?

Faced with environmental and social urgency, investors are increasingly expected to demonstrate the effectiveness of their investments beyond financial performance alone. Measuring extra-financial dimensions provides tangible evidence of the positive effects generated, so as to meet the expectations of clients, regulators and civil society. Indeed, measuring what companies produce for society and the planet is indispensable to managing those effects and improving them. This requirement is part of the impact-finance approach, defined by the Institut de la Finance Durable as an investment strategy that aims to accelerate the just and sustainable transition of the real economy by providing evidence of its beneficial effects.

Mirova has therefore developed a rigorous framework to assess the exposure and effective contribution of its funds to the environmental and social transition. The framework rests on the DNA of impact investing — **intentionality, additionality and measurability** — as promoted in particular by the Forum pour l'Investissement Responsable (FIR), France Invest and the Institut de la Finance Durable (IFD). The objective is twofold: to steer the strategy according to the extra-financial results obtained, and to demonstrate these results in an accessible way to internal and external audiences.

IN BRIEF

This note distinguishes three complementary concepts — the impact of the underlying assets, the fund's financial exposure to those impacts through its investments, and the investor's real contribution (additionality) — and unfolds them across five levels of analysis, from the assets financed to investor additionality.

This detailed version, produced by the Mirova Research Center, is the subject of a summary note published by Mirova: the two documents are complementary and mirror one another.

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OVERVIEW

Our five-level analytical framework

To address these challenges, we propose a multi-level approach that distinguishes three complementary concepts: the impact of the underlying assets, the fund's financial exposure to those impacts through its investments, and finally the investor's real contribution — or additionality. This approach is structured in five complementary levels, from the assets financed to investor additionality.

Level of analysis	Key question	Main objective	Example
Level 1 The absolute impact of the assets	What effects do the companies' activities generate?	Assess the intrinsic extra-financial performance of each asset (alignment with the SDGs, net contribution).	EcoBuild, a company specialising in the energy renovation of buildings, avoided 40,000 tCO_2 in year n.
Level 2 The average impact of the asset list	Does Mirova select the right companies from the outset?	Steer selection towards the sustainable transition (define a consistent, ambitious asset list).	To build its fund, Mirova selected 3 companies from a broader set. On average, a selected asset avoided about 92 tCO_2 per €m of financing in year n (vs ~3 tCO_2/€m in the starting universe).
Level 3 The average impact of the portfolio	What is the overall extra-financial performance, given the weight assigned to each asset?	Measure the average impact generated per €m of fund financing.	The portfolio avoids on average 105 tCO_2/€m of financing in year n. Its intensity is higher than that of the asset list because the manager gave a larger weight to a company that is highly intensive in avoided emissions.
Level 4 Investment-linked exposure	What share of the impact is attributable to Mirova according to its investment?	Quantify the fund's responsibility in proportion to its holding of the asset's value.	Of the 112,500 tCO_2 avoided in total by the companies financed in year n, 21,000 tCO_2 avoided are attributed to the fund, pro rata to its financing.
Level 5 Investor additionality	What changes occurred thanks to Mirova's intervention and would not have happened otherwise?	Demonstrate the fund's effective contribution (fresh capital, catalytic effect, shareholder engagement, etc.).	By investing at an early, critical stage and catalysing other co-investments, the fund enabled a project that would not have seen the light of day without it.

Diagram 1 — From the universe of possibilities to investor additionality

This is a methodological document aimed at clarifying how Mirova takes into account sustainable development issues in the framework of the environmental, social and governance analysis of each sub-sector of activity.

Key concepts: impact, exposure and real contribution

Many indicators used in sustainable finance primarily describe the extra-financial performance of the underlying assets (green companies, social projects, etc.). They measure the environmental or social effects generated by the activities financed. However, these indicators are not sufficient to characterize an investor's role: they say nothing about how capital is allocated within the portfolio, nor about the specific effects of the investor's intervention. Three key notions must therefore be clearly distinguished: the impact of the underlying assets, a portfolio's exposure to activities with environmental and/or social impact, and its real contribution to the changes observed (additionality).

Asset impact corresponds to the environmental or social effects generated by the companies or projects financed, independently of the investor's role. It measures what the company's or project's activities produce: avoided emissions, jobs created, beneficiaries reached, improved access to essential services, etc. It does not make it possible to determine what share of that impact is linked to the fund's financing, nor whether that financing played a causal role.

Exposure describes what the fund invests in and in what proportions. It thus reflects the portfolio's alignment with certain environmental or social activities. For example, a fund invested 100% in renewable energy will show a low carbon footprint and a high proportion of "green" assets, indicating that the portfolio is largely exposed to positive-impact activities. Unlike companies' absolute impact indicators, exposure takes into account the amounts actually invested in each asset. A fund may indeed invest very different amounts in the companies it finances: it can be heavily exposed to companies with poor practices and, conversely, invest only marginally in companies that are highly virtuous from an environmental or social standpoint. Absolute impact indicators, when simply aggregated, therefore reflect neither how the portfolio is actually built nor the investor's capital-allocation choices — which exposure captures better.

The fund's real contribution, or additionality, seeks to determine the extent to which the investor's intervention generated additional impact. The question then becomes: what changed thanks to the fund's intervention? A company may generate positive impacts independently of the fund investing in it, or could have obtained financing from other players; the investor is then exposed to an existing impact without necessarily being at its origin. Conversely, when the fund's financing enables a project to happen or accelerate — for example by investing at an early stage in a renewable-energy project that would not otherwise have seen the light of day — it effectively contributes to creating additional impact: the portfolio increased positive impact or avoided negative impact, relative to what would have happened anyway. That is a real contribution of the fund itself.

The three approaches are complementary. Asset impact is the starting point: for a fund to claim to finance positive impacts, the assets it invests in must themselves generate such impacts. Moreover, strong exposure to sustainable activities is generally a prerequisite for claiming positive impact — it is difficult, for example, to have a positive environmental impact while mostly financing fossil fuels.

However, strong exposure is not a sufficient condition for investor additionality; conversely, an investor can make a decisive contribution with relatively limited capital, if its intervention was crucial to enabling or accelerating a project.

Recognizing the distinction between exposure and the fund's real contribution avoids two pitfalls: overestimating impact, or *overclaiming* (by conflating the exposure and the contribution of a "green" portfolio built through selection), and underestimating the additionality brought by certain engaged investors.

Mirova has therefore structured its environmental and social performance measurement framework along a multi-level logic, from the micro level (the assets in the portfolio) to the macro level (the fund and its additionality), in order to assess impact from different angles. The five levels of analysis retained are: the assets, the asset list, the portfolio, the investment and investor additionality. Each provides a specific perspective, with its own methodologies, objectives and limitations, which we detail below.

The categories of extra-financial performance indicators

Extra-financial performance indicators fall into two broad categories, according to whether or not they vary with the activity volume of the entity analyzed.

Examples of indicators that depend on volumes or size[1]

Category	Indicator	Specificity	Mode of expression
Environment (E)	Carbon footprint (tCO_2e)	Sector-specific	Absolute
Environment (E)	Water consumption (m^3)	Activity-specific	Absolute
Environment (E)	Waste generated (tons)	Activity-specific	Absolute
Social (S)	Number of employees	Non-specific	Absolute
Social (S)	Workplace accidents	Sector-specific	Absolute
Social (S)	Number of beneficiaries of a social activity	Activity-specific	Absolute

Examples of indicators independent of volumes produced or size

Category	Indicator	Specificity	Mode of expression
Governance (G)	Board independence (%)	Non-specific	Ratio
Governance (G)	Share of women in management (%)	Non-specific	Ratio
Governance (G)	Existence of an anti-corruption policy	Non-specific	Boolean
Social (S)	Existence of a diversity policy	Non-specific	Boolean
Social (S)	Existence of a social-dialogue mechanism (unions, committees)	Non-specific	Boolean
Environment (E)	Environmental certification	Activity-specific	Boolean

[1] Source: MRC

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Absolute impact indicators can be expressed as **intensities**, i.e. related to a unit of activity (number of products sold) or an economic unit (revenue, EVIC, etc.). This transformation neutralizes the effect of volumes or size and makes companies' performance comparable. How these indicators are treated varies by level of the framework. In particular, volume-dependent indicators can be attributed following a financing logic, provided they are normalized by an economic indicator linked to the investments: this normalization connects the measured impact to the capital actually mobilized by the fund and thereby makes the attribution consistent. At level 4, these indicators can thus be attributed to the fund according to its share in the financing of the asset. This approach is referred to in this framework as **vertical attribution**.

