# Deep Pockets, Dirty Profits:

## How Banks and Investors Are Financing the Global Petrochemical Industry

CIEL CENTER for INTERNATIONAL ENVIRONMENTAL LAW

# About CIEL

Founded in 1989, the Center for International Environmental Law (CIEL) uses the power of law to protect the environment, promote human rights, and ensure a just and sustainable society. CIEL is dedicated to advocacy in the global public interest through legal counsel, policy research, analysis, education, training, and capacity building.

# Acknowledgements

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Please send comments or questions to info@ciel.org to be sure of a reply.

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# Overview

Petrochemicals have become the fossil fuel industry's lifeline and the primary driver of oil demand growth.[1] The fossil fuel industry, and the banks that finance it, are investing in petrochemical production — threatening further lock-in precisely at the moment the world is trying to move away from fossil fuels.

Globally, fossil fuel activities face increasing scrutiny and restrictions, bolstered by courts[2] citing unequivocal scientific evidence[3] that a rapid phaseout is essential to meet climate goals and protect human rights.[4] However, petrochemical production continues to attract substantial capital, in large part because it is not always explicitly covered by fossil fuel exclusion or divestment policies. The petrochemical sector remains comparatively underexamined and certainly under less scrutiny as a target for global bank and investor financing. Despite growing recognition of the industry's health,[5] climate, and environmental justice harms worldwide,[6] major global banks and investors, including some of the largest pension funds, continue to provide significant financial backing to petrochemical companies.

Global petrochemical expansion would be impossible without financial institutions continuing to invest and underwrite the industry. This report builds on research from the US Toxic Finance report (released in March 2026 by the Center for International Environmental Law, Break Free from Plastic US, Friends of the Earth US, Gulf South Fossil Finance Hub, Texas Campaign for the Environment, and The People Over Petro Coalition) by examining how capital is allocated by major banks, investors, and asset managers to the world's top fifteen petrochemical companies (as determined by the 2024 ranking, which reflects 2023 chemical sales). By tracing the financial flows that enable these corporations to sustain or expand production and construct new facilities across multiple regions, this report exposes who is behind the next generation of fossil-based infrastructure — and what is at stake for communities, the climate, and the global financial system.

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TotalEnergies Antwerp Platform located in the Port of Antwerp, Belgium
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## Key Findings

Our findings show that significant capital has been directed towards petrochemicals, supported by sustained and continuous financing from some of the world's most influential banks and investors — some of which have public commitments to align their portfolios with climate goals.

### 1. Global banks have channeled over half a trillion dollars into the top fifteen petrochemical companies (by sales) since 2019.

Between January 2019 and June 2025, the top fifteen global petrochemical companies received a combined US$590.8 billion in sustained financing for their total business operations from 240 major global banks, helping enable petrochemicals to remain a core growth segment of the fossil fuel industry.

Financing was split almost evenly between loans and underwriting, with more than US$292.5 billion in loans (49.5 percent) and US$298.6 billion (50.5 percent) in underwriting, predominantly through bond issuance. While the total financing reflects all identified lending and underwriting to these companies across their global operations (not just for their petrochemical arm), this level of capital demonstrates that petrochemicals are not a marginal nor isolated activity in bank portfolios, but a continual destination for bank financing, even as the industry faces structural problems such as oversupply, collapsing profit margins,[7] and fierce global competition.[8]

**2. Over just six years (2019–2025), twenty global banks alone provided US$389.6 billion in financing to the world's leading fifteen petrochemical companies, evidence of sustained and long-term institutional commitment from the banking sector.**

Of this total, more than US$199.5 billion was provided through loans, accounting for approximately 51.2 percent of total financing, while underwriting contributed US$190.0 billion, representing about 48.8 percent. The allocation of bank financing reflects banks' support for backing large infrastructure projects that will operate for decades to come, helping to sustain and possibly expand petrochemical production capacity and locking in emissions and fossil fuel demand.

**3. The financing of petrochemical companies is highly concentrated among a relatively small number of global banks, amplifying both accountability and systemic risk.**

From 2019 to 2025, those same twenty major global banks provided over US$162.8 billion to the top fifteen petrochemical companies specifically for the adjusted petrochemical share of their overall corporate activities. This includes a combined US$101.0 billion in loans and an additional US$61.8 billion in underwriting. This limited group of globally significant financial institutions is playing a decisive role in shaping the future trajectory of the petrochemical sector. This level of investment highlights the depth of institutional backing behind the fifteen largest (per sales) petrochemical companies during a period of increasing climate-related financial risk. Banks in some regions, particularly Europe,[9] continue to factor climate risks into investment decisions. However, banks in other contexts, such as the US — where environmental policy rollbacks have reduced regulatory pressure,[10] and banks have recently stepped back from their climate commitments[11] — continue to see strong financial backing for petrochemical expansion. These patterns show the challenges of aligning finance with an equitable phaseout of fossil fuel production and use to stay below 1.5˚C of warming.[12]

**4. Financing is highly concentrated among major banks in the US, Japan, China, Germany, and the United Kingdom (UK).**

The banks driving this financing are not fringe institutions; rather, they are some of the world's most systemically significant financial players. The top financiers include Citigroup (US),[13] Bank of America (US),[14] Mizuho Financial (Japan),[15] JPMorgan Chase (US),[16] HSBC (UK),[17] Bank of China (China), Deutsche Bank (Germany),[18] and Barclays (UK).[19] This concentration highlights the central role of global systemically important banks (G-SIBs)[20] in driving the petrochemical industry and its expansion.

**5. US banks dominate the lending space, while Asian banks provide a balanced mix of lending and underwriting, and European banks remain major underwriters.**

US banks are leading the ranks with Citigroup and Bank of America as the largest loan providers. Japanese and Chinese banks contribute both lending and underwriting, while European banks — including HSBC, BNP Paribas, Barclays, and Société Générale — remain significant underwriters despite the European Union (EU)'s climate-risk disclosure rules[21] and emerging regulatory scrutiny.

**6. Between 2019 and 2025, the top fifteen global petrochemical companies received US$251.9 billion in financing attributable to their petrochemical activities (adjusted).**

Of the US$251.9 billion in total financing attributable specifically to petrochemical activities, US$144.3 billion (57.3 percent) came through loans and US$107.6 billion (42.7 percent) through underwriting.

Some of this investment is driven towards integrated oil and gas corporations,[22] who all have significant petrochemical divisions. These fossil fuel companies are increasingly relying on petrochemical growth to offset declining demand for oil in other sectors, such as transport fuels.[23] However, this strategy depends on sustained high growth in petrochemical demand and carries significant risks of overinvestment and stranded assets in an increasingly oversupplied market.[24]

**7. Citigroup has ranked among the top five petrochemical financiers every single year since 2019.**

Citigroup provided US$17.0 billion in loans and underwriting services to the top fifteen global petrochemical companies between January 2019 and June 2025 — ranking in the top five every single year across the entire period examined in this brief. This shows a sustained, year-on-year institutional commitment to an industry at the heart of fossil fuel expansion, throughout a period in which Citigroup has simultaneously made prominent public climate commitments, which include its Sustainable Finance Framework.[25]

**8. Institutional investors hold nearly US$146.6 billion in exposure to the top fifteen petrochemical companies.**

As of September 2025, major institutional investors held nearly US$146.6 billion in shareholdings and bondholdings of the top fifteen global petrochemical companies specifically attributable to their petrochemical activities, exposing the large financial investment in the sector.

## 9. Leading global public pension funds — managing the retirement savings of millions of people — are among the top twenty investors of the fifteen top petrochemical companies.

Despite Environmental, Social, and Governance (ESG) and climate commitments, both Norway's Government Pension Fund Global (GPFG)[26] and Japan's Government Pension Investment Fund (GPIF)[27] remain heavily exposed and hold investments in petrochemical giants. This reveals a stark gap between climate commitments and actual investment practices, while channeling workers' and retirees' savings into increasingly risky, carbon-intensive financial products.

## 10. US institutional investors dominate the global landscape, with sixteen out of the top twenty investors based in the US.

Unsurprisingly, the world's largest asset managers lead the charge. Vanguard, BlackRock, State Street, Capital Group, and Geode Capital — all headquartered in the United States — collectively hold US$53.4 billion, more than 1.5 times the combined holdings of the remaining fifteen investors. Vanguard alone exceeds the bottom ten investors combined. This geographical concentration reveals a massive imbalance, with US investors (and banks) serving as the central engine of global petrochemical finance.

The findings presented in this brief should be read as conservative estimates of the full scale of global petrochemical financing due to several limitations in the methodology. Additional detail on these constraints is provided in the limitations section.

