Why do DFIs struggle to mobilize private capital for development countries?

Insights from joint investment between Norfund and KLP pension fund.

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ONH Working paper 2/2026

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ONH Working Paper 2/2026
July 2026

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Abstract[1]

Many Development Finance Institutions (DFI) pursue profit maximization in development countries, arguing that demonstrated high returns will catalyze private capital mobilization — the “billions (of development aid) to trillions (of private investment)” aspiration. This paper examines whether this strategy works through a case study of the co-investment partnership between the Norwegian DFI Norfund and the pension fund KLP. Since 2013, the two institutions have jointly invested a total of NOK 5 billion (USD 0.5 billion) across 21 investment projects in development countries. Using investment-level data, I estimate that the partnership generated a nominal NOK internal rate of return (IRR) of 12.6% since inception, which is relatively strong compared with calculated counterfactual benchmark returns. Despite this performance, the partnership has not been replicated by other Norwegian institutional investor, and KLP has still only 0.4% of their assets in developing country projects. Drawing on key informant interviews and literature, I identify three reinforcing mechanisms that explain this weak mobilization: (i) systematic risk overestimation; (ii) illiquidity of investment, (iii) herd behavior arising from relative performance evaluation and career concerns at individual level and (iv) asymmetric reputational payoff where losses in development countries generate disproportionate negative publicity at company level while gains go unnoticed. These findings suggest that demonstrated profitability, while necessary, is insufficient to overcome institutional and behavioral barriers to private capital flows into developing economies. The paper discusses implications for DFI mandate design and blended finance strategy.

Keywords: blended finance, development finance institutions, private capital mobilization, herd behavior, home bias, Norfund, pension funds

JEL Classification: F21, G11, G23, O16

[1]This author is thankful to Norfund for providing information on all co-investment projects with KLP, as well as KLP and Norfund employees for sharing insights in their work, Viktor Bratberg for research assistance. I also thank Christian Wolff, Øystein Strøm, participants in NDCE 2025 and LASA 2026 conferences for fruitful comments. All remaining errors are the author’s own responsibility.

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1 Introduction

Norway is the country with the highest levels of development assistance relative to national income. Norway is allocating an increasing share of its development assistance budget to blended finance initiatives due to the growing attention to the lack of investments in development countries through the Addis Abeba Action Agenda launched in 2015 by the major multilateral institutions under the slogan “from billions (development aid) to trillions (of private investment)”.[2]

The raison d’être of ODA-financed Development Finance Institutions (DFIs) is to address the underinvestment of private capital in development countries both by injecting public capital and by mobilizing more private capital. This case study of 21 joint project investments between the Norwegian DFI Norfund and the Norwegian pension fund KLP investigates whether the outcome has been profitable or not, and, if so, why private investors are still reluctant to take part in Norfund’s investments in developing countries.

There are two main reasons why Western governments concerned about growth in development countries should invest in development countries. First, if the private investors are not rewarded for positive externalities of the project, then ODA subsidies (defined concessional capital in the finance literature) should close the gap between private and social return to increase economic efficiency. Second, misperceptions of risk and rewards may lead private investors to underinvest in development countries. Profitable DFI investments may alter investors’ perception of developing countries and lead private and institutional investors to invest.

Most DFIs appear to argue for the latter approach to induce private capital investments in development countries (Attridge et al., 2024; Leon, 2025b). This also applies to the Norwegian DFI, The Norwegian Investment Fund for Development countries (Norfund), which is seeking as high return in their defined investment universe as possible for both loans and equity.[3]

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[2] Official Development Assistance (ODA) constitutes 1.02% of Norway’s Gross National Income (GNI), far above the average of other countries in the OECD DAC average of only 0.33%, https://www.oecd.org/en/topics/official-development-assistance-oda.html

[3] The DFI that maximize return might still value more social aspects of the investment in contrast to their private counterparts in PE funds, e.g. only invest in socially desirable sectors (e.g. green energy instead of oil), induce better production methods (e.g. deforestation free value chains), treat employees more fairly, induce gender equality, etc. Some academics require that the FDI include concessional capital to for the project to be denominated Blended finance (BII, 2025), which will hence not be the case in this analysis.

