Opportunity NOCs

How investors can jumpstart energy transitions in national oil companies

UC SANTA BARBARA
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Executive Summary

The extent of investor exposure and the degree of investors' potential influence over the fates of NOCs are far greater than investors themselves may perceive.

International oil companies, or IOCs, face increasing pressure from investors, regulators, and the broader public to reduce greenhouse gas emissions and accelerate the transition to clean energy. By contrast, investors, regulators and others have paid far less attention to national oil companies, or NOCs. These state-owned titans constitute half of the world's oil and gas production, control two-thirds of global reserves, and often serve as the largest entities in their home economies.[1] If the world is to meet the goals of the Paris Agreement, NOCs must begin decarbonizing their activities.[2]

Despite the seemingly closed-off nature of many NOCs, investors will play a critical role in directing and incentivizing this energy transition. For example, Russia's 2022 invasion of Ukraine showcased just how exposed investors are to geopolitical risks borne by state-owned Rosneft and Gazprom, with the latter suspended from trading on the London Stock Exchange in March 2022. This brief shows that both the extent of investor exposure and the degree of investors' potential influence over the fates of NOCs are far greater than investors themselves may perceive.

Investors are financially exposed to a range of NOC activities. This exposure both opens avenues for investor influence and creates a strong incentive for investors to use it. Three cases present the highest level of investor exposure, but also the most direct opportunities for investor influence. First, NOCs can be partly shareholder-owned like Equinor and Petrobras. Others have issued bonds like Pemex and the Abu Dhabi National Oil Company. Last, a number of NOCs require outside technical assistance and financing, especially on frontier oil and gas projects.

In addition, investors are exposed to NOCs through their holdings in banks like JPMorgan Chase, Citi and Bank of America, which have financed hundreds of billions of dollars per year to the largest NOCs. Nearly all NOCs also partner with foreign firms for exploration and development. With IOCs like Shell and BP withdrawing from many NOC partnerships, investor-owned service companies like Schlumberger and Baker Hughes have filled the vacuum. Even though these firms are

1 IEA (2020). The Oil and Gas Industry in Energy Transitions. World Energy Outlook special report. International Energy Agency. January 2020. https://www.iea.org/reports/the-oil-and-gas-industry-in-energy-transitions.

2 Bois von Kursk, O. and Muttitt, G. (2022). Lighting the Path: What IPCC energy pathways tell us about Paris-aligned policies and investments. International Institute for Sustainable Development. 7 June 2022. https://www.iisd.org/publications/report/ipcc-pathways-paris-aligned-policies; Calverley, D. and Anderson, K. (2022). Phaseout Pathways for Fossil Fuel Production Within Paris-compliant Carbon Budgets. University of Manchester. 22 March 2022. https://www.research.manchester.ac.uk/portal/en/publications/phaseout-pathways-for-fossil-fuel-production-within-pariscompliant-carbon-budgets(c7235a8e-e3b1-4f44-99de-c27958c03758).html; IEA (2021). Net Zero by 2050. A Roadmap for the Global Energy Sector. International energy Agency. October 2021. https://www.iea.org/reports/net-zero-by-2050.

much smaller than the IOCs they are replacing, they are nevertheless becoming an increasingly relevant route for investors in terms of risk exposure to, and influence on, NOC activities.

This brief outlines immediate steps that investors can take to encourage NOCs to decarbonize and contextually reduce investors' own exposure risk to NOCs.

We encourage investors to:

- Direct NOCs to adhere to climate disclosure requirements to improve their transparency and prevent offshoring of emissions by IOCs to NOCs.
- Develop and apply ESG frameworks to NOCs similar to those increasingly applied to IOCs to reveal the myriad risks faced by investors, financial actors, and operational firms partnering with NOCs.
- Call on banks to refrain from financing new oil and gas expansion projects by NOCs.

Each of these constitute first but important steps toward more substantive actions by investors for NOCs to limit new oil and gas infrastructure expansion—in line with Paris Agreement goals and industry-based emissions scenarios—and begin to substantially decarbonize their activities.

Introduction

To limit warming to 1.5 degrees above pre-industrial levels, national oil companies, or NOCs, must begin to decarbonize their activities.[3] Despite the seemingly closed-off nature of many NOCs, investors can play a critical role in directing and incentivizing this transition.

NOCs are a highly heterogeneous group, in terms of objectives, capabilities, and governance structures.[4] Some of the NOCs have a fairly "closed" profile—they are fully owned by their own national governments—while others are listed openly with equity and/or debt partially held by private and international investors. Other forms of "openness" arising for some NOCs include ownership of foreign assets, partnership with IOCs in complex and high-risk projects, or use of international service companies to carry out some project activities.

The extent of such "openness" has important consequences for investors. For the purpose of this piece, investors are broadly defined as any non-state actor with a vested financial interest, whether through direct equity or debt, or through indirect investments in companies playing an active role in NOCs. This brief shows that both the extent of investor exposure and the degree of investors' potential influence over the fates of NOCs are larger than investors themselves may perceive. This creates a number of openings for investors to try and influence NOC strategies, including their efforts to decarbonize.

3 Bois von Kursk, O. and Muttitt, G. (2022). Lighting the Path: What IPCC energy pathways tell us about Paris-aligned policies and investments. International Institute for Sustainable Development. 7 June 2022. https://www.iisd.org/publications/report/ipcc-pathways-paris-aligned-policies; Calverley, D. and Anderson, K. (2022). Phaseout Pathways for Fossil Fuel Production Within Paris-compliant Carbon Budgets. University of Manchester. 22 March 2022. https://www.research.manchester.ac.uk/portal/en/publications/phaseout-pathways-for-fossil-fuel-production-within-pariscompliant-carbon-budgets(c7235a8e-e3b1-4f44-99de-c27958c03758).html; IEA (2021). Net Zero by 2050. A Roadmap for the Global Energy Sector. International energy Agency. October 2021. https://www.iea.org/reports/net-zero-by-2050.

4 Gillies, A., Heller, P., Mahdavi, P., Manley, D., Marcel, V., Melgar, L., Monaldi, F., Muttitt, G., Picciariello, A. and Roth, J. (2021). National Oil Companies and Climate Change: Insights for Advocates. 8 November 2021. https://resourcegovernance.org/analysis-tools/publications/national-oil-companies-climate-change-insights-advocates.