An ExxonMobil integrated refining and petrochemical complex, Louisiana, US

Fire on site at Sinopec Shanghai Petrochemical Co., Ltd's ethylene glycol plant in Shanghai, China
© IMAGO/Fang Zhe - Alamy

# Introduction

Petrochemicals are fossil fuel–derived substances used in plastics, fertilizers, and other synthetic materials and substances.[28] Their production relies heavily on fossil fuels, both as a raw material and as an energy source, consuming approximately 14 percent of global oil and 8 percent of global fossil gas in 2018, making petrochemicals the industrial sector with the highest energy demand.[29] Petrochemical feedstocks' share of total oil consumption is expected to rise from 15.8 percent in 2024 to 17.4 percent by 2030.[30] Coal is also coming back as an increasingly significant feedstock for petrochemical production.[31] This trend might complicate efforts to reduce long-term coal dependence[32] by creating new industrial demand pathways for coal, particularly in China and other parts of Asia.[33] In 2024, China (the world's largest coal consumer) converted an estimated 7 percent of all coal into chemicals. Recent reporting also identified forty-seven newly planned coal-to-chemical plants globally, with twenty-one announced or under development in China, followed by India with fourteen projects in the pipeline.[34] The emissions from manufacturing petrochemicals are estimated to have reached 1.9 billion metric tons of carbon dioxide equivalent emissions ($CO_2e$ (±0.6)) in 2020.[35] The sector is on course to become one of the largest sources of demand for oil over the next two decades, outpacing demand for trucks, aviation, and shipping.[36]

Despite this scale, petrochemicals remain one of the most overlooked contributors to the climate crisis and are described as a key "blind spot" of the energy system.[37] The Center for International Environmental Law (CIEL)'s assessment of divestment and transition frameworks suggests that petrochemicals have largely fallen outside their scope.[38] Overall, finance for petrochemicals has remained critically understudied compared to finance for fossil fuels.[39] At the same time, the fossil fuel industry has turned to petrochemicals as a deliberate growth strategy, driving a major buildout of plastic and petrochemical

production.[40] This global expansion of production capacity supports the ongoing viability of oil, gas, and coal, thereby incentivizing further fossil fuel extraction. This expansion poses severe risks to the environment, the climate, and public health.[41]

Furthermore, petrochemical facilities are often located in low-income, marginalized communities that have historically already faced elevated exposure to toxic chemicals and environmental degradation.[42] The expansion of the petrochemical industry is therefore not only a climate issue but an environmental justice issue that leaves these communities bearing the costs. Although the financial sector could play a pivotal role in curbing this harm,[43] without greater inclusion in transition and fossil fuel divestment policies, capital flows to the petrochemical sector are likely to remain largely unaddressed.

The scale of capital reaching the petrochemical sector is significant. While the United States (US) accounts for a large share of new petrochemical expansion,[44] the industry's growth is global — driven by a concentrated flow of capital from international banks and investors. The findings in this brief highlight the scale of bank financing flowing into the petrochemical sector and its expansion. Much of this capital is potentially directed at producing increasing amounts of plastic and fossil ammonia[45] despite clear evidence of various structural issues such as oversupply, overcapacity (whereby the industry produces more than there is market demand for), weak demand growth, and mounting pressure related to the industry's environmental costs.[46] The scale of financing documented in this brief is enabling projects that will lock in decades of greenhouse gas (GHG) emissions, toxic pollution, and hazardous waste, further exacerbating existing economic vulnerabilities. The financial institutions backing the petrochemical sector are not passive: they are active participants in an industry that directly undermines the move away from fossil fuels.

Furthermore, the US-Israel war on Iran, and the subsequent closure of the Strait of Hormuz, through which approximately 25 percent of the world's seaborne oil trade[47] and 19 percent of global liquified natural gas (LNG) normally transits, has further exacerbated the instability of the petrochemical industry.[48] The conflict has disrupted fossil fuel extraction and petrochemical production across the Middle East,[49] sending ripple effects through global supply chains.[50] Oil and LNG are not the only commodities affected, with chemicals used in fossil fertilizers also being disrupted, risking food price inflation across the globe as agricultural systems are yet to decouple[51] from fossil-based inputs.[52] This is just the latest conflict to further demonstrate that such a high reliance on fossil fuels across whole supply chains will continue to leave economies and societies exposed to extremely volatile markets.[53] For investors, this is yet another reminder that the sector is a structurally fragile, geopolitically exposed, and increasingly risky investment.

## Scope and Definitions

The global expansion of the petrochemical industry would not be possible without substantial ongoing funding. This brief examines the capital flows from banks and investors to the top fifteen global petrochemical companies, revealing who the largest financiers supporting the expansion of fossil-fuel-based infrastructure are.

The financial research underpinning this brief was conducted by Profundo BV, which analyzes the capital flows from both banks and investors over recent years. The bank-focused research covers the period from January 2019 to June 2025 and includes lending, underwriting, bond and share issuance, project and corporate finance, as well as bilateral and syndicated loans. The investor-focused research examines holdings of both stocks and bonds as of September 2025. The analysis draws on a range of publicly available financial data and subscription-based sources,

including financial databases, a project finance database, and company disclosures, such as annual, interim, and quarterly reports. Additional sources used include company registry filings, media reporting, and analyst reports.

## Limitations

While this brief provides a global overview of financial flows into the petrochemical industry, the availability and transparency of financial data vary significantly by region, affecting how clearly financing patterns can be identified and compared. Gaps in the dataset reflect limitations in public disclosure and investment transparency, particularly where complex cross-ownership structures between banks and industry exist, or where financing occurs through less transparent channels, obscuring who is ultimately funding the petrochemical sector. For example, Chinese banks and investors are often underrepresented — and therefore underestimated — in international financial datasets due to limited public disclosure, differences in reporting standards, and restricted access to domestic financial information.[54] In Japan, data is more accessible but remains entangled by a distinct system of cross-shareholding, known as *Kabushiki mochiai*, in which banks and industrial companies routinely hold equity stakes in one another, including in the companies they finance.[55] While the practice of cross-shareholding in Japan has been gradually winding down,[56] where in place, it continues to blur the ultimate source of capital, making it harder to show petrochemical-specific exposure. Similar challenges arise in areas where weaker disclosure requirements or financing routed through state-owned institutions take place.

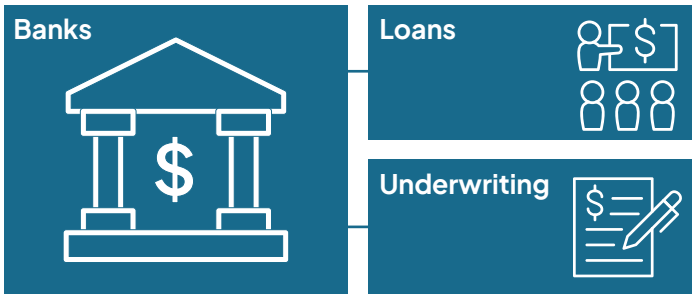
A further limitation applies specifically to the bondholder data. Investor holdings disclosures are drawn primarily from jurisdictions where regulatory thresholds require declaration above a certain ownership level. This means a significant portion of bondholders is not captured in the dataset, as bond ownership is structurally less transparent than equity ownership. The figures presented should therefore be read as a partial picture of total bondholder exposure, and the data cannot support conclusive findings about the relative scale of debt versus equity financing across the companies analyzed. The absence of bondholder data from this dataset does not indicate a lack of exposure; it may simply reflect a lack of public disclosure. Additionally, all bonds and shareholdings are subject to constant change, and positions identified during this research may have since been sold or restructured.

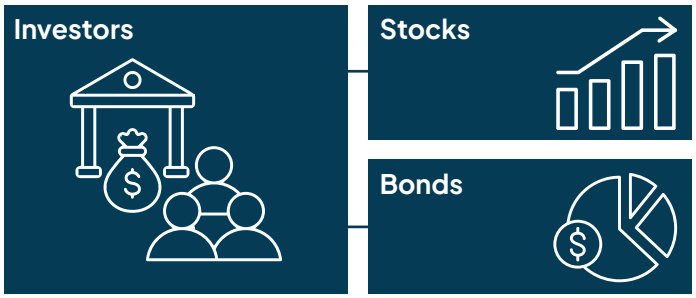
As for the companies analyzed, many operate across multiple sectors and regions. To account for and understand the portion of each company's total business that relates specifically to petrochemicals, we have applied segment adjusters. This allows us to determine how much of the financing a company receives is attributable to its petrochemical operations, rather than to other parts of the business. Details of all adjustments made to the data are explained in the overall methodology[57] for both the US Toxic Report and this global brief.

Taken together, these limitations mean the figures in this brief should be read as conservative estimates, not a comprehensive account of all financing linked to petrochemicals.

This brief analyzes the two main financial pillars currently funding the petrochemical industry: **banks and investors**. Banks provide essential access to capital through loans and by underwriting new bond and equity issuances. Investors, in turn, purchase these securities and hold portions of corporate **debt (money that must be repaid with interest)** and **equity (ownership or stake in a company in exchange for funding)** in those companies, supplying the petrochemical industry with funds today in exchange for the prospect of future returns.

## Figure 1: Types of Finance




### Banks

Banks help petrochemical companies secure the funds they need to run their business and build new projects. They do this in two main ways:

**Loans**

Banks lend companies money that must be repaid over time with interest — much like a home mortgage or car loan. Banks also offer lines of credit that companies can use when needed, similar to a credit card.

**Underwriting**

Banks help companies raise money by organizing and managing the sale of stocks and bonds to investors. In underwriting deals, banks may commit to buying some or all of the stocks or bonds at an agreed price, or they may simply help sell them to investors. In return, banks earn fees for arranging and carrying out the sale or earn profits from reselling the stocks or bonds.[58]

### Investors

Investors provide longer-term funding by buying the stocks and bonds that companies issue. In return, they expect to earn money over time from those investments. Investors can include large institutional actors such as pension funds, asset managers, insurance companies, mutual funds, and hedge funds, as well as individual investors. These entities invest money on their own behalf or on behalf of others (such as workers, retirees, or clients).

**Stocks**

When investors buy stock, they are buying a small ownership or stake in a company. This money is not repaid like a loan. Instead, investors make money if the company grows in value or pays out profits. Stock ownership can also give investors some influence over company decisions and participation in Annual General Meetings (AGMs).