Not all indicators lend themselves to an investor-attribution logic, however. Volume-independent indicators — whether ratios or boolean indicators — describe structural characteristics of the company. They vary neither with the level of activity nor with financing; they therefore cannot be attributed to the fund pro rata to its financing. They nonetheless remain essential for analyzing the composition of the portfolio. It is recommended to aggregate them at portfolio level through weighted averages based on each asset's weight: this approach reflects the fund's investment choices and assesses its exposure to assets with more or less advanced practices. Finally, while these indicators cannot be attributed in proportion to financing, the investor can nevertheless influence their evolution over time through additionality levers.

NOTE ON THE USE OF THE TERM "IMPACT"

In this document, the terms "impact" or "impact indicators" are used in a broad sense to designate the full set of extra-financial indicators mobilized to characterize the environmental or social effects generated by an activity. They may thus refer to output, outcome or impact indicators.
The purpose of this document is not to discuss the conceptual distinction between outputs, outcomes and impacts, nor the challenge of favoring indicators that reflect real, long-term changes for beneficiaries or the environment. Rather, it aims to propose a methodological framework for handling different types of extra-financial indicators at the level of an investment fund.
In this context, the term "impact" is therefore used generically to designate the extra-financial performance of assets and portfolios, regardless of the precise nature of the indicators mobilized .

LEVEL 1

The absolute impact of the assets

This level assesses the intrinsic impact of the companies' or projects' activities, independently of any portfolio or financing consideration.

The first level of analysis assesses the intrinsic impact of each asset the fund invests in. The underlying company or project is analyzed as if it were an autonomous entity, in order to understand how its activities contribute (or are detrimental) to environmental and social objectives.

The objective is to ensure that portfolio assets are aligned with the sustainable transition and to identify the nature of their impact.

Methods used. Mirova relies on qualitative and quantitative analyzes of each company or project. Each asset is assigned an overall impact opinion on a five-degree scale from "Negative impact" to "Strong positive impact", reflecting its degree of contribution to the Sustainable Development Goals (SDGs) (Mirova's impact and sustainability assessment scale in Appendix 1). This internal assessment takes into account the share of revenue or activity dedicated to sustainable solutions, the quality of ESG practices, and the positive or negative externalities generated. On the quantitative side, one can measure for example:

- **Absolute impact indicators**: tons of CO_2 avoided annually thanks to the company's products, number of beneficiaries reached (households supplied with renewable energy, micro-entrepreneurs financed, etc.), hectares of biodiversity preserved, etc.
- **Alignment with taxonomies or standards**: for climate, for example, the percentage of revenue aligned with the EU green Taxonomy or with a 2 °C scenario.

At this stage, the analysis concerns the impact of an individual asset, considered independently of any financing logic, of the resources needed to produce that impact, and of any portfolio. When several assets are analyzed jointly, their impacts can be aggregated by summing each one's absolute impacts. It is important to note that this logic only describes an absolute impact generated by a set of activities. It does not account for the role played by a company's size (which mechanically increases impacts) and therefore does not allow comparing companies' performance. Nor does it capture the role played by the investor. It is this aggregation logic that is formalised in the formula below and in the examples.

GENERIC FORMULA

$$Total\ absolute\ impacts\ = \sum_{i=1}^{n} Impact_i$$

where n is the total number of assets (companies or projects) considered and $Impact_i$ the impact associated with asset i, expressed in absolute terms (tons of CO_2 avoided, jobs created, beneficiaries reached, etc.).

EXAMPLE 1 — CLIMATE

Take a solar-panel manufacturer. Its impact will be assessed via the total capacity of panels supplied (e.g. X MW installed per year) and the estimate of CO_2 emissions avoided by customers who use this solar energy rather than fossil-fuel electricity. If these panels avoid, say, 50,000 tonnes of CO_2 per year, the company will be rated positively. Any negative impacts (pollution linked to production, working conditions at silicon suppliers, etc.) will also be examined to obtain as complete a picture as possible. A company whose products or services have a net negative impact (a coal producer, for example) would instead be rated at the bottom of the scale ("Negative impact") and potentially excluded from the fund's investable universe.

EXAMPLE 2 — JOBS

Take a solar-panel manufacturer. Its impact will be assessed via the total capacity of panels supplied (e.g. X MW installed per year) and the estimate of CO_2 emissions avoided by customers who use this solar energy rather than fossil-fuel electricity. If these panels avoid, say, 50,000 tonnes of CO_2 per year, the company will be rated positively. Any negative impacts (pollution linked to production, working conditions at silicon suppliers, etc.) will also be examined to obtain as complete a picture as possible. A company whose products or services have a net negative impact (a coal producer, for example) would instead be rated at the bottom of the scale ("Negative impact") and potentially excluded from the fund's investable universe.
We consider three fictional companies with contrasting profiles:

Company	Jobs created over period t
Company 1	150,000
Company 2	80,000
Company 3	1,500,000

Illustrative example for explanatory purposes only. Fictional companies and figures

Formula used:

$$Total\ jobs\ created\ = \sum_{i=1}^{n} Jobs\ created_i\ =\ 1\ 730\ 000$$

Interpretation. Company C1 created 150,000 direct jobs, C2 created 80,000 and C3 created 1,500,000 over

Going further

The following points are methodological avenues for deepening the analysis of impact at the level of the underlying assets. They are not specific to the role played by the investor.

- **Measuring the change generated**: for social impact, a central challenge is to go beyond output indicators (number of beneficiaries, jobs created, people supported, etc.) to measure the changes actually experienced by individuals. The aim is to identify outcome indicators that assess the depth of impact: improved social ties, greater self-confidence in a career-guidance journey, lasting access to employment, improved well-being, etc.
- **Consolidating heterogeneous social indicators**: social impact is often specific to each activity. One company may target improved social ties, another greater autonomy, a third access to essential care. These indicators are relevant for each company, but rarely comparable between them, and there are few cross-cutting metrics common to all companies. This raises a major difficulty: how to consolidate such heterogeneous indicators at fund level?
- **Horizontal attribution of impact**: when several companies contribute to the same impact (within a value chain, for example), so-called horizontal-attribution approaches propose explicit rules for sharing the measured impacts among the different contributors (equal shares, cost-based approaches, etc.). These rules rest on methodological conventions and avoid double counting, but they do not necessarily demonstrate who caused which change.
- **Causally isolating the share of change generated by the activity**: beyond these conventional sharing rules, a more demanding and complex approach seeks to causally isolate the share of change

actually generated by a given activity. The aim is then to identify each actor's effective contribution against a counterfactual scenario.

This causality analysis also raises the question of net impact. For example, does a company that creates jobs destroy them elsewhere? Does a positive local impact come with negative externalities for other stakeholders? The challenge is then to go beyond the gross measurement of direct effects and analyze indirect effects.

Another challenge is isolating the share of impact attributable to the activity being assessed. Isolating the effect of an intervention on the change experienced by an individual can prove complex. Take the example of a company seeking to strengthen social ties within a territory: a relevant indicator could be individuals' subjective perception of their social interactions. The difficulty then lies in identifying the specific role played by the company in that improvement. One method is to establish a counterfactual, exploring what would have happened in the company's absence. This counterfactual can take the form of a baseline scenario, often used in environmental impact, or a comparison group. Under time and budget constraints, another approach is to ask beneficiaries what share of the change they themselves attribute to the activity in question. Though potentially imperfect, this approach yields an estimate of the impact attributable to the activity.