The extent and channels of investors' exposure to NOCs

The brief highlights where such direct or indirect exposure risks may arise, and proposes recommendations for how to manage the risks related to such exposure and exert their influence in the most effective ways.

While there is a generalized feeling that private and international investors are detached from the doings and fates of national oil companies, in reality their exposure to NOCs may be far greater than perceived. Such exposure can take both direct and indirect forms.

Several major NOCs pursue financing options outside of their national governments—from either domestic or international investors—in the form of equity and debt financing.

Equity financing

The most direct of these financing options is equity listings in international stock exchanges. This includes NOCs such as Colombia's Ecopetrol, Norway-based Equinor, Russia's Gazprom, Brazil's Petrobras, Malaysia's Petronas, Petrochina and Saudi Aramco, which together account for 35 percent of global oil and gas production.[5]

Investors perceive their likely degree of exposure to NOCs when they engage in equity financing, especially on international stock exchanges. In 2017 and 2018, following Saudi Aramco's announcement of its prospective IPO, the London Stock Exchange attempted to attract Aramco to list its shares on the exchange, offering Aramco a premium listing that potentially eased and sidestepped existing exchange regulations. This move was met with strong general opposition by investors. Investors not only disagreed on the ad hoc approach being designed for Aramco's benefit, but also feared having Aramco shares included in major equity indices, such as the FTSE 100. This was mostly based on perceptions of the high degree of exposure to Aramco risks investors would have acquired, poorly balanced by what investors perceived as little degree of control over Aramco's activities.[6]

Debt financing

Most of the aforementioned NOCs, as well as companies like Pemex, Qatar Energy, Abu Dhabi National Oil Company, also issue bonds in the international financial market to finance their capital expenditures.[7] The Mexican NOC Pemex, for instance, has its debt widely held by mutual-fund

5 Ibid.

6 BBC (2018). Controversial rules for Aramco London listing approved. BBC. 8 June 2018. https://www.bbc.com/news/business-44410784; Donnellan, A. (2017). City funds fire broadside over Saudi Aramco oil float. The Sunday Times. 15 October 2017. https://www.thetimes.co.uk/article/city-funds-fire-broadside-over-saudi-aramco-oil-float-cpjbgt6zh; Jessop, S. (2017). British investors wary of Aramco as London courts listing. Reuters. 10 May 2017. https://www.reuters.com/article/uk-investors-aramco-ipo-idUKKBN1861W6.

7 Strohecker, K. and Jessop, S. (2021). Analysis: After Brazil ructions, a rethink for investors in emerging market state firms. 26

managers in Europe and the U.S., with roughly $105 billion of bonds and loans outstanding.[8] Investors may also be exposed to NOCs through their holdings in banks financing those companies.

Between 2016 and 2021 the world's 10 largest banks, in aggregate, provided over $140 billion per year to eight of the largest NOCs.[9] Some of the world's largest exploration projects from NOCs involve commercial banks alongside oil majors and NOCs. Citi, JPMorgan Chase and Santander

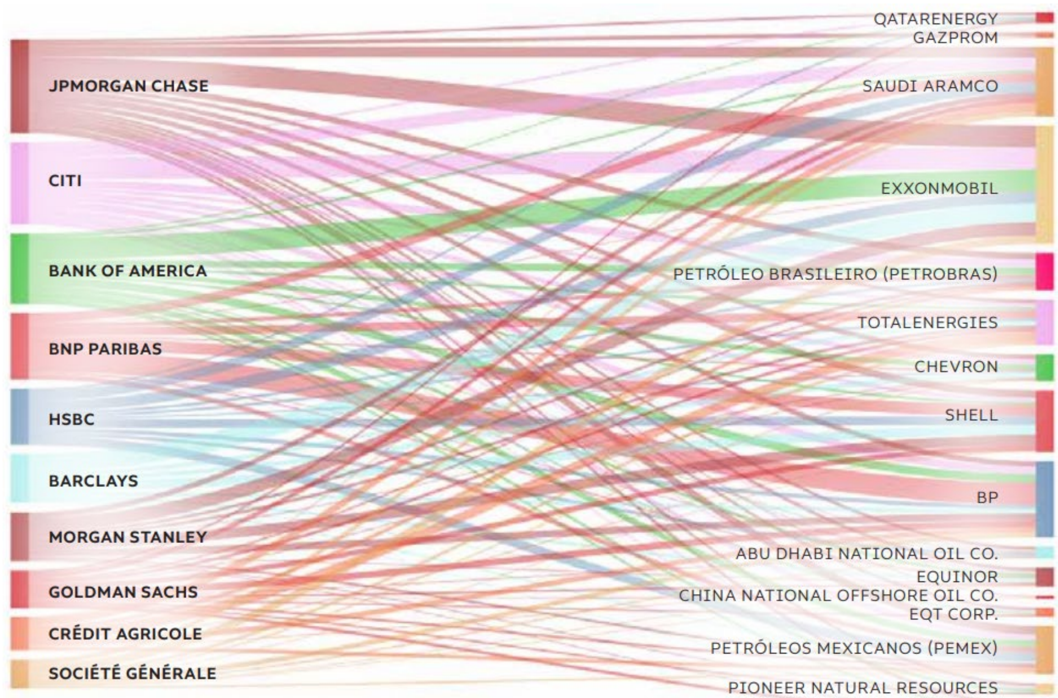

Fig 1. Financial flows between major banks and major oil companies (IOCs and NOCs).
Source: Banking on Climate Chaos, 2022, used with permission.

February 2021. Thomson Reuters. London. https://www.reuters.com/article/us-emerging-debt-soes-analysis-idUSKBN2AQ1HB; Toledano, P., Brauch, M. D., Mebratu-Tsegaye, T. and Pardinas Favela, F. J. (2020). Equipping the Nigerian National Petroleum Corporation for the Low-Carbon Transition: How Are Other National Oil Companies Adapting? Columbia Center on Sustainable Investment. September 2020. https://scholarship.law.columbia.edu/sustainable_investment_staffpubs/120; Narayanan, A. and Ratcliffe, V. (2021). Qatar Petroleum Sells $12.5 Billion of Bonds For Gas Push. Bloomberg. 30 June 2021. https://www.bloomberg.com/news/articles/2021-06-30/qatar-petroleum-kicks-off-first-sale-of-dollar-bonds-in-15-years; Di Paola, A. (2022). UAE's Top Oil Producer Prepares to Sell Bonds for First Time. Bloomberg. 25 January 2022. https://www.bloomberg.com/news/articles/2022-01-25/uae-s-top-oil-producer-forms-entity-to-sell-bonds-for-first-time.