**Bonds**

Bonds are another way companies borrow money. Instead of borrowing from a single bank, the company breaks the loan into many small pieces and sells them to investors. The company (the issuer) must repay the full amount on a specified date (maturity date) and make regular interest payments (coupon payments) along the way. Investors can also buy and sell bonds in the secondary market after they are issued. Companies have the ability to issue bonds in order to borrow money to finance general operations and capital-intensive projects, and to refinance existing debt.[59]

For the full detailed methodology, please refer to the US Toxic Finance Report's methodology annex.[60]

# The World's Top Petrochemical Companies

Many of the world's largest chemical producers have significant petrochemical operations, and petrochemicals represent a major segment of the global chemical industry. To identify the world's largest petrochemical producers, we drew on Chemical & Engineering News' Global Top Fifty ranking for 2024 and focused on the top fifteen chemical companies.[61] This dataset provides a valuable snapshot of the largest and most influential chemical producers, illustrating how major firms and the industry as a whole are operating and adjusting to shifting market conditions.

The ranking is determined by the most recent full-year chemical sales, meaning the 2024 edition reflects companies' 2023 sales. Together, the top global fifteen companies generated a combined **US$571.5 billion in sales**. Based on this methodology, the following companies appear in the top global fifteen positions in the global top fifty, presented here in the order in which they appear in the ranking: **BASF, Sinopec, Dow, LG Chem, PetroChina, ExxonMobil, SABIC, LyondellBasell, Formosa Plastics, Linde, INEOS, Air Liquide, Syngenta, Rongsheng,** and **Mitsubishi Chemical Group**.[62]

**Table 1. Top Fifteen Global Petrochemical Companies (2024)[63]**

| Rank | Petrochemical Company | Headquarters | Sales |
|---|---|---|---|
| 1 | BASF | Germany | $74.5 B |
| 2 | Sinopec | China | $58.1B |
| 3 | Dow | US | $44.6 B |
| 4 | LG Chem | South Korea | $42.3 B |
| 5 | PetroChina | China | $40.9 B |
| 6 | ExxonMobil | US | $40.7 B |
| 7 | SABIC | Saudi Arabia | $37.7 B |
| 8 | LyondellBasell | US | $31.9 B |
| 9 | Formosa Plastics | Taiwan | $31.1 B |
| 10 | Linde | UK | $30.7 B |
| 11 | INEOS | UK | $29.6 B |
| 12 | Air Liquide | France | $29.4 B |
| 13 | Syngenta | Switzerland | $26.8 B |
| 14 | Rongsheng | China | $26.8 B |
| 15 | Mitsubishi Chemical Group | Japan | $26.4 B |
| | | TOTAL | $571.5 B |

While all these companies operate within the petrochemicals sector, their level of plastics exposure, revenue composition, and market share vary considerably. Among the top fifteen companies, the extent of involvement in plastics production, chemicals, and fossil fertilizers ranges from solely plastics-focused producers to large, diversified conglomerates.

Dow,[64] LyondellBasell,[65] and Formosa Plastics[66] have large segments of their business concentrated on plastics.[i] For all three, polyolefins and related derivatives — polyethylene (PE), polypropylene (PP), and polyvinyl chloride (PVC) — account for a significant proportion of sales. SABIC is also heavily plastics-oriented, particularly in polyolefins, while also maintaining a fertilizers business through SABIC Agri-Nutrients.[67] INEOS has a diversified portfolio but retains a strong base in plastics and olefins.[68] Sinopec[69] and Rongsheng[70] are large Chinese producers who have a variety of products among their portfolios, including polyolefins, synthetic resins, and rubber.

BASF,[71] LG Chem,[72] and ExxonMobil,[73] have diversified portfolios but still generate a significant share of revenues from plastics and related petrochemical products. For PetroChina[74] and Mitsubishi Chemical Group,[75] which operate across multiple business segments, petrochemical production represents only a part of their overall business compared to more plastics-concentrated firms.

In contrast, Linde[76] and Air Liquide[77] primarily operate in industrial gases critical for petrochemical applications (e.g., oxygen, nitrogen, hydrogen, carbon dioxide ($CO_2$), with ammonia also included in their portfolios.

Syngenta[78] is primarily an agrochemical and seeds company that relies on petrochemical-derived inputs in the production of its herbicides, fungicides, and insecticides. This shows that petrochemical dependency extends into the food system through agrochemicals, not just through plastics.

## Regional Concentration of Petrochemical Power

Based on the top fifteen global petrochemical companies, we can examine where global petrochemical production is headquartered. East Asia dominates, with six companies in the region (China, Taiwan, Japan, and South Korea). Europe remains significant, with five of the top fifteen located there (Germany, France, Switzerland, and the UK). North America, represented by the US, hosts three companies, including one in the top three. West Asia is represented by a single company headquartered in Saudi Arabia.

Although this table does not show where petrochemical production physically occurs, it reveals where corporate power and financial gains from the industry are concentrated. China hosts an increasing share of the world's petrochemical operations, with a wave of new petrochemical plants that is putting pressure on other producing nations that are already struggling with oversupply.[79]

i The ranking used for this report looks at sales from 2023. The analysis of each company's business segments uses more recent information from 2024 or 2025.

Petrochemical facility in Louisiana, US
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# Global Toxic Banks

Between January 2019 and June 2025, 240 global banks provided more than **US$590.8 billion** in financing to the fifteen largest petrochemical companies worldwide. This total reflects all identified lending and underwriting to these companies across their global operations, not just for their petrochemical arm.

Financing was split almost evenly between loans and underwriting. Banks provided more than **US$292.5 billion in loans (49.5 percent of total financing)**, while underwriting contributed **US$298.6 billion (50.5 percent of total financing)**,[ii] more predominantly through bond issuance rather than equity issuance. These figures are important, as they illustrate the extent to which the top fifteen global petrochemical companies have access to both credit and debt markets, enabling them to sustain their operations and potentially fund expansion plans.
When looking specifically at the adjusted financing segment attributable to just the petrochemicals operations sector of these companies (see Methodology annex), between January 2019 and June 2025, the top fifteen global petrochemical companies received **US$251.9 billion**. Loans accounted for **US$144.3 billion (57.3 percent)** and underwriting for **US$107.6 billion (42.7 percent)**.
The scale of financial flows into the petrochemical industry is substantial, yet CIEL's assessment suggests that the financiers of the petrochemical industry so far may have received less scrutiny than those financing the fossil fuel sector, especially when considering the impacts of petrochemical pollution. In 2024 alone, the world's sixty-five largest banks provided **US$869**

ii All percentages presented are rounded to one decimal place from the full figures in the underlying dataset.

**billion** in financing to the fossil fuel sector.[80] By comparison, that same year, **US$95.5 billion** was supplied by 148 banks to just the top fifteen petrochemical companies alone. While appearing smaller than the total investment into fossil fuels, it is significant to note that nearly US$100 billion went to just fifteen petrochemical companies, and thus it is likely that bank financing across the entire global petrochemical sector is significantly greater. Despite the scale of these flows, the banks and investors sustaining the industry's expansion may not be facing the level of regulatory pressure or scrutiny that their exposure might warrant.

## The Financial Risks of Petrochemical Investments

The scale of investment flowing into the petrochemical sector sits in growing tension with the sector's financial fundamentals. The financial risks of investing in petrochemicals are already materializing, and credit rating agencies have been taking note. Several of the top fifteen global petrochemical companies have seen their bonds downgraded by major credit rating agencies in recent years, reflecting mounting concerns about oversupply, overcapacity, and the potential inability of companies to repay their debts.[81] While these downgrades signal that investment in petrochemical companies carries heightened risk, capital continues to flow into the sector. For example, INEOS, a privately owned company with limited obligations for disclosure and transparency,[82] recently faced successive credit downgrades — an imminent signal of growing doubts over its financial stability, ability to manage rising debt, and poor operational performance.[83] Despite these risks, global investors, such as pension funds, have continued to invest millions of dollars in this company. INEOS's reliance on fossil gas feedstocks,[84] carbon-intensive operations,[85] and aggressive growth plans[86] might be in direct conflict with the environmental policies these pension funds claim to support.[87] This disconnect has serious implications for the millions of ordinary people whose retirement savings are invested in such companies through their pension funds. When credit rating agencies downgrade a company's bonds, the value of those bonds falls and the risk profile of holding them rises. Pension fund beneficiaries, which include workers and retirees, are therefore being exposed to increasing financial risk in a sector that is simultaneously facing structural decline, growing legal liability,[88] and accelerating climate-related losses.[89]

## The Global Twenty Most Toxic Banks

A small group of banks is responsible for financing the top fifteen global petrochemical companies, with just twenty banks providing **US$389.6 billion (65.9 percent)** of all identified financing between January 2019 and June 2025. Of this total, more than **US$199.5 billion** was provided through loans, accounting for **approximately 51.2 percent** of these twenty banks' financing, while underwriting contributed **US$190.0 billion**, representing about **48.8 percent**.