However, there is also a third reason to use ODA in blended finance. DFIs investments by Western governments might have preferential access to information compared to private investors which facilitate the identification of profitable projects and governmental protection from breaches of contract. Part owned DFI projects will also induce higher public confidence at home. These advantages spill over to the private capital partners in the project and the related increase in expected risk adjusted profitability might mobilize investors that otherwise would have shunned development countries.

This study investigates whether Norfund has the intended catalytic effect of mobilizing private investment. It explores the joint investment collaboration between Norfund and the Norwegian pension KLP over 13 years. Norfund claims they can invest profitably in commercial terms. There are no subsidies for the investees, and the financial subsidies of their invited private partners are minimal, i.e. Norfund requests less project screening and project follow-up cost recovery from the private project investors than a private equity (PE) fund would have done. Norfund proposes projects and is responsible for their management, KLP evaluates and then decides which projects to join. KLP trust Norfund to identify projects with high potential to succeed and manage their joint ownership of the projects.

KLP and Norfund own respectively 49% and 51% of the two joint investment companies KNI AS and KNI India AS, which have invested nearly USD 0.5 billion (NOK 4.9 billion) in 21 projects in development countries since 2013. It is a financial success with Internal Rate of Return (IRR) in nominal Norwegian Krone (NOK) for this portfolio of 12.6% per year since inception by the end of 2024 (see appendix 8.2). KLP informants considered this result to be in line with other comparable investments.

This collaboration has therefore been financially successful, and the return is approximately 2.5 times higher on this portfolio in development countries than the overall revenue from KLPs investments at 5.5% per year (see annex 8.5)

However, the demonstrated high return has not led other private financial institutions to enter similar joint investment cooperation with Norfund. Furthermore, KLP has only gradually slowly increased its investment in diverse types of development country projects. They are just now approaching the initial maximum set by the board for investments in development countries at USD 0.5 billion more than 13 years ago, which constitutes less than 0.4% of the total management capital.

So why do other private capital actors not buy into Norfund's invitations to co-invest despite high returns? The standard response is high risk and the difficulty of selling projects in development countries. However, pooling projects reduce the risk of the whole portfolio compared to each stand-alone project, with KNI projects in several countries, sectors and regions and hence suggest a hedging element, i.e. limited or even negative correlation of return between them. The illiquidity question is a true cost that is hard to remedy. Another response is the "truism" that past returns does not necessarily reflect the expected return in the future. Anyhow, if realized return is repeatedly observed to be above the calculated required return at the given project risk, a logical conclusion would be that the capital market tends to overestimate risk, and hence underestimate return, in development countries.

Key informant interviews and literature indicate that private investors nevertheless appear reluctant to participate due to diverse types of home bias and adverse reputational effects both at individual and company level. Furthermore, benchmarking indicates that specific stock market has given higher returns and competition from other DFIs with concessional capital elements might be more attractive than co-investing with Norfund.

2 Theory, literature and methodology

2.1 Lack of results

Poor countries need capital to invest in production and infrastructure to bring the population up to an acceptable living standard and will need to invest to construct low carbon intensive societies according to the Paris agreement to prevent global warming. The ambitious goal of satisfying all United Nations (UN) Sustainable Development Goals (SDG) is estimated to require USD 4.2 trillion a year of investments in development countries that are far above the current investment level (UNCTAD, 2023)[4]. First, poor countries simply do not have sufficient financial resources themselves. Second, the required amount is more than rich countries are able and willing to donate. Third, private capital is reluctant to invest such large amounts of money in poor countries.

[4] Total FDI inflow to development countries was just USD 0.87 trillion in 2024 according to UNCTAD, see https://unctad.org/news/global-foreign-direct-investment-falls-second-consecutive-year-posing-acute-challenges and at the level of total global investment in infrastructure at 4.4 trilliog USD, see https://www.pwc.com/gx/en/news-room/press-releases/2026/pwc-2026-global-infrastructure.html.