This framework does not develop these methodological reflections at the level of the underlying assets. It focuses on the question of the vertical attribution of impact among the various financiers.

LEVEL 2

The average impact of the asset list

This level reflects the asset-selection choices made by the fund and verifies their consistency with its extra-financial objectives.

The second level assesses the extent to which the selection made (or the universe filter) steers the fund towards the sustainable transition.

Methods used. The asset list can be described in terms of impact-related inclusion / exclusion criteria:

- **Themes and SDGs**: identifying key sustainable themes (clean energy, sustainable mobility, financial inclusion, health, etc.) and mapping each asset in the universe against these themes. The share of the list contributing positively to each SDG can be quantified.
- **Minimum score or rating**: for example, Mirova may decide that the fund's universe excludes companies with a "negative" impact opinion, retaining only assets deemed to have positive impact (cf. Mirova's impact & sustainability assessment scale in Appendix 1). The universe thus guarantees minimum exposure to sustainable activities and avoids the most harmful assets.
- **Climate alignment of the list**: assessing the universe against global objectives (e.g. the universe's implied-temperature trajectory, or the share of assets aligned with a 2 °C pathway). Portfolio-alignment tools (Science Based Targets, IEA scenarios, the Net Zero Investment Framework — NZIF methodology)

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EXAMPLE 2 — JOBS

We consider three fictional companies with contrasting profiles:

Company	Jobs created over period t
Company 1	150,000
Company 2	80,000
Company 3	1,500,000

Illustrative example for explanatory purposes only. Fictional companies and figures

Formula used:

$$Total\ jobs\ created\ = \sum_{i=1}^{n} Jobs\ created_i\ =\ 1\ 730\ 000$$

Interpretation. Company C1 created 150,000 direct jobs, C2 created 80,000 and C3 created 1,500,000 over period t. These figures correspond to the total impact generated by each asset over a given period. The sum of jobs created by the three assets is 1,730,000, which measures their gross direct contribution to employment, without reference to their size, to a portfolio or to an amount invested.

can be applied from the universe stage to verify that it is on a sound trajectory.

GENERIC FORMULA — AVERAGE OF IMPACT INTENSITIES

$$\frac{1}{n}\sum_{i=1}^{n}\frac{Impact_i}{Homogeneous\ indicator_i}$$

where *n* is the total number of assets considered, $Impact_i$ the absolute impact of asset *i* and $Homogeneous\ indicator_i$ a normalizing unit common to all assets (total headcount, revenue, total number of beneficiaries, etc.). Each asset weighs equally, which isolates the selection effect.

It is not relevant, however, to use the real average here, based on total sums:

$$Real\ average\ = \frac{\sum_{i=1}^{n} Impact_i}{\sum_{i=1}^{n} Homogeneous\ indicator_i}$$

The real average takes into account companies' relative size: it expresses the real average impact of all companies on society. In this formula, however, a large company erases the selection effect of a smaller but highly impact-intensive one. To reflect the quality of the fund's asset selection, we do not favor this approach and opt for an average of impact intensities.

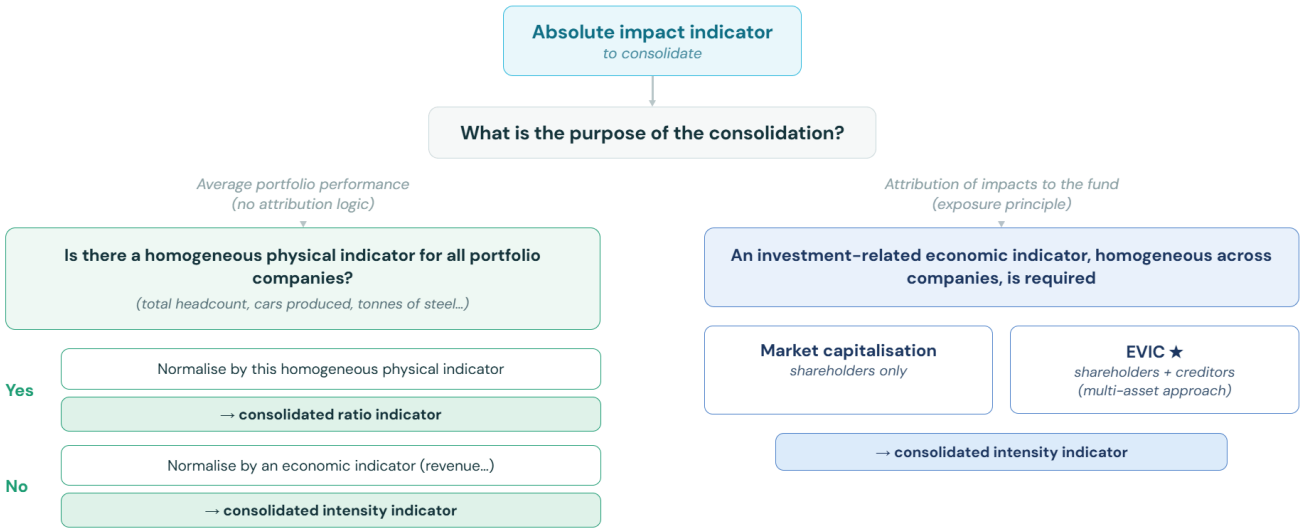

Diagram 2 — Choosing the denominator and the unit of the consolidated indicator according to the intended use

EXAMPLE 1 — CLIMATE

Consider a "Climate transition" equity fund. Its initial investment universe could be defined as all listed companies contributing significantly to the low-carbon transition. Concretely, this means including renewables, energy-efficiency and clean-transport companies, etc., while excluding sectors such as coal, unconventional oil or industries incompatible with climate objectives. One could thus state that the universe's average carbon intensity is 60% lower than that of the global equity market. This universe therefore has a markedly better environmental footprint than a broad index, attesting to its alignment with the ecological transition from the selection stage onwards.

EXAMPLE 2 – JOBS

Suppose our ultimate objectives is to attribute footprints to the fund.

Company	Jobs created	EVIC (€m)	Job intensity
Company 1	150,000	1,000	150
Company 2	80,000	10,000	8
Company 3	1,500,000	1,000,000	1.5

Illustrative example for explanatory purposes only. Fictional companies and figures

Formula used:

$$Average\ job\ intensity\ = \frac{1}{3} \times (150\ +\ 8\ +\ 1{,}5)\ =\ 53{,}2\ jobs/M€$$

Interpretation. The result corresponds to the job intensity of an "average" asset on the list. Thus, on average and independently of their economic size, the companies on the list generate 53.2 direct jobs per €1 million of economic value over period t. In this calculation each company is weighted identically, whatever its size: this approach measures the average performance of the selected assets, neutralising effects related to their economic dimension

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EXAMPLE 2 (CONTINUED) — JOBS

Suppose now that our objective is to express the overall performance of the asset list, with no attribution objective.

Company	Jobs created	Total headcount	Net creation rate
Company 1	22,500	150,000	15%
Company 2	6,400	80,000	8%
Company 3	135,000	1,500,000	9%

Illustrative example for explanatory purposes only. Fictional companies and figures

Formula used:

$$Average\ job\ creation\ intensity\ = \frac{1}{3}\sum_{i=1}^{n}\frac{Jobs\ created_i}{Total\ headcount_i} \approx\ 10{,}7\ \%$$

Interpretation. An average company on the list creates about 10.7 net jobs per 100 existing jobs, over period t.

LEVEL 3

The average impact of the portfolio

This level measures the portfolio's average extra-financial impact, expressed per million euros invested, as composed, reflecting the weights assigned to each asset.

At the third level, we analyze the portfolio as actually composed, i.e. the combination of assets and the weights assigned to each. The idea is to measure the portfolio's aggregate extra-financial performance, taking weights into account, as is classically done for financial measures (return, volatility). This level provides an overall view of the portfolio's footprint and its global alignment with environmental and social objectives.