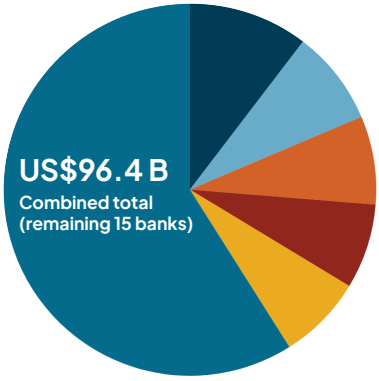
Of the total adjusted financing segment attributable to just the petrochemicals operations of these fifteen companies (**US$251.9 billion**), twenty global banks provided an estimated **US$162.8 billion**, which represents about **64.6 percent of all identified petrochemical financing**. This includes approximately **US$101.0 billion** in loans and **US$61.8 billion** in underwriting. The distinct split between loans and underwriting also shows that these companies rely heavily on loans as their preferred financing method.

While loans represent the dominant financing method for petrochemical-attributed financing among these twenty banks, the role of bond underwriting remains significant. The use of bonds for petrochemical financing reflects a broader trend, similar to what is happening across the fossil fuel sector: the bond market has increasingly become the underwriting avenue for companies seeking to access funds.[90] Some of the largest coal expansionist companies have raised 2.5 times more capital from bonds than

from loans,[91] because they can often borrow much larger sums at lower interest rates. Bonds also typically have fewer operational restrictions compared to bank loans and don't involve handing over any control of the company to investors, as with shareholdings.[92] Overall, around half of all fossil fuel financing now comes from corporate bonds in the primary market, highlighting the bond market's central role in sustaining fossil fuel growth and expansion.[93]

Just **five banks**, including Citigroup (US), Bank of America (US), Mizuho Financial (Japan), JP-Morgan Chase (US), and HSBC (UK), supplied just over a quarter of all identified financing for petrochemicals. Citigroup led with **US$17.0 billion**, followed by Bank of America (**US$13.4 billion**) and Japan's Mizuho Financial (**US$12.6 billion**). Major lenders from China, Europe, and Japan also play a significant role, reflecting the global nature and reach of the petrochemical industry.

## Figure 2: The Global Top Twenty Banks Providing Financing to Petrochemical Companies




- Citigroup US$17.0 B
  Largest single lender
- Bank of America US$13.4 B
- Mizuho Financial US$12.6 B
- JP Morgan Chase US$11.7 B
- HSBC US$11.6 B

**US$66.4 B**

Top 5 banks combined provided just over a quarter of all identified financing for petrochemicals.


Chemical production facility in Ludwigshafen, Germany
© iStock.com/Firn

**Table 2. Global Top Twenty Banks Providing Financing to Petrochemical Companies' Petrochemical Operations**

| Rank | Bank | Headquarters | Loans | Underwriting | Total |
|---|---|---|---|---|---|
| 1 | Citigroup | US | $11.3B | $5.7B | **$17.0B** |
| 2 | Bank of America | US | $9.0B | $4.4B | **$13.4B** |
| 3 | Mizuho Financial | Japan | $8.8B | $3.8B | **$12.6B** |
| 4 | JPMorgan Chase | US | $6.6B | $5.1B | **$11.7B** |
| 5 | HSBC | UK | $7.3B | $4.3B | **$11.6B** |
| 6 | Bank of China | China | $6.9B | $4.6B | **$11.5B** |
| 7 | Deutsche Bank | Germany | $5.7B | $3.0B | **$8.6B** |
| 8 | Barclays | UK | $5.1B | $3.1B | **$8.2B** |
| 9 | SMBC Group | Japan | $5.5B | $2.4B | **$7.9B** |
| 10 | BNP Paribas | France | $4.4B | $2.7B | **$7.1B** |
| 11 | CITIC | China | $794M | $6.2B | **$6.9B** |
| 12 | ING Group | Netherlands | $4.2B | $2.1B | **$6.3B** |
| 13 | Industrial and Commercial Bank of China | China | $4.2B | $1.9B | **$6.1B** |
| 14 | Mitsubishi UFJ Financial | Japan | $4.0B | $1.6B | **$5.6B** |
| 15 | Morgan Stanley | US | $2.6B | $2.5B | **$5.1B** |
| 16 | China Construction Bank | China | $4.0B | $836M | **$4.9B** |
| 17 | China Merchants Bank | China | $714M | $4.0B | **$4.7B** |
| 18 | Société Générale | France | $3.2B | $1.4B | **$4.6B** |
| 19 | Crédit Agricole | France | $2.9B | $1.6B | **$4.5B** |
| 20 | Agricultural Bank of China | China | $3.5B | $702M | **$4.2B** |
| | | **Total** | **$101.0B** | **$61.8B** | **$162.8B** |

***Note:** Totals are calculated as the sum of actual figures and rounded to the first decimal place.

According to the data presented in this brief, between January 2019 and June 2025, Citigroup consistently ranked among the top five petrochemical financiers every single year. During this period, Citigroup provided nearly US$17.0 billion in loans and underwriting services to the top fifteen global petrochemical companies' petrochemical arms. The bank ranked as the top financier in 2024, providing US$3.4 billion in that year alone. By comparison, HSBC appeared among the top five petrochemical financiers five times during the same period, providing a total of US$11.6 billion. Bank of America (US$13.4 billion), JPMorgan (US$11.7 billion), Bank of China (US$11.5 billion), and Mizuho (US$12.6 billion), each ranked in the top five on four occasions, further illustrating the scale and consistency of Citigroup's backing of the sector.

This shows a sustained, year-on-year institutional commitment to an industry at the heart of fossil fuel expansion throughout a period in which Citigroup has endorsed or been a founding member of numerous climate-responsible finance initiatives.[94] Additionally, Citi has recently launched its Sustainability Finance Framework[95] in which they explicitly exclude "fossil fuel exploration, extraction, production and distribution"[96] from counting as sustainable finance. Yet, this framework does not exclude financing hydrogen and ammonia production derived from fossil gas from counting as sustainable finance, despite consultants commissioned to write a second opinion on Citibank's sustainability framework acknowledging that financing fossil ammonia projects could cause fossil fuel lock-in.[97] Given that fossil gas-derived ammonia is itself made of fossil fuels and carries a significant risk of fossil fuel lock-in,[98] this omission is a direct internal contradiction between Citi's stated commitment to sustainable finance and its actual investments.

Citi's framework also includes provisions to finance carbon capture and storage (CCS),[99] which in itself has a long history of overpromising and under-delivering, with projects frequently failing to meet announced emission reduction targets.[100] Far from mitigating climate change, CCS prolongs fossil fuel dependence. In 2023, around 85 percent of CCS capacity was used in enhanced oil recovery, where captured $CO_2$ is used to extract more oil and gas.[101] CCS is routinely used to justify lock in of new, expanded, or continued operations, including gas and oil projects in the UK[102] and Canada.[103] Projections claim high-emitting sectors, like cement and petrochemicals, will fuel demand for CCS,[104] despite the availability of alternatives. Citi justifies these investments by indicating that it excludes CCS applied to carbon-intensive activities 'not aligned with recognized decarbonization thresholds.'[105] However, Citi does not define which decarbonization thresholds it considers credible, which could potentially allow for funding petrochemical operations that use CCS.[106] Depending on what the decarbonization thresholds are, this exclusion might still potentially allow for the continued production of fossil-derived petrochemical products. This illustrates precisely why petrochemicals must be explicitly named in fossil fuel exclusion and divestment policies if those policies are to have any meaningful impact.

This contradiction is further compounded by the broader scale of Citi's general corporate financing for companies involved in fossil fuels,[107] raising serious questions about whether its sustainable finance commitments are meaningful when compared with the fossil fuel exposure running through the rest of its portfolio.

## How Much Financing Did the Top Fifteen Global Petrochemical Companies Receive? (Adjusted Petrochemicals Segment)

Between January 2019 and June 2025, the top fifteen global petrochemical companies received US$251.9 billion in funds from creditors that was specifically attributable to their petrochemical activities.

Petrochemical facilities in Moscow, Russia
© Aleksandr Popov

**Table 3. Financing Received by the Top Fifteen Petrochemical Companies' Petrochemical Operations (January 2019 – June 2025)***

| Rank | Company | Headquarters | Loans | Underwriting | Total |
|---|---|---|---|---|---|
| 1 | Syngenta | Switzerland | $11.3 B | $36.7 B | **$48.1B** |
| 2 | INEOS | UK | $35.0 B | $7.5 B | **$42.5 B** |
| 3 | Dow | US | $25.3 B | $11.9 B | **$37.1B** |
| 4 | BASF | Germany | $22.3 B | $8.5 B | **$30.8 B** |
| 5 | LyondellBasell Industries | US | $15.0 B | $9.6 B | **$24.6 B** |
| 6 | Saudi Arabian Oil Co. | Saudi Arabia | $7.5 B | $12.3 B | **$19.8 B** |
| 7 | Sinopec | China | $8.9 B | $4.7 B | **$13.6 B** |
| 8 | ExxonMobil | US | $5.9 B | $5.2 B | **$11.1B** |
| 9 | Rongsheng | China | $5.6 B | $2.2B | **$7.8 B** |
| 10 | Mitsubishi Corporation | Japan | $3.2 B | $1.6 B | **$4.7 B** |
| 11 | Formosa Plastics Corp | Taiwan | $1.6 B | $2.1B | **$3.8 B** |
| 12 | Linde | UK | $1.6 B | $2.0 B | **$3.5 B** |
| 13 | LG Chem | South Korea | 0 | $2.3 B | **$2.3 B** |
| 14 | Air Liquide | France | $1.1B | $952 M | **$2.0 B** |
| 15 | PetroChina | China | 0 | $238 M | **$238 M** |
| | | **Total** | **$144.3 B** | **$107.6 B** | **$251.9 B** |

***Note:** Totals are calculated as the sum of actual figures and rounded to the first decimal place.

Out of the fifteen companies, three companies — Syngenta, INEOS, and Dow — receive slightly more than half (50.7 percent) of all the financing:

- **Syngenta** received the largest amount **(US$48.1 billion)**, driven overwhelmingly by underwriting (about 76 percent of its total).
- **INEOS** followed with **US$42.5 billion**, relying far more heavily on loans (US$35.0 billion) than on underwriting.
- **Dow** received **US$37.1 billion**, with a more balanced mix of loans (US$25.3 billion) and underwriting (US$11.9 billion).