8 Wirz, M. (2019). Investors Unload Pemex Bonds on Rating Fears. The Wall Street Journal. 21 June 2019. https://www.wsj.com/articles/mexicos-pemex-at-risk-of-being-downgraded-by-two-ratings-firms-11561139772.

9 The NOCs for which bank financing was identified were: Qatar Energy, Gazprom, Saudi Aramco, Petrobras, Pemex, Abu Dhabi National Oil Co., Equinor and CNOOC. The financing banks the data refers to are: JPMorgan Chase, Citi, Bank of America, BNP Paribas, HSBC, Barclays, Morgan Stanley, Goldman Sachs, Crédit Agricole and Société Générale (Banking on Climate Chaos, 2022). Figures based on the authors' own calculations using the Banking on Climate Chaos data.

co-finance oil exploration in the Amazon together with Ecopetrol, Petróleos del Perú, PetroEcuador and Petrobras. Separately, JPMorgan Chase, Citi and Bank of America finance ExxonMobil, CNOOC and Hess in offshore drilling in Guyana.[10]

As investors increasingly engage with banks to align their lending and underwriting portfolios with a 1.5 degrees C future, banks' continued financing of NOCs should be a key area of focus.

Partnerships between NOCs and IOCs or international service companies

NOCs often partner with IOCs for exploration and development, as well as operations in deep-water or other challenging environments. Usually, the IOC takes the lead on technical aspects and orchestration of these complex undertakings. The NOC, in turn, takes greater responsibility for setting and harmonizing business and investment standards to facilitate the project development, which requires a deeper knowledge of local contacts and relational skills.[11] While these partnerships allow IOCs and investors access to otherwise inaccessible fields, they also open the door for exposure to any kind of risks faced by the NOC. For example, the Russian NOC Rosneft has a relatively long history of collaboration with international foreign companies (either foreign partners or international service companies and providers of equipment and technology) in the Arctic region.[12] Yet these partnerships have started to crumble or are in peril as a result of Russia's invasion of Ukraine in 2022 (see next section).

Participation agreements between NOCs and IOCs are often a way for NOCs to gain access to strategic fields. Petronas (Malaysia) recently completed a 'multi-well participation agreement' with Chevron to gain access to blocks in the US Gulf of Mexico. This includes Chevron-operated Silverback deep-water well in Mississippi Canyon, which Chevron operates with a 65 percent interest, with Murphy and Colombia's Ecopetrol both on 10 percent and Petronas the remaining 15 percent.[13]

10 Rainforest Action Network, Bank Track, Indigenous Environmental Network, Oil Change International, Reclaim Finance, Sierra Club, Urgewald (2022). Banking on Climate Chaos. Fossil Fuel Finance Report 2022. March 2022. https://www.banktrack.org/download/banking_on_climate_chaos_2022/2022_banking_on_climate_chaos.pdf.

11 Similarly, NOCs tend to require external support when they decide to move from operatorship of very small fields to complex fields; this was for example the case for Sonangol P&P, the upstream subsidiary of the Angolan NOC Sonangol, who since 2004 has been supported in such a process by external consultants, seconded in as staff to help build up competences and establish processes quickly. Most of the challenges Sonangol P&P has had to face over the past years relate to the development of deep-water offshore fields, to tackle which it has entered into joint ventures with private sector firms such as Eni or the asset partner Sonangol Sinopec International, or SSI. Sources: Salauden, D., Marcel, V. and Lobo, A. (2014). Unlocking the potential of Africa's NOCs. 2014 KPMG International Cooperative. https://assets.kpmg/content/dam/kpmg/pdf/2014/11/unlocking-potential-africas-NOCs.pdf; Wime, H., Nogueira, Y. A., Fernandes, L. K., Eriksen, Gunnar, E. and Bondevik, J. O. (2009). Gimboa, Angola Block 4 - First Deep Water Challenge for Sonangol P&P. Paper presented at the Offshore Technology Conference, Houston, Texas, May 2009; Offshore Technology (2019). Eni starts new production well in Vandumbu field offshore Angola. 25 January 2019. https://www.offshore-technology.com/news/eni-vandumbu-field-angola/; Esau, I. (2020). Sonangol boosts stake in BP block off Angola. Upstream Online. London. 22 May 2020. https://www.upstreamonline.com/field-development/sonangol-boosts-stake-in-bp-block-off-angola/2-1-813328; Garcia, R., Lessard, D. and Singh, A. (2014). Strategic partnering in oil and gas: A capabilities perspective. Energy Strategy Reviews, Vol. 3, pp. 21-29. September 2014.

12 Polack, F. and Farquharson, D. (2021). Cold Water Oil. Offshore Petroleum Cultures. Routledge. 20 December 2021.

13 Energy Intelligence (2021). Petronas Dives Deeper Into US Gulf With Chevron Deal. Energy Intelligence Group. 7 July 2021. https://www.energyintel.com/0000017b-a7dd-de4c-a17b-e7dfa47d0000.

With IOCs continuing to withdraw from a number of projects and fields, it is reasonable to expect that service companies may assume an increasingly bigger role in their dealings with NOCs. This makes service companies, even if generally much smaller than IOCs in their size and in their share of investor portfolios, an increasingly relevant route for investors in terms of risk exposure to, and influence on, NOCs.[14]

Box 1: NOC-Service Co. Partnership Examples

- The wellhead systems expert Plexus Holdings partnered with China Oilfield Services (majority owned by the NOC CNOOC) to work with Red Sea Technologies and Yantai Jereh Oilfield Services on exploring commercial opportunities for shallow water subsea and crossover wellhead production systems in China.[15]

- The UK Wood Group PLC recently signed a multi-million dollar contract with Saudi Aramco to deliver engineering and project management services for the Safaniyah and Manifa oilfields in the Kingdom of Saudi Arabia, as well as an agreement with ADNOC to perform pre front-end engineering and design work for a world-scale blue ammonia production facility in Ruwais, Abu Dhabi.[16]

- The Norwegian service company Aker Energy holds a 50% participation interest in the Deepwater Tano Cape Three Points block in Ghana alongside the Ghanian NOC GNPC.[17] And the French service company Technip recently signed a major Engineering, Procurement, and Construction contract with the Egyptian NOC ANOPC for the construction of a new Hydrocracking Complex for the Assiut refinery in Egypt.[18]

Each of these cases illustrates the interconnectedness of global oil markets. Whether through direct equity, debt holdings and holdings in banks financing NOCs, or investments in firms working in partnership with NOCs, investors are financially exposed to a range of NOC activities.

