



# Who will finance the chemical sector's modernisation?

## Industrial decarbonisation and defossilisation

Brussels, June 2026

### Executive summary

The European chemical sector faces two linked challenges: the need to move away from fossil fuels – both as an energy source and as raw material input – and growing pressure from competitors abroad. Both point the same way: toward significant investment in modernising how chemicals are sourced and produced. Those investments can be categorised into:

- Public funding instruments include grants, research programmes, guarantees and state aid frameworks. These can help de-risk specific projects, catalyse investment, support innovation and enable shared infrastructure.
- Private finance channels include cash generated from companies' operations, finance from banks, and finance raised from investors through capital markets. These channels provide the bulk of industrial finance, especially for capital expenditure in long-term assets such as production plants, equipment and infrastructure.

This paper sets out the roles and relative scale of public funding and private finance, and illustrates how industrial investment is financed in practice through examples from companies active in the European chemical sector. The central question is not only how much investment flows to the sector, but what it builds: the same private finance flows can prolong high-emission, fossil-based assets, or help finance the transition to low-carbon technologies, non-fossil feedstocks and the infrastructure needed for a competitive European chemical sector.

### Why investment flows matter

The chemical sector underpins much of European industry, but it is also one of the largest industrial sources of greenhouse gas emissions and remains heavily dependent on fossil fuels, both for the energy that powers its plants and for the raw material built into many of its products. Meeting climate goals will require deep changes in how chemicals are produced, sourced and used.

At the same time, the sector faces real competitive pressure: demand has weakened and lower-cost producers in other regions have expanded capacity. These pressures are often presented as a trade-off, but over the long term they point in the same direction: Europe's competitiveness will not be secured by prolonging dependence on existing fossil-based production, but by creating clean markets through policy measures, and by investing in the technologies, infrastructure, energy systems and feedstocks needed for production that can remain viable in a low-carbon economy.

Modernisation is therefore both a climate and a competitiveness challenge. Meeting it depends not only on how much investment flows to the sector, but on what that investment builds. Investment can come from both public and private sources, but these play different roles and operate at different scales.

Public funding can help de-risk specific projects, support innovation and enable shared infrastructure, but the larger volumes of capital needed for sector-wide transformation are mobilised through private finance, including companies' own investment budgets, bank lending and capital markets. As Cefic – the trade association representing the European chemical industry – stated, the private sector “will be key to financing the green transition.”<sup>1</sup> A complete picture of investment needs towards chemical sector modernisation therefore requires understanding both the scale and function of public instruments, and the private finance flows that shape where industrial investment actually happens.

## The scale of public and private investment

The EU27 chemical industry recorded €28.4 billion in capital spending in 2024, down slightly from €29.3 billion in 2023, alongside €10.4 billion in research and innovation spending.<sup>2</sup> These are recurring annual investment flows, decided and mobilised largely through companies' own investment planning and private finance channels.

The scale is significant when set against even large EU public funding instruments. The EU Innovation Fund, one of the EU's main instruments for clean industrial technologies, has an estimated €40 billion budget from EU ETS revenues for 2020-2030 across all eligible sectors, with around €15 billion awarded to projects since its launch in 2020.<sup>3</sup> One year of EU27 chemical sector capital spending is therefore equivalent to around 70% of the Fund's entire ten-year budget envelope, even though the Fund covers multiple sectors and supports selected clean technology projects rather than sector-wide investment. By the end of 2024, the portfolio covered 120 ongoing projects with around €7.1 billion in committed Innovation Fund support. However, the total expected capital expenditure of these same 120 projects was around €38.7 billion, more than five times the Fund's committed contribution.<sup>4</sup>

Public instruments also play different roles:

- Grants such as the Innovation Fund help selected clean technology projects move forward by reducing part of the cost or risk.
- Research programmes such as Horizon Europe support knowledge, innovation and demonstration before technologies are commercially mature.
- Guarantees such as InvestEU help mobilise other public and private investment by reducing risk for financial partners.
- State aid frameworks do not provide EU money directly but set the conditions under which Member States can support companies or projects.

Public funding is therefore important, but it should not be understood as one single pot of money for sector-wide modernisation, nor expected to be the main source of investment flows for the European chemical sector.

## Private finance in practice

Large chemical companies finance investment through several channels used in parallel. These include cash generated from their own operations, finance from banks, and finance raised from investors through capital markets. Together, these channels are used to fund capital expenditure, meaning investment in long-term assets such as production plants, equipment, infrastructure and other assets used over several years.

The examples below use group-level figures reported by companies active in the European chemical sector. They are not intended to compare company performance or assess individual investments. Instead, they show how industrial investment is planned, raised and allocated through private finance, including internal cash generation, bank finance, capital markets and dedicated project finance.