Methods used. Several types of indicators are computed on the consolidated portfolio:

- **Absolute impact indicators** (which vary with company volume and size): each asset's impact intensities are aggregated by weighting them according to their portfolio weight, yielding the portfolio's average impact intensity (per €m invested). Some examples:
  - Portfolio carbon footprint: expressed in tons of CO_2 emitted per million euros invested.
  - Aggregate avoided emissions: expressed in tons of CO_2 avoided per million euros invested.
  - Jobs created: average intensity of jobs created per €m invested by the portfolio.
  - Beneficiaries reached: average intensity of beneficiaries reached per €m invested by the portfolio.
- **Ratio or share indicators**: although these indicators are not normalized by company size (they do not vary with it), aggregation at portfolio level relies on a weighted average based on each asset's weight, not a simple average.

This reflects the portfolio's exposure choices and the trade-offs made: from the same companies, a manager can build portfolios with distinct extra-

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financial footprints, depending on the weights retained.

- % of green revenue: weighted average of each company's green-revenue share.
- Share of women in management: weighted average of the rates observed at each company.
- Average scores: weighted average of proprietary or external ESG scores, average overall impact rating (for example if the Negative, Neutral, Positive… opinions are converted to a numerical scale).

• **Boolean indicators**: two aggregation approaches are possible depending on the objective. (1) An approach weighted by asset weights in the portfolio, to reflect the portfolio's effective exposure to practices or characteristics. (2) A simple-average approach, to express the satisfaction of a criterion and gauge the diffusion of a practice among portfolio companies — the proportion of companies satisfying a criterion is then assessed, not the proportion of exposed assets. For consistency between absolute impact indicators, ratios and booleans, we favor the first approach; both can nonetheless serve different purposes for booleans.

- Environmental certification: (approach 1) the proportion of assets invested in companies holding an environmental certification; (approach 2) the proportion of portfolio companies holding a recognised environmental certification.

GENERIC FORMULA

$$Portfolio\ impact\ intensity\ = \sum_{i=1}^{n} w_i \times \frac{Impact_i}{EVIC_i}$$

where n is the total number of assets in the portfolio, w_i the weight of asset i in the portfolio (in %), $Impact_i$ the absolute impact of asset i and $EVIC_i$ the Enterprise Value Including Cash of asset i.

EXAMPLE 1 — CLIMATE
Take a green bond fund. By aggregating its positions, one can communicate that the portfolio has a carbon intensity of 50 tCO_2 per €m invested, versus 200 tCO_2/€m for a conventional bond index (i.e. 75% less). This type of result gives a concrete view of the portfolio's extra-financial performance over a given period (often annual).

EXAMPLE 2 — JOBS

Two portfolios are considered. They invest in the same companies but differ in the weights assigned to each:

	Jobs created	EVIC (€m)	Job intensity	Portfolio A weight	Portfolio B weight
Company 1	150,000	1,000	150	80%	10%
Company 2	80,000	10,000	8	20%	10%
Company 3	1,500,000	1,000,000	1.5	0%	80%

Illustrative example for explanatory purposes only. Fictional companies and figures

Formula used:

$$Portfolio\ job\ intensity\ = \sum_{i=1}^{n} w_i \times \frac{Jobs\ created_i}{EVIC_i}$$

$$Portfolio\ A\text{: } 0{,}8 \times \frac{150\,000}{1\,000} + 0{,}2 \times \frac{80\,000}{10\,000} = 121{,}6\ jobs/M€$$

$$Portfolio\ B\text{: } 0{,}1 \times \frac{150\,000}{1\,000} + 0{,}1 \times \frac{80\,000}{10\,000} + 0{,}8 \times \frac{1\,500\,000}{1\,000\,000} = 17\ jobs/M€$$

Interpretation. Although they invest in the same companies, portfolio A has an average job intensity of 121.6

LEVEL 4

Investment-linked exposure

This level attributes a share of the companies' impacts to the fund according to its financing.

The fourth level addresses exposure from the financier's point of view, i.e. how the assets' impact results can be attributed to the fund according to its financing contribution. In other words, we assess what share of each asset's impact accrues to the fund given its financial participation. This is the principle of **vertical attribution**.

Methods used. At fund level, methods are applied according to the type of indicator to aggregate:

- **Absolute impact indicators**: the most common attribution method uses the ratio between the amount invested by the fund in an asset and the total value of that asset. For a listed company, the share of financing held (or the invested amount / EVIC ratio) is used, in line with the PCAF standard. For a project or a green bond, the percentage of the total project budget covered by our investment is used. Applying this ratio attributes to the fund the same proportion of impact as its proportion of financing.
    - *Attribution of positive impacts*: for example, if the fund holds 5% of a company that generates 100,000 tons of avoided CO_2 per year, the fund will be considered to have financed 5,000 tCO_2 avoided that year through this investment. Likewise for indicators such as the number of beneficiaries: 5% of 1,000,000 beneficiaries = 50,000 beneficiaries attributable to the fund.
    - *Attribution of negative impacts (financed carbon footprint)*: the calculation is the same for the carbon footprint — 5% of the company's emissions will be counted as emissions "financed" by the fund. This approach is the one recommended by the PCAF standard to avoid any double counting at the global level: each

portion of a company's emissions can be shared among its various shareholders and lenders, without exceeding 100% in total.

- **Ratio or share indicators**: these indicators do not vary with the amount of financing; at level 4 they are therefore computed and interpreted in the same way as at level 3, through a weighted average based on the companies' portfolio weights.
- **Boolean indicators**: likewise, these indicators are unaffected by financing amounts. At level 4 they therefore keep the same value as observed at level 3, preferably computed as a weighted average, to reflect the assets' exposure.

GENERIC FORMULA

$$Fund\ Exposure = \sum_{i=1}^{n} w_i \times \frac{AUM}{EVIC_i} \times Impact_i$$

where n is the total number of assets in the portfolio, AUM the fund's total assets under management, w_i the weight of asset i (in %), $Impact_i$ the absolute impact of asset i and $EVIC_i$ its Enterprise Value Including Cash.

EXAMPLE 2 — JOBS

Two portfolios are considered and the fund invests €50m in total:

Portfolio A

	Jobs created	EVIC (€m)	Intensity	Weight	Amount invested (€m)	Share of financing	Jobs attributed
Company 1	150,000	1,000	150	80%	40	4%	6,000
Company 2	80,000	10,000	8	20%	10	0.1%	80
Company 3	1,500,000	1,000,000	1.5	0%	—	—	—

Illustrative example for explanatory purposes only. Fictional companies and figures

Portfolio B

	Jobs created	EVIC (€m)	Intensity	Weight	Amount invested (€m)	Share of financing	Jobs attributed
Company 1	150,000	1,000	150	10%	5	0.5%	750
Company 2	80,000	10,000	8	10%	5	0.05%	40
Company 3	1,500,000	1,000,000	1.5	80%	40	0.004%	60

Illustrative example for explanatory purposes only. Fictional companies and figures

Interpretation. Funds A and B are assumed to provide this financing over the whole of period t. Fund A can be attributed 6,080 jobs linked to its investments, and fund B 850 jobs, over period t.

Summary of results across the four levels of the framework

Level	Indicator	Portfolio A	Portfolio B
Level 1 — The assets	Total jobs created	230,000	1,730,000
Level 2 — The asset list	Average of job intensities	20.9	1.7
Level 3 — The portfolio	Portfolio job intensity	121.6	17
Level 4 — The investment	Jobs attributed to the fund	6,080	850

This is a methodological document aimed at clarifying how Mirova takes into account sustainable development issues in the framework of the environmental, social and governance analysis of each sub-sector of activity.

EXAMPLE 1 — CLIMATE
If our fund invests €10m in a solar-energy project whose total cost is €100m, it finances 10% of the project. If this solar farm produces 200 GWh per year and avoids 80,000 tCO_2 per year (by substituting for a coal plant), 8,000 tCO_2 avoided per year can be attributed to the fund (10% of 80,000). Likewise, if the project supplies 50,000 households, 5,000 of those households will be considered supplied thanks to the fund's financing.