Mobilizing investment funds to development countries through blended finance became a cornerstone of development aid in 2015 through the Addis Abeba Action Agenda. [5] The core idea of blended finance is to use ODA funds to subsidize private sector investments. A rather small sum can tip marginally unprofitable projects to become marginally profitable. The limited ODA funds can induce huge amounts of private investment in development countries, hence the motto "from billions (ODA) to trillions (in private investment)" (Attridge et al, 2024). However, the mobilizing effect has so far been disappointing. Attridge and Engen (2019) estimate that USD 1 of DFI and MDB investments only mobilize respectively USD 0.75 in development countries and USD 0.37 in low-income countries, implying "from (some) billions to (more) billions" to be a more realistic slogan.

2.2 Social above private return

Why do few private investors finance projects in development countries? The immediate answer is the lack of profitable investment opportunities due to low development level in these societies. A poor population cannot pay for consumer goods. Furthermore, low education levels combined with dysfunctional institutions induce low productivity in the economy. Even export oriented projects in natural resource abundant countries can become too costly and risky to be lucrative for national or foreign investors.

Private investment in production complement public investment in education, infrastructure, and other public goods in the light of the traditional big push approach, i.e. all sectors are reinforcing and must improve in parallel to avoid bottlenecks (Murphy et al, 1989). Alternatively, funding of private projects will increase private income and hence taxation for public services and infrastructure improvement. The investor is in general not rewarded for the general growth effect on the economy that stems from their investments. Subsidies are hence justified in closing the gap between private and social outcome of investments.

There are also a number of project level externalities that can justify subsidies. The first company to successfully establish production units in new localities, e.g. making a solar panel farm functions technically and economically in new geographical, climatic and society setting, reduces the perceived and real risk for similar projects in the future if successful, or prevent others from repeating

[5] Blended finance was launched to induce growth in development countries in 2015 jointly by UN, IMF, and WB at the same time as the UNFCCC Paris Agreement alongside and the Sustainable Development Goals (SDGs). The capital stock of institutional investors in Europe is estimated to be USD 26 trillion and hence represent a yardstick for investments that are needed for development (BCG, 2021).

the failure in the future if proven to be unprofitable (Collier et al, 2020).[6] In addition, investor are seldom paid for reductions in CO_2 emission and pollution which drives a wedge between the private and social return to investments.

2.3 Overestimated risks

Overestimation of absolute risk in development countries is a well-known home bias phenomenon. If the investment management has limited insight into local conditions, the assessed risk tends to be higher than the real risk. An overestimated risk will lead Western investors to require super profits to invest in development countries.

There has been a long debate of whether credit risk rating agencies like Moody's, Standard and Poor's and Fitch have overestimated the risk of investing in development countries. The International Finance Cooperation (IFC), the DFI branch of the World Bank, analysis on the newly released statistics from the Global Emerging Markets Risk Database (GEMs), a consortium of 26 MDBs and DFIs pooling their credit risk data, provides a way to analyze the risks in a more nuanced way. They identify 2,000 defaults out of 15,000 loans in development countries. An IFC study finds that the actual default rates are considerably lower than the estimate Standard & Poor historical country sovereign ratings for low-income countries and on the contrary higher in high-income countries, i.e. respectively 6% realized and 14% assessed default rate for the former and on the contrary 2.3% vs. 1.7% for the latter (Galizia and Lund, 2024).