## BASF

BASF provides a clear example of the private financing mix. In 2025, the German company generated €5.61 billion in cash flow from operating activities. This means cash generated by the company's normal business activities, and is one source from which investment can be financed. BASF also spent €4.27 billion on property, plant, equipment and intangible assets, which is broadly its capital expenditure on long-term industrial assets.<sup>5</sup>

BASF's investment planning also extends beyond a single year. The company planned around €13 billion in capital expenditure for 2026-2029, with 50% allocated to Europe. This shows that major investment decisions are made at corporate level over multi-year planning cycles.<sup>6</sup>

Beyond internal cash generation, BASF raises external finance through capital markets and banks. It states that corporate bonds form the basis of its medium to long-term debt financing and are issued through a standing €20 billion debt issuance programme. In practical terms, investors provide capital upfront by buying BASF bonds, and BASF repays them over time with interest. BASF also uses a \$12.5 billion commercial paper<sup>i</sup> programme for short-term financing and has a €6 billion syndicated<sup>ii</sup> credit facility until 2030, which it can draw on if needed. To fund the construction of its Zhanjiang Verbund site in China, BASF's subsidiary signed a 40 billion renminbi (equivalent to €5.15 billion) syndicated bank loan facility, of which around €4.2 billion had been used by the end of 2025.<sup>7</sup>

## LyondellBasell

LyondellBasell shows the same pattern from a major petrochemicals and polymers company with significant European operations. In 2025, it generated \$2.3 billion in cash from operating activities and spent \$1.9 billion on capital expenditure.<sup>8</sup>

Beyond internal cash generation, LyondellBasell's public investor materials show access to capital market finance, including a published list of bonds issued in US dollars and euros (\$11.8 billion and €1.0 billion in amounts to be repaid at maturity, as listed at the end of March 2026).<sup>9</sup> The company has also used green bond<sup>iii</sup> financing: in May 2023, it issued a \$500 million bond labelled as green and reported that \$495 million from that bond had been fully allocated by the end of 2024 to projects eligible under its 'Green Financing Framework'. This illustrates the role of bond markets in the financing mix of a petrochemicals and polymers company.<sup>10</sup>

## Evonik

In 2025, Evonik reported €1.44 billion in cash flow from operating activities. In that year, the company also reported €748 million in cash outflows for investments in intangible assets, property, plant and equipment, which is broadly its capital expenditure on long-term industrial assets.<sup>11</sup> In its outlook for

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<sup>i</sup> **Commercial paper** is a short-term, unsecured debt issued by companies to raise money from investors for short-term financing needs. See here: <https://www.sfgate.com/personal-finance/article/commercial-paper-18148541.php>

<sup>ii</sup> **Syndicated** means that the financing is provided by a group of banks or lenders, usually coordinated by one lead bank, rather than by a single lender.

<sup>iii</sup> **Green bonds** are bonds (a company borrows money from investors by issuing a bond and repays that money over time with interest) issued to raise money for projects considered "green", such as renewable energy, energy efficiency, pollution reduction, clean transport, circular economy projects or green buildings. See here: <https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Project-Mapping-June-2021-100621.pdf>

2026, the company expected to maintain cash outflows for investments at around €750 million, broadly in line with 2025.<sup>12</sup>

Beyond internal cash generation, Evonik raises external finance through capital markets and banks. For short-term financing, Evonik uses commercial paper (€80 million reported at the end of 2025). For longer-term funding, Evonik uses bonds, Schuldschein loans<sup>iv</sup> and bank loans, with bonds representing its most important source of financing (€2.44 billion in bonds, including a €500 million green bond issued in January 2025). Separately, Evonik maintains sizeable bank credit facilities as liquidity reserves - backup access to bank finance if needed (€1.75 billion syndicated credit facility and €550 million in bilateral bank credit facilities).<sup>13</sup>

## INEOS Group Holdings S.A.

In 2025, INEOS Group Holdings S.A. reported €1.60 billion in cash flow from operating activities and €2.10 billion in capital expenditure. Most of that capital expenditure was in its O&P (Olefins & Polymers) Europe segment (€1.7 billion) – linked to Project ONE, a new ethane cracker in Antwerp, and turnaround (scheduled maintenance and inspection work during a planned plant shutdown) expenditure at Lavéra, France.<sup>14</sup>

INEOS also shows why large industrial projects often require dedicated external finance. Project ONE provides a clear example of project financing for a petrochemical asset: Project ONE is estimated to represent around €4.9 billion of capital investment in total. Of this, around €3.7 billion had been invested by the end of 2025, with approximately another €1 billion expected in 2026. INEOS states that the project is financed largely through loans backed by the Project ONE assets, alongside equity contributions from the company or its owners.<sup>15</sup>

## What this means

These examples show that the capital for modernisation does not come from one source. Private finance can include companies' own resources, such as cash generated from operations and internal investment budgets, as well as external finance from banks, capital markets and dedicated project finance structures. **Public funding enters this landscape as one tool to support, de-risk or steer specific investments, rather than replacing the wider financing system through which companies already invest.**

In the coming years, chemical companies will continue to make major investment decisions through their own planning cycles, financing strategies and project pipelines. **The decisive question is therefore what those flows of finance are directed toward: extending fossil-based production models, or building the technologies, feedstocks and infrastructure needed to decarbonise and defossilise chemical production for a modern and competitive European chemical sector?**

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<sup>1</sup> Cefic, *Finance and Funding*, September 2024. Available here: <https://cefic.org/policy/finance-and-funding/>