The investor's levers for varying its exposure

Once impacts are measured and attributed at fund level, it becomes possible to identify the levers through which the investor can act on the overall impact generated. The equation above makes these levers explicit by decomposing total impact into several distinct terms. They make it possible to analyze, steer and compare impact-investing strategies.

DECOMPOSITION BY LEVER

- **Volume (AUM)**: increase the fund's assets under management.
- **Allocation (w_i)**: increase the financing share of the companies that create more impact.
- **Selection ($Impact_i$ / $EVIC_i$)**: select more impact-intensive companies, creating more impact per million euros of financing.

Note that, used mechanically, the intensity-based lever could encourage selecting overvalued companies with equivalent negative impact or, conversely, favoring undervalued companies with equivalent positive impact. Used pertinently, this lever aims to select companies on the basis of their absolute impacts, made comparable by normalizing by EVIC. The challenge — in a selection logic as in a shareholder-engagement logic — is to act on the numerator of the intensity (the impacts themselves), not on the denominator, by reducing the negative impacts and strengthening the positive impacts generated by the activities financed.

Finally, identifying these three action levers makes it possible to decompose the impact variations observed from one period to the next in impact reports:

- **"Like-for-like" variations**: linked to changes in the impact intensities of companies already in the portfolio, at constant allocation. This perimeter corresponds to changes occurring with an unchanged portfolio structure.
- **Allocation-driven variations**: resulting from weighting and reallocation choices between the portfolio's assets.
- **Fund-size (AUM) variations**: linked to changes in assets under management, independently of the portfolio's relative composition.

IN PRACTICE: WHICH CONSOLIDATION METHOD FOR WHICH INDICATOR?

In practice, indicators are consolidated at portfolio and fund level following two distinct logics, which stem directly from whether or not they depend on the activity volume of the entity analyzed.

Absolute impact indicators (CO_2 emissions avoided, jobs supported, beneficiaries reached, for example) can be attributed to the fund following a vertical-attribution logic, according to its share in the financing of the assets. This is the family that lends itself to measuring the fund's own contribution.

Volume-independent indicators vary neither with company size nor with financing: they reflect a structural characteristic. They therefore do not lend themselves to pro-rata attribution, but remain essential for analyzing the portfolio's composition and the fund's exposure to certain practices. Two sub-cases stand out:

- **ratios** (% of women in top management, % of taxonomy-aligned revenue, ESG scores, for example) are aggregated at portfolio level through weighted averages based on asset weights;
- **boolean indicators** (existence of a diversity policy, environmental certification, for example) can be consolidated following two approaches, chosen according to the objective: a weighted average based on asset weights, which reflects the portfolio's effective exposure to a practice; or a simple average, which expresses the diffusion of a practice among portfolio companies, independently of their weight.

For consistency with the other indicators, we favor the first approach; the second can nonetheless be mobilized when the analytical objective justifies it.

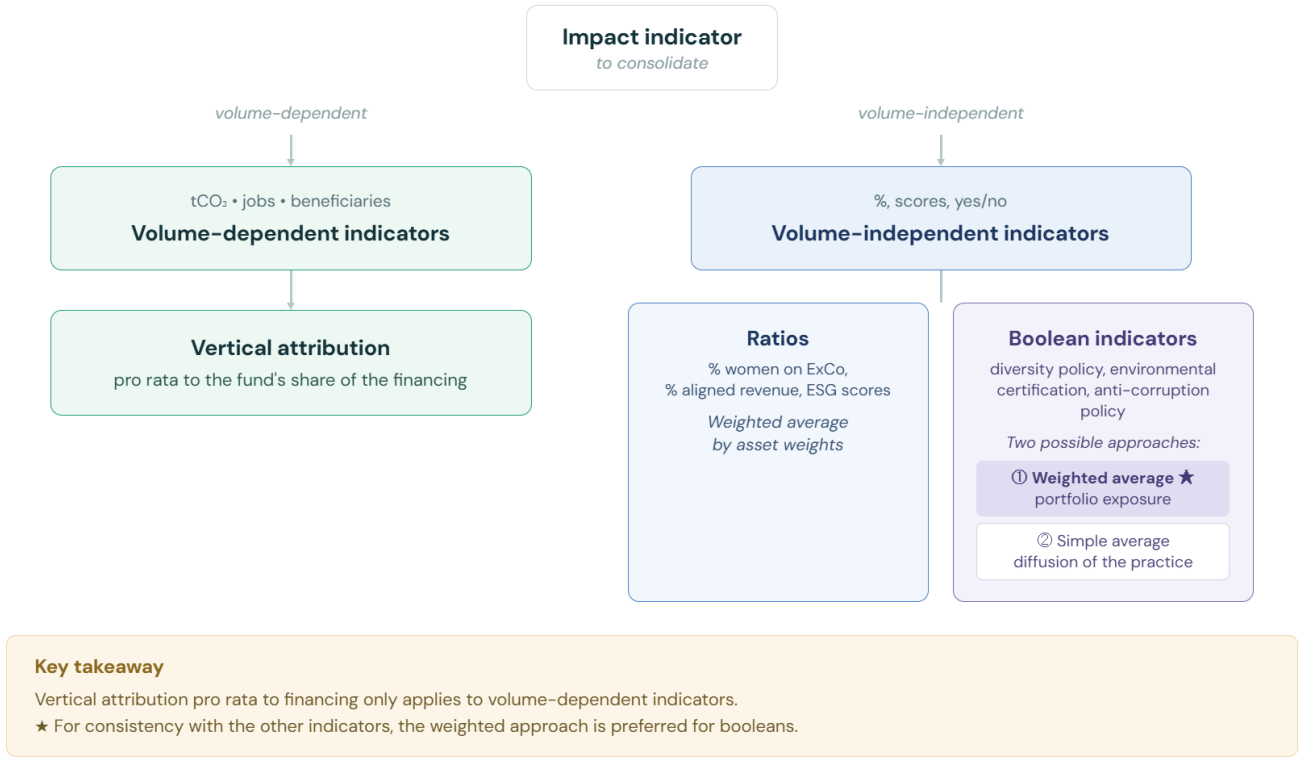


Diagram 3 — Which consolidation method for which indicator?

Overview of consolidation practices

To situate our methodological framework relative to market practice, we benchmarked the consolidation principles applied by other asset managers to their impact indicators. This analysis aims to objectify the diversity of approaches and identify the most widespread practices.

Methodology. The analysis covers 59 asset-management companies. The sample spans six broad categories of investment strategies — carbon funds, other nature-based-solutions funds, funds dedicated to the energy transition in emerging countries, funds dedicated to the energy transition in OECD countries, private-equity and venture-capital funds, and a set of funds with diverse characteristics ("Other") — in order to reflect the plurality of asset classes and impact theses. The analysis was conducted according to the following principles:

- The analysis relies exclusively on publicly available information: impact reports, published methodological documents, institutional presentations and websites. Any information not publicly disclosed was treated as not implemented by the asset manager concerned.
- 2025 impact reports covering 2024 data were favored. Where a 2025 report was not available, the most recently published report was used.

Methodological limitations. Consolidation methodologies are rarely made explicit by asset managers in their publications, which required a significant degree of interpretation in reading the reports. The figures presented below should therefore be read as an order of magnitude of observed practices, not an exact measurement. Moreover, the uneven coverage of the different strategy categories (from 3 to 19 companies depending on the case) calls for caution in interpreting results by category.