These are followed by BASF (US$30.8 billion), LyondellBasell (US$24.6 billion), Saudi Aramco (US$19.8 billion), and Sinopec (US$13.6 billion), each of which attracted substantial financing, highlighting the scale of capital access.

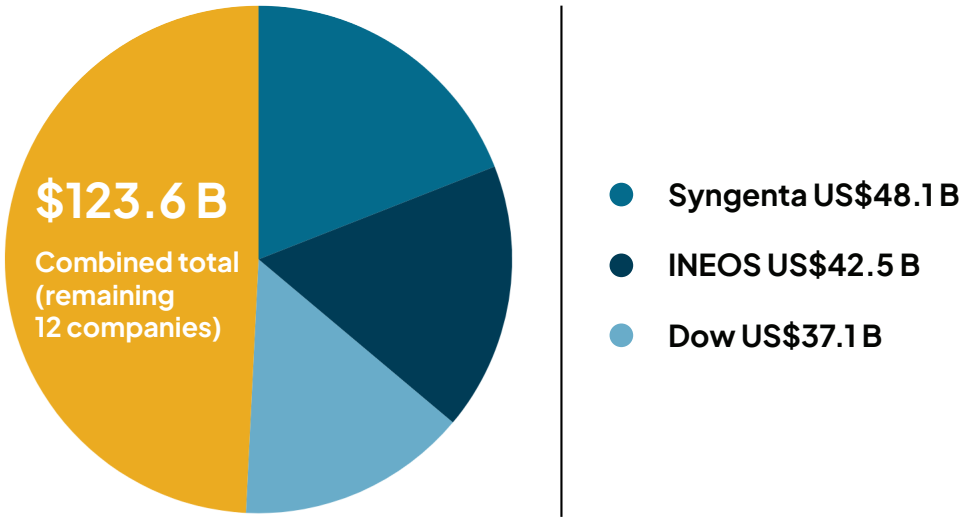
The table above also shows distinct financing profiles by company.

- INEOS, BASF, and LyondellBasell rely more heavily on bank loans than on underwriting.
- Companies that are weighted more heavily toward underwriting include Syngenta and Saudi Aramco, both of which receive more than half of their capital via underwriting.
- Some companies, such as LG Chem and PetroChina, appear with relatively low numbers of petrochemical financing; this could be due to their petrochemical activities making up a smaller share of their overall business or because of limitations in the data that resulted in more conservative adjusted assumptions on their financing activities.

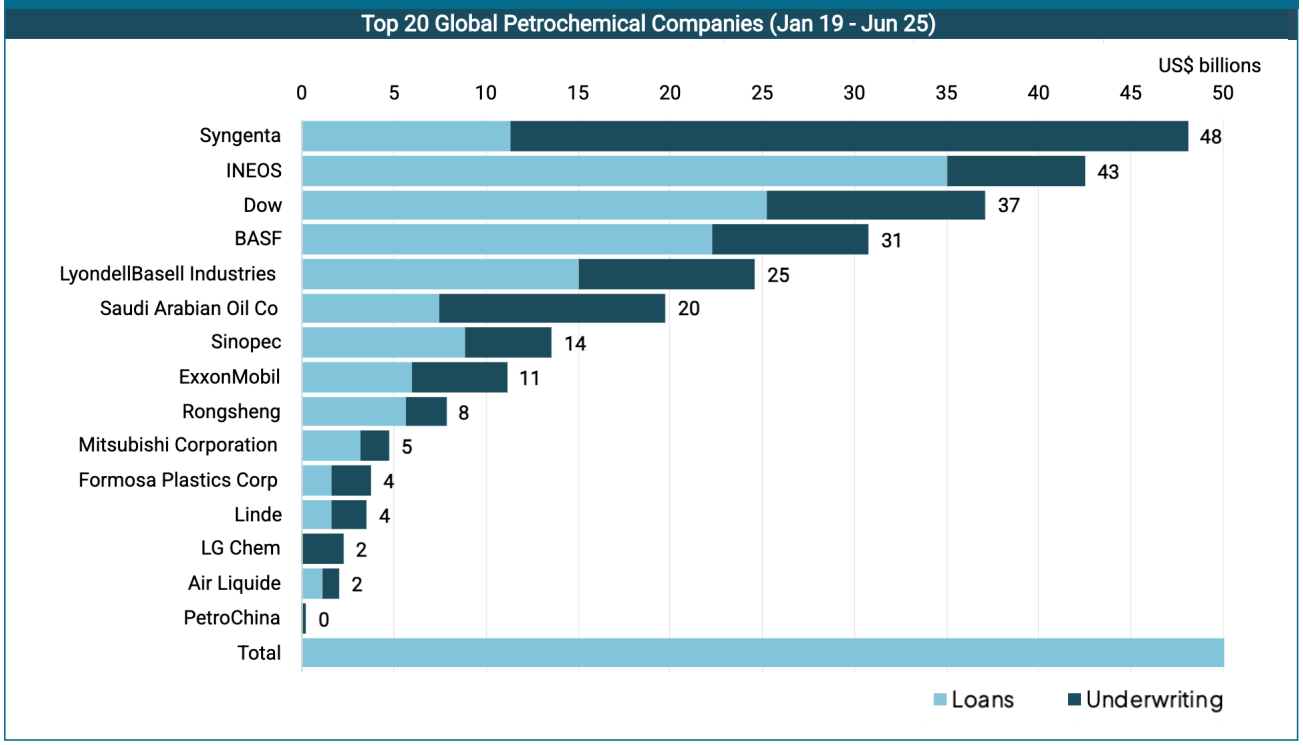
**Petrochemical plant in Saudi Arabia**

## Figure 3: Three Companies Receive Over Half of All Identified Financing to the Top Fifteen Petrochemical Companies

Out of the 15 companies, three companies — Syngenta, INEOS, and Dow — account for slightly more than half (50.6%) of all the financing going to these 15 companies:




## Figure 4. Loans Versus Underwriting Across the Top Fifteen Global Petrochemical Companies for Petrochemical Operations



Dow Chemical petrochemical facility in Texas, US

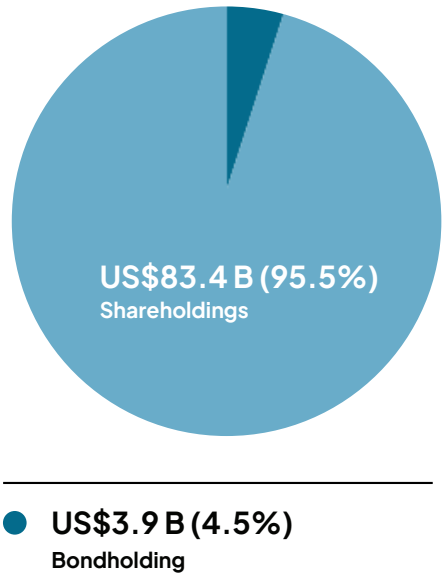

# Global Toxic Investors

**Institutional investors worldwide also play a significant role by investing in the global petrochemicals sector.** As of September 2025, institutional investors held **US$722.5 billion** in bonds and shares in the top fifteen global petrochemical companies.

## The Global Twenty Most Toxic Investors

As of September 2025, the top twenty investors held **US$87.3 billion** in investments in the top fifteen global petrochemical companies' petrochemical arms. Of this total, approximately **4.5 percent (US$3.9 billion)** came through bondholdings, while the majority of investment, with an overwhelming **95.5 percent (US$83.4 billion)**, was provided through shareholdings.