<sup>2</sup> Cefic, *Capital & R&I Spending, Facts & Figures of the European Chemical Industry*, 2025. Available here: <https://cefic.org/facts-and-figures-of-the-european-chemical-industry/capital-ri-spending/>

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<sup>iv</sup> **Schuldschein loans** are privately placed debt instruments common in Germany that act as a faster, less bureaucratic alternative to issuing corporate bonds. See here: [https://www.lbbw.de/services/our-solutions/finance/capital-market-finance/schuldschein\\_aimvd5ucrg\\_e.html](https://www.lbbw.de/services/our-solutions/finance/capital-market-finance/schuldschein_aimvd5ucrg_e.html)

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- <sup>3</sup> European Commission / CINEA, *Commission unlocks €2.7 billion for 54 clean industry projects under the Innovation Fund*, 24 March 2026; see here: [https://cinea.ec.europa.eu/news-events/news/commission-unlocks-eu27-billion-54-clean-industry-projects-under-innovation-fund-2026-03-24\\_en](https://cinea.ec.europa.eu/news-events/news/commission-unlocks-eu27-billion-54-clean-industry-projects-under-innovation-fund-2026-03-24_en)
- <sup>4</sup> European Commission, Directorate-General for Climate Action, *2025 Annual Knowledge Sharing Report of the Innovation Fund: De-risking innovative low-carbon technologies*, July 2025. Available here: <https://op.europa.eu/webpub/clima/innovation-fund-2025/en/>
- <sup>5</sup> BASF, *BASF Report 2025: Statement of Cash Flows*, February 2026. Available here: <https://report.basf.com/2025/en/combined-managements-report/basf-groups-business-year/financial-position/statement-of-cash-flows.html>
- <sup>6</sup> BASF, *BASF Report 2025: Investments*, February 2026. Available here: <https://report.basf.com/2025/en/combined-managements-report/forecast/outlook/investments.html>
- <sup>7</sup> BASF, *BASF Report 2025: Financing Policy and Credit Ratings*, February 2026. Available here: <https://report.basf.com/2025/en/combined-managements-report/basf-groups-business-year/financial-position/financing-policy-and-credit-ratings.html>
- <sup>8</sup> LyondellBasell, *LyondellBasell reports 2025 earnings*, January 2026. Available here: <https://www.lyondellbasell.com/en/who-we-are/updates-events/corporate--financial-news/lyondellbasell-reports-2025-earnings/>
- <sup>9</sup> LyondellBasell, *Bond information*, data as of 31 March 2026. Available here: <https://investors.lyondellbasell.com/stock-info/bond-information/default.aspx>
- <sup>10</sup> LyondellBasell, *2024 Green Bond Report*. Available here: [https://s204.q4cdn.com/455115734/files/doc\\_financials/2024\\_green\\_bond\\_report.pdf](https://s204.q4cdn.com/455115734/files/doc_financials/2024_green_bond_report.pdf)
- <sup>11</sup> Evonik, *Financial and Sustainability Report 2025*, p. 30, Cash flow statement. Available here: [https://www.evonik.com/content/dam/evonik/documents/Evonik\\_Financial\\_and\\_Sustainability\\_Report\\_2025.pdf.coredownload.pdf](https://www.evonik.com/content/dam/evonik/documents/Evonik_Financial_and_Sustainability_Report_2025.pdf.coredownload.pdf)
- <sup>12</sup> Evonik, *Financial and Sustainability Report 2025*, p. 58, Report on expected developments, Financing and investments. Available here: [https://www.evonik.com/content/dam/evonik/documents/Evonik\\_Financial\\_and\\_Sustainability\\_Report\\_2025.pdf.coredownload.pdf](https://www.evonik.com/content/dam/evonik/documents/Evonik_Financial_and_Sustainability_Report_2025.pdf.coredownload.pdf)
- <sup>13</sup> Evonik, *Financial and Sustainability Report 2025*, pp. 31-32, Financial condition, Net financial debt, Bonds as central financing instrument and Liquidity position remains strong; and p. 257, Notes, Payments for non-derivative financial instruments by remaining maturity. Available here: [https://www.evonik.com/content/dam/evonik/documents/Evonik\\_Financial\\_and\\_Sustainability\\_Report\\_2025.pdf.coredownload.pdf](https://www.evonik.com/content/dam/evonik/documents/Evonik_Financial_and_Sustainability_Report_2025.pdf.coredownload.pdf)
- <sup>14</sup> INEOS Group Holdings S.A., *2025 Annual Report*, pp. 67-68, Capital Expenditures and Cash Flows. Available here: <https://www.ineos.com/globalassets/investor-relations/public/annual-reports/2025-ineos-group-holdings-s.a.-annual-report---1.pdf>
- <sup>15</sup> INEOS Group Holdings S.A., *2025 Annual Report*, p. 7, Certain Definitions and Presentation of Financial and Other Information, definition of "Project ONE Facilities"; and p. 101, Project ONE. Available here: <https://www.ineos.com/globalassets/investor-relations/public/annual-reports/2025-ineos-group-holdings-s.a.-annual-report---1.pdf>