Results: application of the consolidation principles

Strategy category	AMs (n)	Vertical / exposure principle applied	Vertical alloc. — carbon	Vertical alloc. — other absolutes	Weighting of ratios	Weighted avg — booleans
Carbon	6	33%	33%	0%	0%	0%
Nature-based solutions	16	25%	13%	19%	6%	0%
Energy transition — emerging countries	3	67%	67%	67%	0%	0%
Energy transition — OECD	19	74%	63%	32%	5%	16%
Private equity & venture capital	10	40%	40%	20%	20%	10%
Other	5	100%	100%	60%	0%	20%
Total	59	53%	46%	27%	7%	8%

Table 1 — Proportion of asset managers applying each of the main principles for consolidating impact indicators at fund level

Two lessons emerge from this analysis:

- Vertical attribution is applied more to carbon-related indicators than to other absolute impact indicators (46% vs 27% on average). This result reflects the greater methodological maturity of carbon-attribution practices, supported by the PCAF framework, while attribution for jobs, beneficiaries or restored hectares remains rarer.
- The weighting of ratios and the consolidation of boolean indicators remain rarely practiced explicitly (7% and 8% of the sample respectively).

Asset managers analyzed: 12Tree, ABC Fund, AGRI3 Fund, Alantra Asset Management, Amazonia Impact Ventures, Andes Amazon Fund (AAF), Ardian x aDryada — Averrhoa Funds, Astanor, Axa, Axa Climate & Biodiversity, BNP AM, Capagro, Citizen Capital, Copenhagen Infrastructure Partners (CIP), Dutch Fund for Climate & Development, EcoEntreprises Fund, Eiffel Investment Group, Energy Impact Partners, Energy Infrastructure Partners (EIP), Equitix, Eurazeo, FMO, FinFund, GenZero, HitecVision, Hummingbirds, Impax New Energy, Karista (Paris), L3F, LGIM NTR, Livelihoods, Marguerite, Moringa PE Fund, New Forests, Nuveen, Omnes, Patrizia, Pentagreen, Prime Capital, Pymwymic, Qualitas Energy, R Green, Removall Carbon, RIVE Private Investments, Robeco, ResponsAbility, Ring Capital, SLM (Silva Europe Fund), Sosteneo, Swen Capital, Taaleri Energia, Terra Bella Colombia Fund, Triodos Energy Transition European Fund, Triodos Emerging Markets Renewable Energy Fund, Triodos Food Transition, Triodos Groen Fonds, Triodos Microfinance Fund, White Summit Capital, &Green Fund.

LEVEL 5

Investor additionality

This level assesses the investor's additionality, i.e. the effects that occurred in its presence and would not have happened in its absence.

The fifth level assesses the additionality of the fund's action, i.e. how the intervention of Mirova and its investors made it possible to obtain additional impacts that would not have occurred otherwise. It is the most qualitative and prospective level, but also the most decisive for judging the fund's true contribution to the transition.

Methods used. Additionality can manifest itself through several levers, which Mirova seeks to document wherever possible. A non-exhaustive list follows:

- **Financial additionality (capital volume)**: the fund finances projects or companies that lacked resources. A simple indicator can be the share of the portfolio invested in primary financing (capital increases, new green bonds, direct infrastructure projects) rather than secondary purchases. The higher this share, the more fresh capital the fund brings into the real economy; it is possible, for example, to state that X% of the portfolio corresponds to new financing of sustainable activity over the year. However, while the share of the portfolio in primary financing is a necessary condition for demonstrating financial additionality, it is not sufficient in itself to prove that the investments made have a significant, measurable impact on the economy. A competitive primary investment may not be considered additional, whereas a primary investment in an impact company facing a capital shortage will be more so. Thus, while the share of primary financing is an interesting proxy for additional impact on the economy, other elements must also be analyzed to fully assess this additionality.

• **Financial additionality (risk)**: even in secondary markets, a fund can take an additional approach by taking risks or positions that others would not have taken. For example, by investing early in an innovative company, the fund can play a pioneering, catalytic role. This role is documented qualitatively (case studies of start-ups supported, etc.) and sometimes quantitatively (e.g. the leverage effect: each euro invested by the fund led to Y euros co-invested by others).

• **Additionality through shareholder engagement**: Mirova actively exercises voting rights and conducts dialogue with companies to positively influence their practices. The impact of these engagements is tracked (number of successful engagements, improvements obtained). For example, if the fund pushed a company to adopt a 1.5 °C-aligned climate strategy, any future emissions reduction linked to that plan could be considered partly the result of this intervention. Quantifying that share precisely is admittedly complex, but the success of influence can be counted as an additional qualitative impact (a change in the company's behaviour attributable to the investor).

• **Additionality through the contribution of expertise to the company**: Mirova's teams can bring technical expertise to the company (on measuring its impact, for example), which can also strengthen its position with other investors. In addition, a Mirova representative sitting on the board can share operational knowledge. Mirova also encourages synergies between entrepreneurs, notably through events such as its CEO Days. This set of initiatives fosters the sharing of knowledge and skills, creating new, strategic resources for companies.

• **Additionality through innovation in the impact-finance sector**: the fund can contribute technical expertise or credibility that fosters the development of impact projects. For example, if Mirova structures a novel financing arrangement (a junior / green debt mix), it opens the way to other similar financings (demonstration effect). This level of additionality is often reflected in Mirova's participation in market-wide initiatives and methodological work (Impact Valuation Hub, France Invest, etc.), which helps move market standards forward for the benefit of all.

• **An explicit theory of change**: more generally, every impact fund should formulate its theory of change, i.e. the causal path linking its investment activities to the impacts sought. This theory of change identifies where additionality lies: for example "by financing under-financed solutions X, we accelerate their deployment relative to the baseline scenario", or "by engaging in dialogue on a given issue, we improve practices beyond what they would have been". Mirova aligns itself with frameworks such as the IFC's Operating Principles for Impact Management (OPIM), which require formulating these hypotheses and verifying them throughout the investment cycle.

EXAMPLE 1 — CLIMATE

Suppose the Mirova fund invested in 2018 in a small sustainable-mobility company at a critical stage (growth-capital injection). At the time, the company might not have been able to raise the necessary funds from conventional investors. By 2024, this company has become a major player that has avoided millions of tons of CO_2 through its solutions. Here, the fund's additionality is measured by the change of scale it enabled: without the initial financing (and any strategic support provided), the company would probably not have reached this scale so quickly, or perhaps at all. Likewise, if the fund was the anchor investor in a €50m green-infrastructure project, subsequently attracting other co-financiers, there was a crowding-in effect: the project could go ahead thanks to the confidence generated by the fund's participation (which goes beyond the mere percentage of financing). Finally, engagement can be illustrated: for example, Mirova reported that three of its portfolio companies adopted an ambitious climate plan following the shareholder dialogue conducted in 2022, which was not planned absent this intervention (an additional change of behaviour).

EXAMPLE 2 — JOBS

By joining the funding round of a company operating in a socially sensitive sector, the Mirova fund contributed its expertise in structuring impact indicators, facilitating the establishment of a monitoring model that had not existed before. Its active engagement in governance and its reporting requirements then helped reassure other impact investors, making it possible to close the project's financing. This catalytic role made it possible to finance poorly covered social needs, in a geography with little coverage.

Two families of methodological approaches

In summary, two broad types of methodological approaches coexist for measuring or estimating the additionality of investment funds, and are set to develop further:

Measurement-based approaches (demonstrating the change generated, without necessarily distinguishing the levers that contributed to it): they consist of comparing the observed situation linked to the investor with the one that would have occurred without it (counterfactual). The objective is to identify whether the results (e.g. changes in a company's CSR strategy, adoption of a low-carbon technology, improvement of social practices) can genuinely be attributed to it.

There are different levels of implementation: in its most simplified, global form, the approach compares the results of a "treated" group with those of a "control" group; in a more advanced version, it also seeks to isolate the effect of certain specific levers deployed by the investor in the "treated" group. This second option provides a better understanding of the processes through which change occurred, but it requires substantial data and resources.

The idea is to approach a "net" estimate of impact, but this approach requires detailed data and sufficient samples, and remains sensitive to selection biases. One notable example is the selection bias of the companies chosen by the investor: the investor picks companies that are likely to carry out an impactful action; it is therefore important to take as the counterfactual scenario companies that are likely to carry out these actions without this investor — not companies that are unlikely to carry them out — in order to isolate the investor's effect alone.