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14 Al-Fattah, S. M. (2013). National Oil Companies: Business Models, Challenges and Emerging Trends. Corporate Ownership & Control. Vol. 11, Issue 1, 2013.

15 Marcel, V., Kennedy, A. and Thompson, Z. (2016). Unsung workhorses of the oil industry. Oilfield Services Companies. KPMG Global Energy Institute. 1 March 2016. https://home.kpmg/xx/en/home/insights/2016/03/oilfield-services-companies-unsung-workhorses-oil-industry.html.

16 Wood (2022). Wood propels growth in Middle East with $580m of wins in 202. Press Release. 12 January 2022. https://www.woodplc.com/news/latest-press-releases/2022/wood-propels-growth-in-middle-east-with-580m-of-wins-in-2021.

17 Aker Energy (nd). Development Projects. https://www.akerenergy.com/what-we-do/development-projects.

18 Technip FMC (2020). TechnipFMC Signs a Major Contract with Assiut National Oil Processing Company (ANOPC) for a New Hydrocracking Complex in Egypt. 7 July 2020. https://www.technipfmc.com/en/investors/financial-news-releases/press-release/technipfmc-signs-a-major-contract-with-assiut-national-oil-processing-company-anopc-for-a-new-hydrocracking-complex-in-egypt/.

The nature of investor exposure to NOC geopolitical and climate-related risks

The extent of investors' exposure to NOC volatility makes them particularly vulnerable to a range of geopolitical and climate risks that can often significantly compound and multiply single risks.

Political events and sanctions

Differences in political objectives and activities between NOCs and their governments pose a substantial risk to investors involved with NOCs. Brazilian President Jair Bolsonaro's abrupt sacking of Petrobras's chief executive in February 2021 led to an $18-billion loss in the company's market value in just two days. Petrobras's bond value similarly plunged immediately after Bolsanaro's social media post announcing the firing.[19]

Similarly, the 2019 drastic drop in Pemex's credit ratings by Fitch Ratings and Moody's Investors Service was supposedly driven by the knowledge that the Mexican government was withdrawing some of its long-standing financial support from the NOC, in the face of the relatively high revenues paid by Pemex to the Mexican government on a yearly basis.[20] As above, Pemex's heavy reliance on Western bonds means that the de-rating has affected a number of investors well beyond the Mexican NOC's national borders. Such political differences are likely to become more prominent as governments navigate the dramatic changes of the energy transition in coming years.

As agents of the state, NOCs are also vulnerable to sanctions directed against their governments, subject to swiftly changing directives and strategies from those in power, and beholden to uncertainty given the gaps between global and domestic standards in environmental and social regulations.

Consider political and economic sanctions directed at the Russian state. Sanctions introduced over Russia's role in the 2014 conflict in Ukraine forced ExxonMobil to exit its partnership with Rosneft on early exploration work in the Arctic.[21] Rosneft's long-term agreements with and potential acquisition of North Atlantic Drilling Ltd. (NADL, a subsidiary of the Norwegian Seadrill) were cancelled as a result of the 2014 sanctions against Russia. On top of that, NADL's economic

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19 Strohecker, K. and Jessop, S. (2021). Analysis: After Brazil ructions, a rethink for investors in emerging market state firms. 26 February 2021. Thomson Reuters. London. https://www.reuters.com/article/us-emerging-debt-soes-analysis-idUSKBN2AQ1HB.

20 Reuters (2019). Pemex bonds crushed on Fitch downgrade, fears of more to come. Reuters. 7 June 2019. https://www.reuters.com/article/usa-trade-mexico-bonds-idUSL2N23E1CD; Fitch Ratings (2022). Reversal of Government Support of PEMEX Validates Delinkage of Ratings. 22 April 2022. https://www.fitchratings.com/research/corporate-finance/reversal-of-government-support-of-pemex-validates-delinkage-of-ratings-22-04-2022.

21 Griffin, R. (2020). Rosneft discovers new Arctic gas field. S&P Global. 9 December 2020. https://www.spglobal.com/commodity-insights/en/market-insights/videos/market-movers-americas/220516-north-american-energy-security-headlines-us-senate-hearing.

position deteriorated considerably and its shareholders filed a lawsuit against the firm because of its failed deals with Rosneft.[22]

The consequences of the most recent and ongoing Russian war in the Ukraine are an even starker reminder of the sudden and colossal loss investors involved with Russian NOCs are experiencing: to name just a few, Gazprom has been suspended from trading on the London Stock Exchange in March this year,[23] and as of June 2022, Rosneft's development plans in the major Vostok Oil project are in jeopardy. In response to Russia's invasion of Ukraine in February 2022, Trafigura, which had agreed to a 10 percent stake in 2020, is "reviewing" its investment; Glencore is reconsidering its shareholding in Eni and Rosneft; and BP is selling its shares in Rosneft with a staggering $25 billion financial loss.[24]

Climate-related risk

NOCs tend to be climate laggards. Governments provide explicit or implicit protection for NOC investments, with little to no attention for climate concerns or existing climate commitments to limit warming to 1.5 degrees C above pre-industrial averages.[25] This creates increasing climate-related risks for investors both because of NOC assets potentially being stranded by future climate policy[26] or physical and macro-economic risks stemming from climate change.[27]

A number of investors are already voicing their concerns regarding NOCs' climate strategies—or lack thereof. Pemex, for example, is facing pressures to adjust course by bondholders and asset managers. According to an asset manager at Allianz Global Investors, if the company's management does not heed calls to curb carbon emissions, "it will become tougher for them to issue debt. […] It will become increasingly challenging for international institutional investors to invest in their bond issuances if they don't address their sustainability concerns - whether climate, oil spills due to oil theft and health and safety."[28]

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22 Polack, F. and Farquharson, D. (2021). Cold Water Oil. Offshore Petroleum Cultures. Routledge. 20 December 2021.