**Figure 5: The Global Twenty Most Toxic Investors (September 2025)**



| Table 4. Top Twenty Global Investors in Petrochemical Operations | | | | | |
|---|---|---|---|---|---|
| Rank | Investors | Country HQ | Bondholding | Shareholding | Total |
| 1 | Vanguard | US | $1.3 B | $19.0 B | **$20.2 B** |
| 2 | BlackRock | US | $970 M | $15.0 B | **$16.0 B** |
| 3 | State Street | US | $114 M | $7.3 B | **$7.4 B** |
| 4 | Capital Group | US | $477 M | $5.0 B | **$5.5 B** |
| 5 | Geode Capital Holdings | US | $0 | $4.4 B | **$4.4 B** |
| 6 | Access Industries | US | $0 | $3.5 B | **$3.5 B** |
| 7 | Government Pension Fund Global (GPFG) | Norway | $241 M | $3.0 B | **$3.3 B** |
| 8 | Fidelity Investments | US | $232 M | $2.9 B | **$3.1 B** |
| 9 | JPMorgan Chase | US | $66 M | $3.0 B | **$3.1 B** |
| 10 | Morgan Stanley | US | $17 M | $2.6 B | **$2.7 B** |
| 11 | Dimensional Fund Advisors | US | $160 M | $2.1 B | **$2.3 B** |
| 12 | UBS | Switzerland | $112 M | $2.0 B | **$2.1 B** |
| 13 | Charles Schwab | US | $42 M | $1.9 B | **$2.0 B** |
| 14 | Bank of America | US | 0 | $1.9 B | **$1.9 B** |
| 15 | Government Pension Investment Fund (GPIF) | Japan | $44 M | $1.7 B | **$1.8 B** |
| 16 | Franklin Resources | US | $66 M | $1.7 B | **$1.8 B** |
| 17 | Crédit Agricole | France | $92 M | $1.6 B | **$1.7 B** |
| 18 | Bank of New York Mellon | US | $28 M | $1.6 B | **$1.6 B** |
| 19 | Northern Trust | US | $9 M | $1.6 B | **$1.6 B** |
| 20 | T. Rowe Price | US | $20 M | $1.5 B | **$1.5 B** |
| | | **Total** | **$3.9 B** | **$83.4 B** | **$87.3 B** |

***Note:** Totals are calculated as the sum of actual figures and rounded to the first decimal place.

The five most prominent investors in petrochemicals are:

- **Vanguard (US$20.2 B)**
- **BlackRock (US$16.0 B)**
- **State Street (US$7.4 B)**
- **Capital Group (US$5.5 B)**
- **Geode Capital Holdings (US$4.4 B)**

These top five investors alone, all headquartered in the US, hold more than **61.2 percent** of all investments in the top fifteen global petrochemical companies (US$53.4 billion out of US$87.3 billion). This is 1.5 times more than the subsequent fifteen **investors combined**. This chart also reveals clear geographical dominance and a striking imbalance of investment sources. Within this group, Vanguard stands out as the single largest investor. Its investments alone exceed the combined investments of the bottom ten investors on the top twenty list. What is distinct about Vanguard is its unique ownership structure. The company is owned by its member funds, which in turn are owned by fund shareholders.[108] This means there are no outside shareholders demanding profits. Other mutual fund management company structures are owned by public or private stockholders who expect to profit from their ownership.[109]

Vanguard argues that this structure benefits its investors directly as profits can go back to the fund rather than to external stakeholders.[110] However, this does not translate into direct control. Vanguard's fund managers and board of directors still make most direct investment decisions, and fund managers do not always disclose fossil fuel investments to its investors.[111] With trillions of dollars under its management,[112] Vanguard continues to finance fossil fuel expansion.[113] While it has only $20.2 billion invested in leading petrochemical companies, Vanguard holds more than $400 billion in fossil fuel projects overall,[114] underscoring the urgent need to address the climate and transition risks of large institutional investors.

## Institutional Investors, Climate Commitments, and Continued Petrochemical Exposure

A total of **sixteen of the twenty investors** are headquartered in the US, reflecting the country's strong influence. Other large, national public financial institutions also appear among the top twenty, **such as Norway's Government Pension Fund Global (GPFG)** and **Japan's Government Pension Investment Fund (GPIF).**[115]

The presence of Norway's GPFG[116] and Japan's GPIF[117] among the top twenty investors in the world's leading petrochemical companies highlights a stark contradiction. Norway's GPFG has pledged to align its portfolios with net-zero emissions by 2050 as part of a larger climate action plan[118] that aims to get the companies in which the fund invests to operate in accordance with the Paris Agreement.[119] The recent report Climate Risk and the Government Pension Fund Global: Managing Risks Associated with Climate Change and the Green Transition,[120] commissioned by an expert group appointed by the Norwegian Ministry of Finance, concluded that climate risk is a relevant and potentially significant risk for the fund and should be reflected in its management.[121] Yet the fund's continued investment in petrochemical companies that perpetuate our reliance on fossil fuels seems at odds with the acknowledged risk and transition frameworks.

Japan's GPIF frames its sustainability approach explicitly around fiduciary duty and long-term financial returns and states that it seeks to reduce 'negative environmental and social externalities in the capital market.'[122] Since 2018, GPIF has also supported the Task Force on Climate-related Financial Disclosures (TCFD), suggesting an orientation towards identifying and managing climate-related financial risks across its portfolio.[123] Yet despite these stated commitments, GPIF maintains investments in the petrochemical companies identified in this

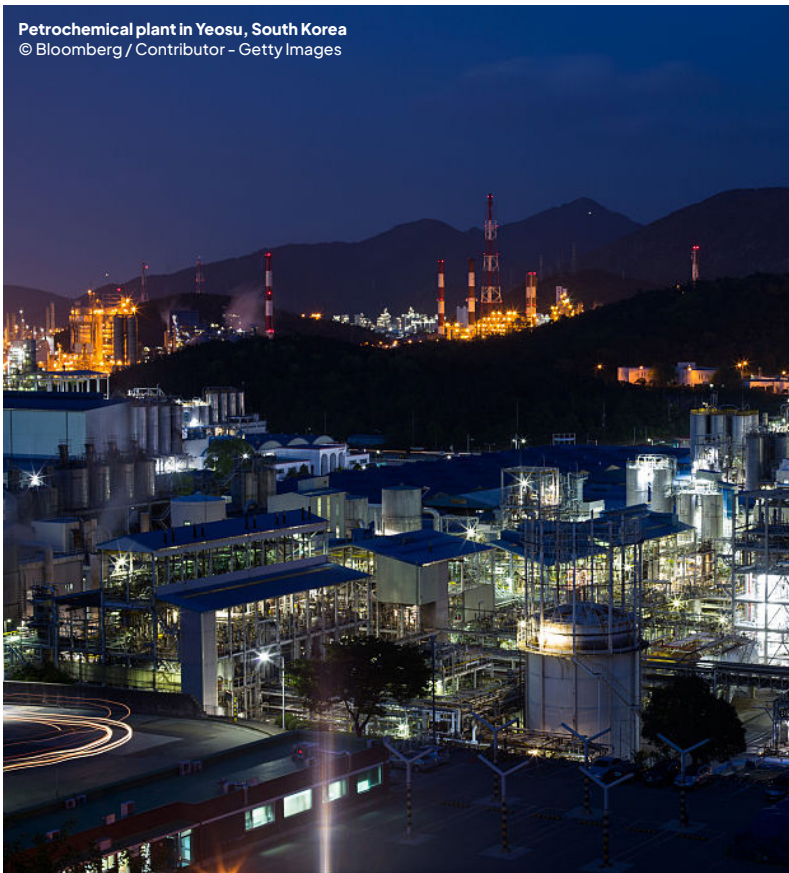
brief. The fund's continued investment in an industry facing tightening regulation, chronic overcapacity, and growing exposure to liabilities, sits uneasily with its own stated objectives of enhancing the long-term resilience of its portfolio to climate-related risks.

Despite *warnings from credit rating agencies, high feedstock costs, and overcapacity* the two **largest public pension funds in the world** continue to rely on the industry's growth. The increasing financial risks associated with petrochemical investments place these two pension funds at risk.

Furthermore, the continued support for petrochemical giants indicates a gap between policy and practice. The production and ongoing expansion of petrochemicals generate significant GHG emissions,[124] which runs counter to the pension fund's goals to reduce negative environmental impacts. But the environmental toll extends far beyond, encompassing air and water pollution, chemical contamination of soil, and the release of toxic substances that harm ecosystems and communities.[125] Fossil fuel pollution has also been linked to severe public health impacts, including premature deaths, respiratory and cardiovascular disease,[126] and growing evidence of neurodevelopmental harms, such as reduced cognitive function, attention deficits, and developmental disorders associated with prenatal and early-life exposure to air pollutants.[127] And rather than reducing support for carbon-intensive sectors, they remain financially entangled with companies driving emissions growth. This sends a strong signal that current voluntary stewardship and Environmental, Social, and Governance (ESG) strategies are insufficient to prevent capital from flowing into fossil-based chemical production. This apparent disconnect between investments and organizational commitments underscores a structural problem. Despite warnings from credit rating agencies,[128] high feedstock costs, and overcapacity,[129] the two largest public pension funds in the world[130] continue to rely on the industry's growth. The increasing financial risks associated with petrochemical investments place these two pension funds at risk. And in turn, rather than responding to market signals,[131] these continued investments further shore up the industry's expansion. Furthermore, the investment decisions pension funds make today will shape both the world their beneficiaries retire into and the financial returns available to pensioners over the long term.

## How Are Investors Funding the Top Fifteen Global Petrochemical Companies? (Adjusted Petrochemicals Segment)

Taken together, the data show that a remarkably small set of investors underpins the vast majority of financial flows of the fifteen world's largest petrochemical companies.