Contribution-based approaches (explaining the sources of the investor's impact, through description and quantitative indicators of the means deployed): here, the aim is not necessarily to measure net impact, but to document in a structured way how the fund contributed to the results.

This involves identifying the additionality levers. Available qualitative and quantitative evidence is then mobilized: the investor's theory of change, ex-ante scoring grids, tracking of engagement actions, or external evaluations. This approach amounts to a demonstration of means: detailing the fund's concrete, differentiating contributions, explaining why they were relevant in the context, and to what extent they probably made the difference.

Where research has already demonstrated and quantified the effect of a specific investor practice (e.g. shareholder dialogue or the supply of patient capital) on company behaviour, the potential effect can then be estimated in other contexts.

Implementing an approach based strictly on the causal measurement of additionality remains complex in practice. Establishing a robust counterfactual, the availability of comparable data and the multiplicity of actors involved often make it difficult to attribute an observed change precisely to a given investor's intervention. It is therefore appropriate to combine these two complementary approaches: mobilizing reasonable counterfactual elements where the data allow (for example by comparing the evolution of ESG indicators in companies engaged by the fund with that observed in a comparable group) and ensuring rigorous traceability of the investor's contribution across its main action levers.

Furthermore, certain market practices seek to integrate additionality into vertical-attribution approaches. Some methodologies propose, for example, adjusting the share of impact attributed to the investor according to the level of risk or the influence of the financial instruments mobilized, applying differentiated weightings by type of capital (e.g. between debt and equity). Other approaches seek to integrate the investor's contribution at an early but decisive stage of a project, by projecting the impacts an investment may generate in the future and computing a discounted impact — a practice observed notably in venture capital. While these approaches reflect a desire to integrate additionality more explicitly into measurement methodologies, they nonetheless raise several methodological challenges, particularly regarding projection assumptions, comparability and the risks of double counting between investors.

DISCUSSION

Limitations and potential biases

While the framework's different levels shed light on how impact is built and how it can be measured, they are also exposed to limitations and biases. This section offers a synthesis of these limitations, illustrated by Diagram 4 below. Some of them cut across several levels and can compound.

Limit / bias ↓ by framework level →	Level 1	Level 2	Level 3	Level 4	Level 5
Quality and reliability of reported data	●	●	●	●	·
Subjective qualitative judgement	●	·	·	·	·
Estimation bias (unavailable data)	●	·	·	·	·
Openness of the asset list (dilution / constraint)	·	●	·	·	·
Heterogeneity of alignment methodologies	·	●	●	·	·
Comparability of data and methodologies	●	●	●	●	·
Valuation and financial-structure bias	·	·	●	●	·
Heterogeneity of financial data (denominator)	·	·	●	●	·
Investor additionality not captured	●	●	●	●	·
Quantifying additionality / double counting	·	·	·	·	●

Diagram 4 — Synthesis of the limitations and biases of impact measurement at each level of the framework

The diagram above offers an overview of the main biases and limitations identified across the framework's levels. We provide more detailed explanations of each below.

Quality and reliability of issuer-reported data: impact measurement relies largely on declarative data provided by issuers, whose quality, coverage and methodologies can vary greatly. Some data, particularly social data, remain partial, and methodological divergences (on avoided emissions, for example) can affect the robustness of the results.

Subjective qualitative judgement: some indicators or assessments rest on expert appraisals. Two positively rated companies do not necessarily have the same exact quantitative impact, as this judgement involves a degree of qualitative appreciation.

Estimation bias: when observed data are unavailable or hard to measure (for biodiversity, for example), assumptions and models may be mobilized. Methodological choices can be more or less conservative, and can thus introduce a gap between estimated impact and real impact.

Investor additionality not captured: levels 1 to 4 of the framework measure the gross impact generated by companies as well as the portfolio's exposure or the financial attribution of impacts, but do not in themselves demonstrate that the investor caused the observed change. They inform ex-ante intention and exposure — i.e. whether the fund invests in assets consistent with its extra-financial objectives — but not the investor's own financial or extra-financial additionality, which requires a specific analysis (level 5). At level 4 in particular, holding 5% of a company does not mean having caused 5% of its emissions reductions or social impacts. This approach implicitly assumes that impact is strictly proportional to financing, whereas real dynamics are often non-linear. For example, some projects have threshold effects: an infrastructure project needs a minimum level of financing to be launched; a fund contributes a minority share of the capital, enabling that critical threshold to be reached. Proportional attribution assigns it a limited fraction of the impact, whereas without that contribution the project would not have gone ahead and no impact would have been generated. Likewise, financial attribution does not capture the catalytic effects of the investment: a capital or debt contribution can reassure other financiers, trigger co-investments or accelerate a project. These leverage effects, though central to assessing additionality, are not visible in a simple rule of three.

Definition of the openness of the asset list: the construction of the list of assets the fund will invest in strongly influences extra-financial results. Too broad a list can dilute impact (presence of neutral or transitioning assets), while too narrow a list can constrain financial diversification.

Heterogeneity of funds' alignment methodologies: two managers may define a "contributing activity" differently, one relying on the EU Taxonomy, the other on a proprietary grid. These differences in methodologies and definitions can blur comparisons between funds.

Comparability of data and methodologies: differences in scope, definitions and calculation methods limit comparability over time and between companies or portfolios. For example, the portfolio's carbon footprint depends on the availability of companies' emissions data (often incomplete for scope 3), and avoided-emissions methodologies are not standardized, which can lead to double counting or uncertainty. This raises a comparability challenge across companies.

Valuation and financial-structure bias: intensity indicators based on a financial unit (tCO_2/€m invested, impact/€m) are sensitive to changes in the company's value and financing structure.

- **Rising equity**: a rise in equity, for example following a revaluation or a new funding round, can lead to a mechanical fall in negative impacts per euro invested, and a decrease in the positive impact attributed to the portfolio, with no change in real physical or social impacts. In listed markets, this phenomenon can create a perverse circularity: the more investors favor a "green" company (pushing up its share price), the lower its unit footprint appears, further reinforcing its appeal, without this reflecting any fall in physical emissions. These intensity indicators must therefore be interpreted with caution.
- **Falling equity**: when the value of equity falls sharply, debt can become the main component of financing. The impacts attributed to lenders can then rise significantly — for negative as well as positive impacts — solely because of the deterioration of equity, and not because of any change in the company's activity or extra-financial performance.
- **Progressive debt repayment**: in the same way, as a loan is progressively repaid, the share of positive (or negative) impact attributed to the financier mechanically decreases, even though the company continues to generate the same volumes of impact.

In all of these situations, the variations observed from one year to the next primarily reflect changes in the financial structure, not the impact actually generated by the activity nor the investor's effective role in creating that impact. It is therefore essential to interpret these indicators by distinguishing financial effects from changes in real impact.

Heterogeneity of the financial data used: in practice, the financial data used in the denominator to normalize impacts can vary. Depending on data availability, the denominator may include equity and debt, or equity only; moreover, the equity retained may be nominal (amounts historically invested) or valued. This heterogeneity raises comparability issues for results at portfolio level and between portfolios.

Difficulty of quantifying additionality and risk of double counting (level 5): level 5 is probably the hardest to quantify in a standardized way, because it rests on counterfactual scenarios ("what would have happened without us?"). The IFD stresses that proving additionality remains very complex and that, for now, an obligation of means rather than results must be accepted, while striving to progress towards more evidence. Moreover, it can be tempting to overstate one's role: all investors will want to

claim credit for a success, hence a risk of double counting additionality. Investors may also be exposed to a cognitive bias of retrospective selection: highlighting the cases where the fund genuinely had a decisive impact, while omitting those where its contribution was marginal. To limit these biases, Mirova strives to document its contribution factually (participation in funding rounds, collective engagement initiatives, etc.) and to have its approach evaluated by third parties where possible. In short, level 5 calls for an accessible, transparent approach: explaining our successes as well as our limitations, without overstatement. It is nonetheless the key to claiming genuine impact: an impact fund should ideally demonstrate that it made a difference to the transition, beyond financing activities already in place.