23 Sweney, M. (2022). London Stock Exchange suspends trading in 27 firms with strong links to Russia. 3 March 2022. The Guardian. https://www.theguardian.com/business/2022/mar/03/london-stock-exchange-suspends-trading-in-27-firms-with-strong-links-to-russia

24 Reed, E. (2022). Trafigura, Glencore review Rosneft holdings. Energy Voice. 2 March 2022. https://www.energyvoice.com/oilandgas/europe/392171/russia-trafigura-glencore-rosneft/; Hurst, L. and Ross-Thomas, E. (2022). BP to Exit Rosneft Stake and May Take a $25 Billion Hit. Bloomberg. 27 February 2022. https://www.bloomberg.com/news/articles/2022-02-27/bp-to-exit-its-20-shareholding-in-russian-oil-producer-rosneft.

25 Manley, D. and Heller, P. R. P. (2021). Risky Bet. National Oil Companies in the Energy Transition. National Resource Governance Institute. February 2021. https://resourcegovernance.org/sites/default/files/documents/risky-bet-national-oil-companies-in-the-energy-transition.pdf.

26 It is estimated that more than $400 billion in NOCs' planned investments oil and gas projects would be unprofitable in a 2 degrees world, let alone in a 1.5 degree one; (Ibid).

27 Panfil. M. and Victor, D. G. (2022). Climate change creates financial risks. Investors need to know what those are. Planet Policy. 29 March 2022. https://www.brookings.edu/blog/planetpolicy/2022/03/29/climate-change-creates-financial-risks-investors-need-to-know-what-those-are/.

28 Hydrocarbon Processing (2020). Mexico's Pemex tests limits of investor influence on climate change. Hydrocarbon Processing. 31 August 2020. https://www.hydrocarbonprocessing.com/news/2020/08/mexicos-pemex-tests-limits-of-investor-influence-on-climate-change.

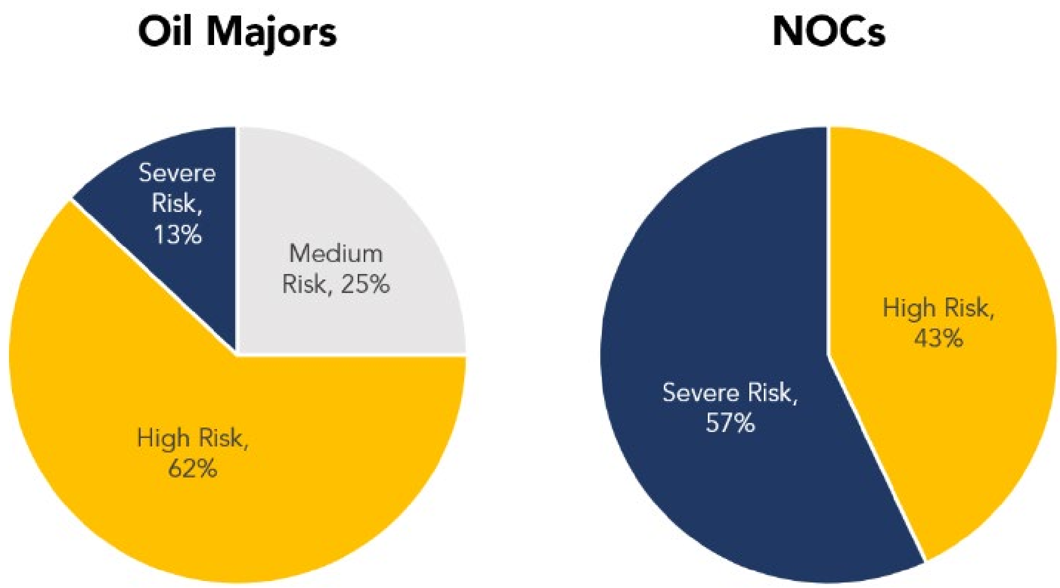

Fig 2. ESG Risk Rating Scores for oil majors and national oil companies
Adapted from: Berdowski and Tiberiu-Mihai, 2022; Data source: Sustainalytics

These concerns are echoed by a fund manager at Federated Hermes: "When we look at what peers are doing, Pemex should do more, show more ambition in terms of commitment to reduce carbon emissions."[29]

Governance and corruption

Some have already attempted an assessment of NOCs-related risks in terms of climate as well as governance concerns, including bribery, graft, nepotism, and general political malfeasance. Sustainalytics assessed NOC exposure to industry-specific Material ESG Issues (MEIs) to find that most NOCs have severe risk scores, far higher than their IOC counterparts. While largely driven by their higher exposure to corruption and weaker governance structures, NOCs' ESG risks also stem from greater uncertainty in their ability to meet rising global standards over environmental and social protection.[30]

Similarly, in 2021, NRGI's Resource Governance Index found that most of the analyzed 21 oil, gas and mining state-owned enterprises from resource-rich countries lack basic elements of corporate transparency and financial accountability. As a result, a pressing need exists to strengthen

29 Ibid.

30 Berdowski, S. and Tiberiu-Mihai, O. (2022). The ESG Risks of National Oil Companies Taking Over Fossil Fuel Production from International Oil Majors. Sustainalytics. 23 February 2022. https://www.sustainalytics.com/esg-research/resource/investors-esg-blog/esg-risks-oil-companies.

integrity measures and adopt clear rules on commodity sales.[31] It is worth noting that, while raising essential questions around NOC climate- and governance-related risks, none of these assessments tackle specific investor risks related to stranded assets, which tend to be separated from conventional ESG metrics.[32] However, weaknesses in governance should give investors concern over NOCs' capacity to effectively manage the energy transition.

31 NRGI (2021). 2021 Resource Governance Index. Natural Resource Governance Index. 9 December 2021. https://resourcegovernance.org/analysis-tools/publications/2021-resource-governance-index.

32 Johnston, R. J., Blakemore, R., and Bell, R. (2020). The Role of Oil and Gas Companies in the Energy Transition. Atlantic Council. January 2020. https://www.atlanticcouncil.org/wp-content/uploads/2020/07/OGT-final-web-version.pdf.