**Petrochemical plant in Yeosu, South Korea**
© Bloomberg / Contributor - Getty Images

**Table 5. Investments in the Top Fifteen Petrochemical Companies (Adjusted Segment – September 2025)**

| Rank | Company | Bondholding | Shareholding | Total |
|---|---|---|---|---|
| 1 | ExxonMobil | $673 M | $55.4 B | **$56.0 B** |
| 2 | Linde | $533 M | $21.3B | **$21.8 B** |
| 3 | LyondellBasell Industries | $2.0 B | $17.0B | **$19.0 B** |
| 4 | Dow | $2.2 B | $12.3 B | **$14.6 B** |
| 5 | BASF | $996 M | $12.6 B | **$13.6 B** |
| 6 | Air Liquide | $157 M | $7.6 B | **$7.8 B** |
| 7 | Mitsubishi Corporation | $37 M | $4.1 B | **$4.1 B** |
| 8 | Saudi Arabian Oil Co | $9 M | $3.6 B | **$3.6 B** |
| 9 | Sinopec | $1 M | $2.1 B | **$2.1 B** |
| 10 | Formosa Plastics Corp | $2 M | $1.7B | **$1.7 B** |
| 11 | LG Chem | $174 M | $1.2 B | **$1.4 B** |
| 12 | Rongsheng | $0 | $391 M | **$391 M** |
| 13 | PetroChina | $0 | $222 M | **$222 M** |
| 14 | INEOS | $171 M | $0 | **$171 M** |
| 15 | Syngenta | $3 M | $38 M | **$41 M** |
| | **Total** | **$6.9 B** | **$139.6 B** | **$146.6 B** |

***Note:** Totals are calculated as the sum of actual figures and rounded to the first decimal place.

The investment landscape is highly concentrated. **ExxonMobil** alone accounts for **US$56.0 billion**, making it by far the most heavily financed company among the top fifteen global petrochemical companies. The scale of investment flowing into ExxonMobil not only signals investor confidence but also reflects structural entrenchment. With this level of access to capital, it could be argued that ExxonMobil is structurally harder to disrupt, as it could absorb market shocks, fluctuating oil prices, and continue to operate and expand in ways that smaller or less well-backed competitors cannot. This level of financing could also push institutional investors to prioritize portfolio stability and long-term returns, which may reduce the pressure shareholders are willing to exert on the company. Institutional investors who are large shareholders would also have their own interests in protecting the value of those holdings, which could translate into indirect lobbying pressure against regulation that would affect ExxonMobil's valuation. Taken together, this level of financial backing could translate into outsized influence over markets, policy, and the pace of the transition away from fossil fuels.

**Linde (US$21.8 billion)** and **LyondellBasell Industries (US$19.0 billion)** lag far behind, reflecting how one US-based petrochemical giant is dominating global investment portfolios.

Together, **the top three petrochemical companies receive US$96.9 billion**, which is nearly **double the US$49.7 billion** combined for the other twelve top companies. Two major European companies are also among the top twenty — the German **BASF (US$13.6 billion)** and the **French Air Liquide (US$7.8 billion)**.

At the other end of the spectrum, companies such as **Syngenta (US$41 million), INEOS (US$171 million), and PetroChina (US$222 million)** show considerably lower investment figures in their adjusted petrochemical segments. These relatively low totals may be a reflection of the data limitations aforementioned, including limited investor exposure, smaller share of petrochemicals within their broader corporate structures, private ownership structures, or simply limited investor disclosure available.

Overall, the data show that the petrochemical sector is heavily funded, with investors providing substantial financial resources to the sector at this point in time.


INEOS chemical storage tank at Antwerp Port Facility, Belgium
© Eric de Mildt

**Table 6. Top Ten Share and Bondholdings, per Financier Country (Latest Filing Date September 2025)**

| Rank | Country | Bondholding | Shareholding | Total |
|---|---|---|---|---|
| 1 | US | $4.3 B | $105.5 B | **$109.8 B** |
| 2 | Japan | $96 M | $5.2 B | **$5.3 B** |
| 3 | Canada | $34 M | $4.2B | **$4.3 B** |
| 4 | UK | $182 M | $3.8 B | **$3.9 B** |
| 5 | France | $235 M | $3.3 B | **$3.5 B** |
| 6 | Norway | $253 M | $3.2 B | **$3.4 B** |
| 7 | Switzerland | $213 M | $3.1 B | **$3.3 B** |
| 8 | Germany | $305 M | $2.4 B | **$2.7 B** |
| 9 | South Korea | $110 M | $1.6 B | **$1.7 B** |
| 10 | China | $4 M | $1.7B | **$1.7 B** |
| | **Total** | **$5.7 B** | **$133.9 B** | **$139.6 B** |

***Note:** Totals are calculated as the sum of actual figures and rounded to the first decimal place.

Based on the headquarters of institutional investors, just ten countries account for **US$139.6 billion** of the identified **US$146.6 billion** in shareholdings and bondholdings supporting the top fifteen global petrochemical companies.

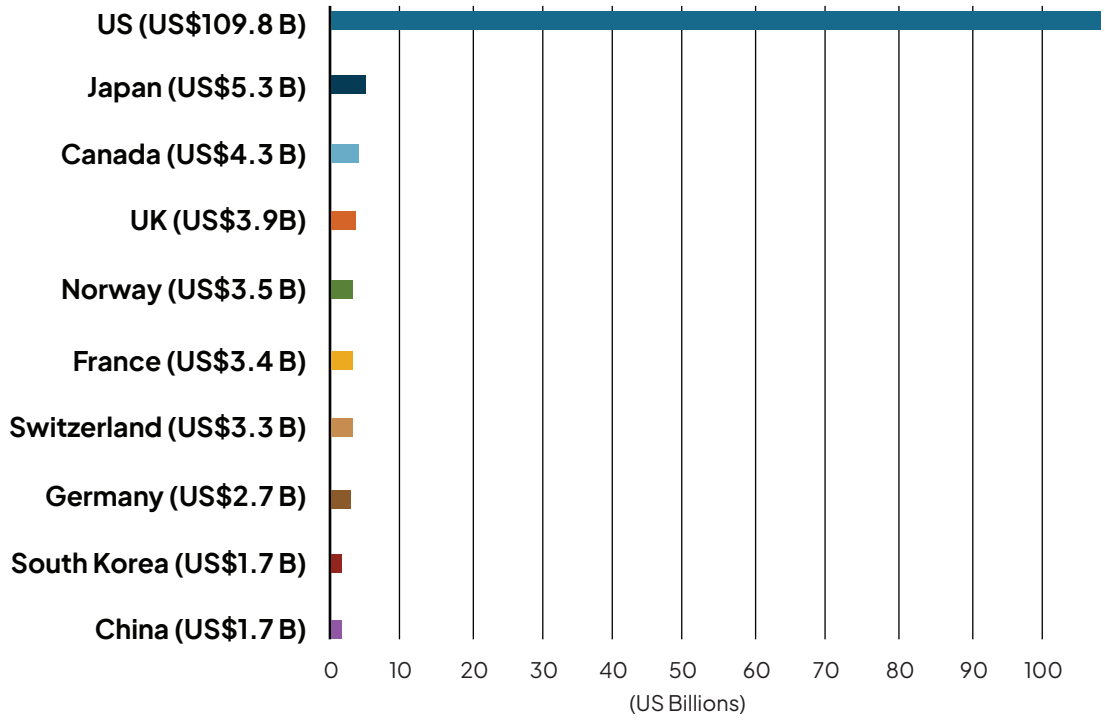
As with bank financing, this investment landscape is dominated by a small number of countries, with the US standing alone as the largest.

These figures reflect private and institutional investors headquartered in these countries, not government ownership or public financing. Investors headquartered in the **United States** are by far the most prominent financiers, providing **US$109.8 billion**, which is equivalent to **74.9 percent** of all identified equity and bond financing. This is more than twenty times more than the next-largest investor, Japan. This expansive concentration of investment underscores how deeply US capital markets are intertwined with the petrochemical sector globally.

Beyond the US, investors from **Japan (US$5.3 billion), Canada (US$4.3 billion), the UK (US$3.9 billion), France (US$3.5 billion), Norway (US$3.4 billion),** and **Switzerland (US$3.3 billion)** follow suit and collectively account for most of the remaining investment funds. The final contributions come from **Germany (US$2.7 billion), South Korea (US$1.7 billion),** and lastly, **China (US$1.7 billion),** with each contributing less than 2 percent of the total investments.

No other country contributes more than 1 percent of total investment, highlighting once again that financing for petrochemicals is concentrated primarily in a small group of high-income nations[132] whose institutional investors, both in the public and private spheres, continue to bankroll the petrochemical industry.

## Figure 6. Top Ten Share and Bondholdings, per Financier Country (Latest Filing Date September 2025)




**US Investment**
**US$109.8 B**

74.9% of all identified financing

**Next Largest (Japan)**
**US$5.3 B**

20× smaller than the US

**All Other Countries**
**US$29.8 B**

Combined 9 nations

# Key Risks for Continued Financing

**Stranded Assets:** The petrochemical industry is facing global overcapacity,[133] which, combined with collapsing profit margins, plant closures, and tightening global regulations in multiple jurisdictions,[134] could lead to planned investments becoming stranded assets. This provides a strategic opening to push for managed decline pathways rather than continued expansion.[135]

**Regulatory Pressures:** The regulatory environment surrounding petrochemicals is tightening on multiple fronts,[136] directly threatening the financial viability of continued investment in the sector. For plastics, a growing number of regulations (bans, taxes, and extended producer responsibility schemes) are compressing margins globally. Furthermore, negotiations toward a Global Plastics Treaty, which include the proposal of a cap on plastic production, represent a potential further change in how petrochemical production and pollution will be governed internationally. For fertilizers, regulatory pressures are mounting with proposals in different jurisdictions[137] aimed at reducing fertilizer overuse and its environmental impacts. Financial institutions that have not assessed their petrochemical portfolios against this tightening regulatory landscape may not be adequately managing the risks associated with their investments in the sector.