CONCLUSION

Lessons and avenues for improvement

The framework presented in this document proposes a structured method for representing impact at fund level, distinguishing several levels of analysis and adapting the treatment of indicators to their nature. Three broad types of indicators are thus consolidated differently:

- **Absolute impact indicators** can be attributed to the fund following a vertical-attribution logic, according to its share in the financing of the assets.
- **Ratios** (independent of volumes produced and company size) are aggregated at portfolio level through weighted averages based on asset weights.
- **Boolean indicators** (independent of volumes produced and company size) are also consolidated through weighted averages, to reflect the portfolio's composition and the fund's exposure to certain practices.

This framework does not, however, resolve all the methodological challenges of impact measurement. Several work streams remain open. A first challenge concerns the assessment of investor additionality: while this document clearly distinguishes the portfolio's exposure from the investor's potential contribution, precisely measuring that contribution remains difficult in practice. Further work is needed to better understand additionality and integrate it into attribution methodologies, through approaches shared among investors so as to avoid double-counting risks.

Beyond the attribution questions addressed in this framework, these challenges belong to a broader body of ongoing work on impact measurement in impact investing. This framework is thus also an opportunity to recall that impact measurement remains a methodological field under construction, in which approaches continue to evolve. Several structuring work streams remain open, at different levels of the framework:

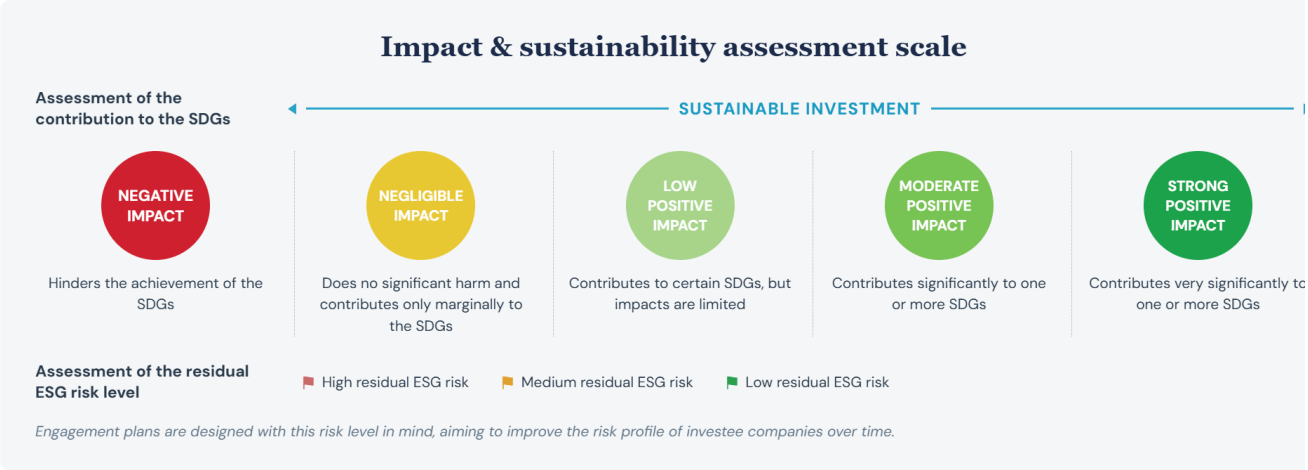
- **Innovating in impact measurement at asset level**: to cover the full range of sustainable-development issues, emerging axes include biodiversity (biodiversity footprint in equivalent hectares, alignment with the UN Global Biodiversity Framework) and strengthening the measurement of social impact, going beyond outputs to better capture outcomes — the changes actually experienced by individuals. In this area, a major challenge is to collect more primary data, beyond estimates or proxies, to verify the effective realization of social impact — which is not automatic once an action is in place

and must be empirically documented. Integrating the just transition, articulating climate and social issues, is also an avenue under development. Existing initiatives — such as the Impact Management Project's impact categories or the biodiversity indices developed by certain data providers — offer avenues for testing new indicators. Finally, participation in initiatives such as the Impact Valuation Hub can, where relevant for an investment strategy, enable the monetization of certain impacts (valuing in euros the social or environmental impact created or avoided).

- **Deepening the horizontal attribution of impact**: beyond vertical attribution among financiers, another research axis concerns the sharing of the change generated among the different companies involved in the same activity. A demanding approach seeks to causally isolate the share of change actually generated by a given activity, mobilizing counterfactuals, but this raises many challenges, and no shared standard of horizontal attribution exists today.
- **Developing the consolidation of heterogeneous indicators at fund level**, particularly for social and biodiversity impacts, which are often highly specific to activities or local contexts: a central difficulty is making measurements and methodologies comparable so that aggregation is consistent.
- **Integrating impact into governance and incentives and making it a steering tool**: to ensure genuine additionality, it is crucial to align internal incentives with impact objectives. Concretely, this can involve including impact indicators in managers' remuneration (e.g. WACI, % of green assets, the portfolio's average impact rating, etc.), on a par with financial indicators. Likewise, strengthening internal impact-monitoring committees and team training will help sustain a culture of extra-financial performance. Mirova, as a mission-driven company, already has provisions in this direction and can serve as an example by closely linking financial success and sustainable impact.

In conclusion, measuring the impact of underlying assets and funds is an essential exercise for steering impact investing and making it credible, but it must always be accompanied by humility and critical thinking. The current framework provides a solid basis for assessing, improving and communicating impact at the level of our funds. The ultimate challenge is to convert these measurements into concrete levers for action: adjusting investment strategies according to results, strengthening our engagements where the indicators reveal gaps, and directing more capital towards the most effective solutions. In this sense, impact measurement — far from being one more reporting constraint — becomes a strategic tool for maximizing our positive contribution in the years to come.

1. Mirova's impact & sustainability assessment scale



2

2. Problematic cases in attributing impact by share of financing

Certain situations make attribution by share of capital (via EVIC, for example) problematic.

A. Zero or negative equity value. When a company has a low or negative enterprise value (EVIC) (debt > assets), the $\frac{Amount\ invested}{EVIC_i}$ ratio becomes inconsistent — even infinite or negative — completely distorting the attribution. Possible solutions:

- Cap or exclude attribution when EVIC falls below a minimum threshold.
- Move up to an aggregate level: attribute on the basis of a revenue multiple, or according to the share of historical capital invested (equity book value).
- A mixed approach: combine several ratios (EVIC, revenue, net assets) to avoid a single point of failure.
- A binary model: in extreme cases, consider that all of the impact is contributed if the financing enabled survival or restructuring (full qualitative — not quantitative — attribution).

B. Massive, sudden dilution. If an investor goes from 10% to 2% of the capital following a funding round, its attributed impact falls artificially, even though real impact has not changed and it historically carried the company. Possible solutions:

- Use the time-weighted average of the stakes held for annual attribution.
- Attribute a historical share of the impact according to the role played in the critical phase (a "cumulative influence" approach).
- Decouple economic attribution from impact attribution: maintain the impact share until a dilution threshold signalling a strategic withdrawal.

[2] Source: Mirova

This is a methodological document aimed at clarifying how Mirova takes into account sustainable development issues in the framework of the environmental, social and governance analysis of each sub-sector of activity.

3. Good practice: temporal consistency between measured impact and holding period

When a fund communicates an impact over several years (e.g. jobs created over 5 years), it must ensure that the companies concerned were actually held over that period. Otherwise, the impact effectively attributable to the fund risks being overstated.

Recommendation. The method depends on the stability of the holding over the period considered. When the share of financing held by the investor in the company remains relatively stable over the year, it is possible in practice to retain a single annual data point, representative of the average situation over the period. Conversely, when that share changes during the year (for example in the event of an investment or reinvestment during the year, dilution of the stake, or a significant change in the company's value affecting the relative share of financing), it is recommended to use average holding weights over the observation period (monthly or quarterly), rather than a snapshot (e.g. at 31/12).

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