Potential avenues for investors' influence on NOCs

NOCs' international "openness" creates a range of avenues for influence that investors can harness to manage risks. As with IOCs, shareholders can table resolutions for listed NOCs. Resolutions can range from calling for greater climate risk disclosure, to requests for 1.5-degree transition plans. Bondholders can pressure NOCs for higher sustainability standards. NOCs may not be as "unreachable" as investors perceive.

Stock exchange rules and regulations may be another route for engagement. In the case of Saudi Aramco's attempt at an international IPO, the Tokyo Stock Exchange was reportedly preferable to Aramco's managers over other major exchanges. Saudi officials believed the Tokyo exchange to have less stringent disclosure regulation and to pose lower litigation risks. Compared to the New York Stock Exchange,[33] Tokyo seemed the better option to reduce the extent of external influence over the Saudi government.[34]

The aforementioned pushback by London Stock Exchange investors against the exchange's attempt to bend rules to attract Aramco is an example of how investors can indeed influence NOCs or the financing environment that surrounds and supports them. Equinor, listed on both the Oslo and New York stock exchanges (with the Norwegian State as the largest shareholder with 67% of total shares), is an interesting case of ongoing shareholder pressure to become more climate-compatible. In January 2020, the company updated its strategy with a pledge to become "near zero" by 2030, partly in response to increased pressure from investors for more climate action by oil and gas majors. Equinor fully committed in November 2020 to being a net-zero energy company by 2050.[35]

Box 2 below illustrates the main points included in the shareholder proposals for Equinor's Annual General Meeting last year. Although none of the stakeholder proposals were adopted by the board, the proposals represent a concrete example of investor requests covering different areas of NOC activities, both domestically and abroad.[36]

In addition, NOC reliance on foreign investment and technical assistance in high-risk projects can

33 Reuters (2017). Saudi Aramco warned by lawyers on New York IPO litigation risks: FT. Reuters. 4 June 2017. https://www.reuters.com/article/us-saudi-aramco-ipo-idUSKBN18V12R.

34 Bhattacharya, S. and Said, S. (2020). A Tokyo Listing for Aramco Highlights Japan's Less-Stringent Disclosure Rules. The Wall Street Journal. 30 August 2019. https://www.wsj.com/articles/a-tokyo-listing-for-aramco-highlights-japans-less-stringent-disclosure-rules-11567170569.

35 Bade, D. M. (2021). Energy major Equinor steps up energy transition targets as part of net-zero goal. S&P Global Market Intelligence. 15 June 2021. https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/energy-major-equinor-steps-up-energy-transition-targets-as-part-of-net-zero-goal-65004014.

36 The motives behind stakeholders' requests are an interesting mix. On the one hand, there are pure financial concerns, such as in the case of Equinor's international investments and the company's exploration in the Norwegian sector of the Barent Sea. The former resulted in big financial losses over the past few years and the latter was deemed by proposing shareholders to be at risk of losses in the near future. On the other hand, stakeholders perceived a larger sense of civic responsibility and trust in their country's institutions. This manifested in some of the proposing shareholders stating their belonging to the Grandparents' Climate Campaign, their dual roles as shareholders and citizens, as well as the reference to the successful conversion of the fossil energy company DONG into the renewable energy company Ørsted decided by the neighboring Danish State.

Box 2: Shareholder Proposals for Equinor's Annual General Meeting

In the context of Equinor's ASA Annual General Meeting on the 11 May 2021, a number of the company's shareholders came up with a proposal to set short-, medium-, and long-term targets for greenhouse gas emissions of the company's operations and the use of energy products (including Scope 1, 2 and 3). The main requests put forward to the board of directors were (Equinor, 2021):

- Adopt quantitative targets for short-, medium- and long-term GHG emissions reduction;
- Report key information on both climate risk and nature risk;
- Stop all exploration activity and test drilling for fossil energy resources; and
- Present a strategy for real business transformation to sustainable energy production (including spinning-out Equinor's renewable energy business in wind and solar power to a separate company).

run both ways: oil majors, service companies, and the banks that back them are exposed to considerable risk if these projects are stranded. Yet this form of support opens an additional avenue for outside pressure, with investors and financiers in a position to condition continued financing on sustainability goals and objectives.

Other routes may be open for investors to exert influence over more "closed" NOCs that entail lower levels of investor exposure as compared to more "open" NOCs. Such routes exist when NOCs engage in international acquisitions: these assets often fall within jurisdictions open to climate-based litigation. Lawsuits targeting emissions from these assets can carry considerable financial impact on their NOC owners, much as investors perceive these impacts to rise for shareholders of IOCs.[37] While investors themselves may not necessarily be initiating climate litigation, investor support in the form of cooperation, data sharing, and other disclosure could be instrumental to prosecutors and state litigators.[38] Figure 3 on the following page provides examples of the span of NOC foreign-owned refineries.

NOCs comprise eleven of the twenty largest fossil fuel companies whose carbon fuels emitted 35% of the global total between 1965 and 2018.[39] Some of these NOCs have assets, operations,

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37 Muffett, C. and Feit, S. (2017). Smoke and Fumes: The Legal and Evidentiary Basis for Holding Big Oil Accountable for the Climate Crisis. Center for International Environmental Law (CIEL). https://doi.org/10.1163/9789004322714_cclc_2017-0135-006.

38 Setzer, J. and Higham, C. (2022). Global trends in climate change litigation: 2022 snapshot. London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science.

39 The NOCs included in the list of the biggest emitters are: Saudi Aramco, Gazprom, National Iranian Oil Co., Pemex, PetroChina, PDVSA, Abu Dhabi, Kuwait Petroleum, Iraq National Oil Co., Sonatrach and Petrobras; Climate Accountability Institute (2020). Update of Carbon Majors 1965-2018. Press release. 9 December 2020. https://climateaccountability.org/pdf/CAI%20PressRelease%20Dec20.pdf.