**Litigation and Reputational Risks:** As petrochemical companies face increased legal risks,[138] the financial institutions financing them could also face increasing financial consequences. This could possibly include reduced asset values, increased credit risk, and reputational damage from being publicly identified as financing companies linked to environmental damage and public health harms stemming from the health impacts caused by petrochemical plants, exposure to toxic substances (ethylene oxide, pesticides, and PFAS), among other environmental issues, such as plastic pollution in public waterways and microplastics.[139]

**Geopolitical Instability and Commodity Price Risks:** Continued investments in the petrochemical sector remain structurally exposed to intensifying geopolitical risks. Instability in major oil and gas producing regions, including conflicts,[140] sanctions,[141] and supply chain disruptions,[142] can trigger rapid and severe fossil fuel price shocks.[143] Given that petrochemical production is completely dependent on fossil fuel feedstocks, such volatility directly translates into feedstock and energy cost spikes, direct supply chain disruptions,[144] and the financial instability of long-term capital investments.[145] Furthermore, rather than reducing portfolio risk, continued petrochemical expansion in the face of persistent geopolitical uncertainty only deepens exposure to these systemic instabilities.

Petrochemical facilities in the Port of Antwerp, Belgium
© Eric de Mildt

# Recommendations

The data in this brief reveals the substantial financial support that the petrochemical industry benefits from. Even as global temperatures rise and the world transitions toward renewable energy, the fossil fuel industry is pushing for a significant expansion of petrochemical production, all derived from oil, gas, and coal. With plastics and fertilizers accounting for 74 percent of all petrochemicals,[146] the continued expansion of this sector poses an ongoing and accelerating threat to the environment, the climate, and human health, and warrants immediate financial regulation. In 2024, CIEL and the Break Free From Plastic (BFFP) members co-published a Policy Guide for Financial Institutions to Exit Petrochemicals,[147] a year that also marked the first time the global temperature average exceeded 1.5˚C over the pre-industrial average temperature.[148] While US-focused, the guide remains more relevant than ever and its recommendations are transferable in a global context, such as the need for immediate, large-scale emissions reductions to prevent further catastrophic warming, as well as for financial institutions to divest from this industry.

## 1. Adopt a phased and time-bound approach to stop financing petrochemicals.

Financial institutions should adopt a phased approach to reducing and ultimately eliminating exposure to the petrochemicals sector, in line with the 1.5˚C temperature limit established under the Paris Agreement and the imperative for a managed and just transition away from fossil fuels. In the short term, all financing of new greenfield petrochemical projects should cease, as should financing for the expansion of existing facilities, particularly those that lock in long-term fossil fuel demand. All existing and future financing should be made conditional on transparent, independently verified GHG reduction targets, including Scope 1, 2, and 3 emissions.

Over the medium and long term, financial institutions should adopt time-bound transition strategies to progressively reduce and ultimately exit financing of the petrochemical supply chain by adopting policies to address the specific harms of plastics, fertilizers, and pesticides.

## 2. Require petrochemical clients to adopt credible transition plans.

All petrochemical investee companies should develop and publicly disclose credible and 1.5˚C-aligned just transition plans that prioritize immediate fossil fuel phase-out and exclude reliance on unproven or ineffective technologies, to prevent irreversible biodiversity loss and climate injustice. These plans should include a timeline for achieving absolute GHG emission reductions, without relying on offsets, carbon capture, or carbon removal. Plans that rely solely on technological fixes rather than structural changes should not be accepted as credible.

## 3. End financing of industries that perpetuate environmental racism and injustice.

Financial institutions should adopt policies to restrict or deny financing for petrochemical projects where there is credible evidence that such projects have, or would result in, disproportionate environmental and/or public health harms to pollution-burdened, marginalized communities. Petrochemical facilities located in vulnerable communities are not a peripheral concern. Instead, they represent a material risk with escalating legal, regulatory, and reputational consequences for the institutions that fund them.

## 4. Make environmental and human rights due diligence and Indigenous sovereignty a binding condition.

Financial institutions should deny, suspend, or withdraw financing from petrochemical companies where there is credible evidence of

persistent or material non-compliance with applicable environmental laws, human rights standards, including the rights of Indigenous Peoples, such as the principle of Free, Prior, and Informed Consent (FPIC).[149]

## 5. Demand transparency and open disclosure.

The difficulty in accessing transparent data on financial flows to petrochemical companies is itself a systemic risk — one that prevents investors from fully understanding their exposure and prevents communities and civil society from holding institutions accountable. Financial institutions should commit to full public disclosure of their petrochemical financing activities, and regulators should require it. Petrochemicals must be explicitly named in fossil fuel exclusion and divestment policies.

## 6. Redirect capital towards strategic reinvestments.

Financial institutions should redirect capital towards sustainable, reuse systems, and circular economy solutions that reduce reliance on fossil feedstocks and move us away from business models that focus entirely on single-use products. Investments should not be made to substitute one disposable material for another or to fund other technologies that perpetuate throw-away consumption. Banks and investors should prioritize investments in companies focused on reducing demand for virgin plastic.

By the same token, financial institutions should redirect capital towards agroecological farming practices that reduce dependence on synthetic, fossil-based inputs, enhance soil health, support resilient, community-led food systems, and foster food sovereignty. Investments should not be concentrated in efforts to substitute one chemical input for another supposedly less harmful one. Banks and investors should prioritize investments in companies already paving the way on reducing demand for any synthetic pesticides and fertilizers.

**Plastics industrial park in Zhejiang, China**
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# Conclusion

The findings in this brief are undeniable: year after year, since 2019, the global petrochemical industry has been financed at a vast scale by some of the most systemically significant financial institutions in the world. Despite increasing recognition of the industry's health, climate, and environmental justice impacts worldwide, petrochemicals are deeply embedded in the portfolios of major banks, asset managers, and pension funds that collectively shape the direction of the global economy. The data presented in this brief make it clear that this is not peripheral or isolated exposure, but rather that financial institutions have a direct and vested interest in the profitability and long-term continuity of the petrochemical industry.

What makes this particularly concerning is that the emerging picture shows that petrochemical expansion is not only driven by individual fossil fuel companies acting alone. It is embedded in a broader financial system in which banks, pension funds, and large asset managers play a central and active role. It is sustained by a broader financial system in which banks provide billions in loans and underwriting, major asset managers take direct ownership stakes through equity holdings, and public pension funds — managing the retirement savings of millions of people — channel workers' money into an industry facing mounting climate, legal, and financial risk. Major financial institutions are positioning petrochemical assets as stable, long-duration investments with future returns, even as the industry faces serious structural challenges that undermine that very stability — such as oversupply, overcapacity, and collapsing margins. Furthermore, petrochemicals are often treated as separate from fossil fuels and therefore not fully assessed for climate-related financial risk. This false dichotomy framing allows capital to flow with less scrutiny, obscuring how the sector props up oil, gas, and coal demand. This is a critical oversight as the petrochemical industry faces numerous potential physical and transition risks, including policy, legal, technological, market, and reputational risks, that investors may not have adequately considered.

These findings underscore the urgent need for greater disclosure, stronger governance, and more responsible investment practices to align financial flows with a sustainable and just transition away from fossil fuels. Such action is essential to uphold the 1.5°C temperature increase limit established under the Paris Agreement[150] and to comply with legal obligations, including those outlined in the International Court of Justice's July 2025 Advisory Opinion, which affirms States' legal responsibility to address climate-related harms.[151] This Advisory Opinion is a legal basis for holding actors accountable for climate harm and increases the likelihood that continued investment in the petrochemical industry will be challenged — through regulatory measures that reinforce both local legislation and global climate negotiations, and where these mechanisms prove insufficient, in courts at local, regional, and national levels.[152] It is no longer hypothetical — those who fail to align with international climate obligations, including petrochemical companies and their investors, now face real risks of liability, reputational damage, and market consequences.

Behind every financial exposure documented in this brief are communities bearing the cost. Communities have a fundamental right to a healthy environment, to clean water, and to a future free from the worst impacts of climate change.[153] Yet, the ongoing global expansion of the petrochemical industry directly threatens these rights, raising serious human rights concerns linked to pollution, environmental degradation, and climate impacts.

Behind every financial exposure documented in this brief are **communities bearing the cost.** Communities have a fundamental right to a healthy environment, to clean water, and to a future free from the worst impacts of climate change.

Financial support for this sector also exposes banks and investors to risks of human rights violations, including potential lawsuits, reparations for impacted frontline communities, and detrimental reputational damage that could possibly affect long-term investments. It is crucial now more than ever to ensure that capital flows and investments do not undermine these rights.

Finally, the US-Israel war on Iran is yet another conflict delivering supply disruptions, price spikes, and cascading effects on global supply chains. Each time a new conflict erupts around fossil fuel-dependent systems, the world scrambles to stabilize economies built on the same structural vulnerabilities. This latest conflict is not an anomaly — it is simply the most recent iteration of a long, recurring pattern that will continue to repeat itself for as long as fossil fuels remain the backbone of the global economy. The question, therefore, is not how we respond to the next fossil fuel-driven crisis, but how we begin to transition away from a fossil economy so that we are no longer at the mercy of its volatility and unreliability.

Taking all of this into account, the trends presented in this brief reveal a global financial system that normalizes petrochemical expansion as inevitable and as a stable long-term investment, even as it intensifies climate, social, and systemic financial risk. We therefore call on financial institutions to adopt a phased exit from the petrochemical sector, starting with an immediate halt to financing project expansions. Investors must demand that petrochemical companies develop and publicly disclose credible, 1.5˚C-aligned just transition plans. To accept anything less means failing to confront the financial, social, and environmental realities exposed in this brief.

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# Deep Pockets, Dirty Profits:

## How Banks and Investors Are Financing the Global Petrochemical Industry


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