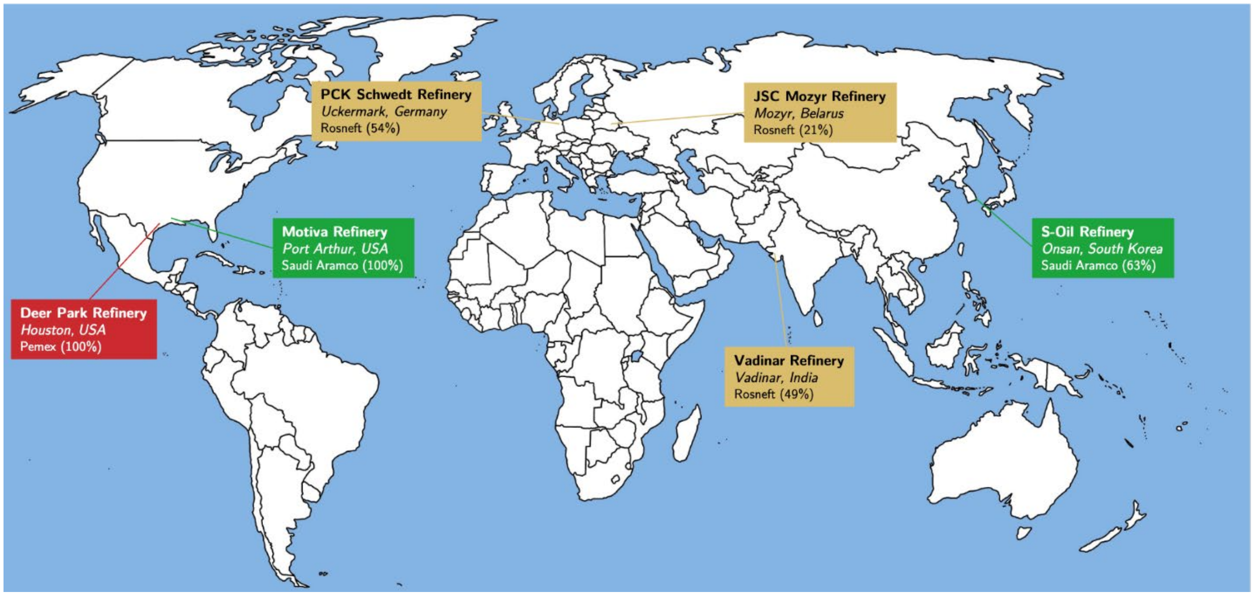

Fig 3. Examples of NOC investments in international refineries.
Percent ownership shown in parentheses as of June 2022. Source: Authors' calculations based on NOC reports.

production or sales in the U.S., such as Pemex, the Venezuelan PDVSA, Petrobras and Equinor.[40] In theory, this creates opportunities for litigation of their foreign-held assets on the basis of GHG emissions and their contributions to climate change.

Litigation opportunities against NOCs tend to be highly context-specific, depending on the company's degree of state ownership, its chartered purposes and legal structure. It may be easier to litigate a NOC on its clearly commercial-oriented activities than on what may be seen as state interests, in defence of which sovereign immunity could be invoked.

Nevertheless, influence on NOCs through litigation of foreign-held assets is more viable than it may seem at first pass. Equinor's drilling plans have recently been slowed down by court cases in Canada and Argentina.[41] Figure 4 highlights selected instances of past and ongoing overseas lawsuits involving NOCs as defendants alongside oil majors and other international, privately-owned companies.

40 Ibid.

41 Farand, C. (2022). Campaigners take Canada to court over oil extraction project. Climate Home News. 11 May 2022. https://www.climatechangenews.com/2022/05/11/campaigners-take-canada-to-court-over-new-oil-extraction-project/ ; Colombo, L. (2022). How people power helped save the Argentine Sea from oil companies. Greenpeace. 16 February 2022. https://www.greenpeace.org/international/story/52326/greenpeace-argentina-saved-argentine-sea-oil-companies/.

Lawsuit Name	Date of Filing	Reason for Litigation	Location of Incident	Type of Litigation	NOCs Involved	Other Actors and Main Companies Involved	Status
California communities' lawsuit against 37 fossil fuel companies	Jul 2017	Climate change compensation	United States	Domestic	Pemex, Equinor (formerly Statoil)	BP, Chevron, ExxonMobil, Eni, Shell, Total and others	Ongoing
Matanza Riachuelo lawsuit	Jul 2004	Pollution-related health damages	Argentina	Domestic	Petrobras	Government of Argentina, Government of the City of Buenos Aires, Dow Chemical, Shell and others	Closed
Amesys lawsuit	Sept 2011	Complicity in human rights abuses by the Gaddafi Government	Libya	Transnational (filed in France)	Saudi Aramco	Microsoft, Shell, Tesco, siemens, Texaco and others	Ongoing
RWE lawsuit	Nov 2015	Climate change threat	Peru	Transnational (filed in Germany)	Gazprom, Equinor (formerly Statoil)	Chevron, ExxonMobil, Glencore, RWE, Xstrata	Ongoing
Lundin Energy lawsuit	Nov 2021	Complicity in war crimes, Sudan	Sudan, South Sudan	Transnational (filed in Sweden)	Petronas (as part of the Lundin Consortium)	Lundin Energy, Danske Bank, Swedbank, SEB, Nordea Bank and others	Ongoing
Gas flaring lawsuit	Jun 2005	Environmental damages and human rights violation	Nigeria	Domestic	NNPC	Nigerian government, Total, Chevron and others	Ongoing
Baihua Caiga et. al., v. PetroOriental S.A.	Dec 2020	Gas flaring impacts on climate change	Ecuador	Domestic	PetroOriental S.A.	N/A	Closed
Greenpeace Southeast Asia and others v Carbon Majors	March 2018	Human rights violations due to climate change	Philippines	Domestic	Rosneft	Shell, ExxonMobil, Chevron, BP, Repsol, Sasol, Total and others	Closed
Office of Criminal Investigation v. Bayernoil	Dec 2018	Local pollution; gas explosions	Germany	Domestic	Rosneft	Eni, Varo Energy	Ongoing

Fig 4. Lawsuits involving NOCs, largely outside of their own national borders.
Data extrapolated by the authors based on information from BHRRC (n.d.), Sabin Center (n.d.) and Greenpeace Philippines (2019).

Negotiating exposure and influence: A way forward for investors

NOCs expose investors to myriad risks, but this exposure opens avenues for investor influence over NOC strategic decisions. Investors currently underestimate their level of exposure to NOC activities, as well as how much influence they may be able to exert over NOCs. Figure 5 considers exposure and influence as dimensions of possible action by investors to advance energy transition strategies within a range of NOCs.

On one hand, NOCs with equity or bond listings present the highest level of investor exposure and thus the most direct opportunities for investor influence. NOC involvement in high-risk projects and, more generally, joint ventures with oil majors or service companies still expose investors to considerable risks, but opportunities for influence are more indirect. On the other hand, potential routes to influence exist where investors do not currently face risk exposure, such as NOC ownership of foreign assets. And while typically not plaintiffs in climate litigation against oil companies, investors and financial actors can provide evidentiary and testimonial support to prosecutors and litigators representing the state.

Private finance opportunities—or international climate finance and development aid—for renewable projects carried out by NOCs is another route that could exhibit investors' influence over national oil companies. For example, investors could impose conditionality on financing for existing projects or outright ban new financing for future oil and gas developments. Few cases of this exist in current practice.[42]

Investor influence	**Direct**	Renewables Financing	Equity listings, Debt issuance
	Indirect	Climate litigation (foreign-held NOC assets)	High-risk projects and joint ventures*
		Low	**High**
		Investor exposure to NOC risks	

Fig 5. Investor exposure to NOCs vs investor influence on NOCs.
*These include unconventional projects, and more generally all projects that qualify as high-cost, technically challenging and long-lead projects.

42 One case that comes the closest is between Eni and state-owned Mubadala Petroleum in the UAE. In 2021, investor pressure on Eni led to a new MoU with Mubadala to cooperate in hydrogen and carbon capture and storage in addition to existing joint investments in gas; Reuters (2021). Mubadala Petroleum, Eni team up on energy transition; Reuters. 7 September 2021. https://www.reuters.com/world/middle-east/mubadala-petroleum-eni-sign-mou-cooperate-energy-transition-2021-09-07/.

However, there is potential for this route if implemented for a select sub-group of NOCs with the competencies and appetite to engage in such projects. Depending on company structure and wider risk profiles, these forms of financing may well represent cases of low investor risk exposure (due, inter alia, to the minimal climate risks involved) with opportunities for direct influence over NOCs.

What's next: Recommendations for investors and financial actors

For some time now, investors and financial actors have engaged on climate with international oil companies. While this has not yet yielded the progress needed for a 1.5C-compatible future, it has nevertheless facilitated important steps forward in terms of transparency requirements and climate-compatibility checks to which IOCs are held accountable.

Despite the urgent need, an equivalent rate of progress is missing with respect to NOCs. Here are a few steps investors and financial actors should follow to pursue financial frameworks that would allow them to manage the NOC exposure risks discussed in this report and engage with NOCs on climate-related issues. It is worth noting, however, that each of these represent important first steps towards more substantive actions by investors for NOCs to limit new oil and gas infrastructure expansion and begin to substantially decarbonize their activities:

Requiring NOCs to adhere to climate disclosure requirements to improve their transparency and prevent offshoring of emissions by IOCs to NOCs.

IOCs currently face increasing pressure to disclose detailed emissions data and climate-related risks to investors. The United States SEC has recently proposed requirements to disclose climate risks and consistent standards for reporting emissions by all listed firms.[43] The UK and the European Commission have adopted or proposed similar standards, in line with Taskforce on Climate-related Financial Disclosures (TCFD) recommendations.[44] Investor exposures described in this brief warrant a similar approach to climate disclosure requirements by NOCs, whether legally mandated by states in which NOCs operate or required as a condition by financial institutions for existing NOC financing. Not only would this further protect financial institutions from growing risks faced by NOCs, it would also create a level playing field across the industry to prevent further "offshoring" of emissions when IOCs divest from carbon-intensive projects.

43 US Securities and Exchange Commission, "Enhancement and Standardization of Climate-Related Disclosures."

44 Department for Business, Energy & Industrial Strategy, HM Treasury, John Glen MP, and the Rt Hon Greg Hands M. (2021). UK to enshrine mandatory climate disclosures for largest companies in law. Press release. UK Government, 29 October 2021. https://www.gov.uk/government/news/uk-to-enshrine-mandatory-climate-disclosures-for-largest-companies-in-law; European Commission (2021). Proposal for a Corporate Sustainability Reporting Directive (CSRD), 21 April 2021. https://ec.europa.eu/info/publications/210421-sustainable-finance-communication_en#csrd.

Developing and applying ESG frameworks to NOCs.

The extension of existing ESG frameworks to NOCs can be an effective tool for investors to assess their portfolio's alignment with climate ambitions and values of positive social impacts and good governance. NOCs have different corporate mandates than their IOC peers; these might imply a more complicated relationship with ESG goals.[45] Yet investors recently surveyed by Palacios and Wong (2021) tend to think that NOCs and IOCs are less different in terms of risks when it comes to the "E" in ESG. Given NOCs' role in capturing and distributing oil rents, as well as the importance of mitigating corruption and political capture that many NOCs may face, corporate governance also represents a particularly risky aspect for investors exposed to NOCs and should be a critical component of an NOC-targeted type of ESG.

Calling for banks to refrain from financing new NOC oil and gas expansion projects.

Commercial banks have a key role in financing NOCs involved in projects both within their national boundaries and internationally. As such, it is essential that banks introduce, as part of their assessment of transition risk and portfolio alignment with the Paris Agreement, specific rules banning any financing for new oil and gas projects by NOCs. Investors in such banks may play a crucial role in calling for them to stop lending money for financing oil and gas projects, included those managed by NOCs.

Investors and other financial actors may perceive their exposure to and influence over national oil companies to be limited. Yet in practice, there are several channels through which investors can impact NOC strategies to both minimize investor exposure to NOC risks and exert influence to advance NOC efforts to decarbonize. While efforts like increased disclosure and ESG standards by themselves will not be sufficient to ensure clean energy transitions among NOCs, they are nonetheless a necessary condition for NOC decarbonization. These efforts are crucial: NOCs are "carbon titans" that are simply too large to ignore in addressing the climate crisis.

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45 Palacios, L. (2021). The Impact of ESG on National Oil Companies. Columbia SIPA Center on Global Energy Policy, November 21, 2021. https://www.energypolicy.columbia.edu/sites/default/files/file-uploads/NOC%20ESG%20commentary,%20designed%20v2,%2011.12.21.pdf.

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