2.4 Alternative explanations

2.4.1 Herd behavior and asymmetrical reputational behavior

Herd behavior refers to the tendency of investors to mimic other actors rather than to assess independently what their optimal action should be. The reason is that both people and companies are rewarded asymmetrically if they deviate from "normal behavior" (Barham, 2023; Scharfstein and Stein, 1990). The business leader or investor needs the confidence from boards and banks, while employees need the acceptance from their superior. The behavioral economics literature emphasizes how actors are rewarded asymmetrically for deviating actions. Success is acknowledged, but failure might lead to ostracization by their peers and money providers like banks

[6] DFI funded projects are furthermore expected to defund their experiences and thereby increasing the learning externality (De Aghion, 1999)

that financial investors. Failing together is hence better than succeeding alone. Keynes (1936, p. 157-158) stated nearly a century ago:

> “…it is the long-term investor, he who most promotes the public interest, who will in practice come in for most criticism, wherever investment funds are managed by committees, boards, or banks. For it is in the essence of his behavior that he should be eccentric, unconventional, and rash in the eyes of average opinion. If he is successful, that will only confirm the general belief in his rashness; and if in the short run he is unsuccessful, which is likely, he will not receive much mercy. Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally.”

Investing in development countries carries a huge risk of negative publicity from small unfortunate incidences that in an OECD setting might even be found acceptable. Most Western people’s perception of their historical relationship with the poor people in the South falls into two extreme categories. Either selfless economic support to people in dire needs, e.g. missionary association in rural Norway knitting cloths to the “freezing” people in the South, or exploitative economic relationships in close to slavery-like productions systems or underpayment for natural resources through corruption practices. It seems hard for the public to understand and accept that pure market transactions based on the “willing seller, willing buyer” principle, might be in the interest of both parties, compared to the alternative of no agreement between the parties.[7] Furthermore, a failure will be met with schadenfreude since people believe you became too greedy lured by high returns in poor risky countries.

There is hence a risk that any investment in development countries will be scrutinized harder by the press and furthermore judged harder by the public than what would happen in a similar incident in the Western world. Such bad publicity will possibly spill over to the private investors’ other far more important economic activities at home. Their employees of the Western companies typically associate with their leadership, and bad press from minor investments in development countries reduces their sense of doing the right thing and their loyalty to their company. The investments in

[7] The popular perception of economic exploitation carries some reality since substantial risk leads to many failures, which must hence be balanced by super profits in the successful projects for the overall portfolio give a reasonable overall return.

development countries might even constitute an Achillies heel of their economic empire, being prone to attacks by both ideological NGOs and business competitors.

2.4.2 Lower incentives with defined benefit pensions systems

Most public employees' pensions in Norway are covered by a *defined benefit* pension plan insurance system which indicates they are guaranteed a certain income independent of return on the invested contributions. This contrasts with a *defined contribution* pension plan where the pension contributors become part-owner of the pension fund and thereby receive a share of the funds' return on investments.

KLP applies the defined benefit system and is hence forced to achieve a minimum rate of return on investments over time to comply with their future legal responsibilities under EU's Solvency II regulation. Pension funds like KLP are motivated to look for moderate expected return elsewhere and rather accept the risk increase attached with low OECD interest rates approaching 0% after the financial crisis in 2008. As a mutually owned company, having several bad years in a row will tear on equity capital and weaken the solvency position. In worst case the company may have to ask their owners for capital injection.

Such defined benefit pension funds hence tend to invest more in risky assets with higher expected income and medium volatility to keep long term returns well above zero percent. There is hence similarly an incentive to return to less risky investments in OECD when the interest rate increases.[8]

2.4.3 Other home biases

Different forms of home bias is a complementary explanation. There are information asymmetries, transaction costs, exchange rate risk, corporate governance concerns, familiarity bias, national loyalty, overconfidence in own markets and aversion for loss in foreign markets.

Levis et al. (2016) describe various forms of home bias. Tesar and Werner (1995) find a strong home bias in five OECD countries despite the gain from international diversification.

[8] The press at that time were full off seemingly irrational statements indicating that the zero interest does not give any return and thereby the capital owners had to find other investments markets with higher expected returns. It seems like the investors did not consider the possibility of negative returns. In general, low interest rates led pension funds to invest more in private equity, see https://www.ft.com/content/e4ae2283-0787-4f57-a23c-aa43d55c6745.

2.4.4 Undervalue non-monetary returns

There is a risk that financial investor identity of the DFI employees and directors risk leads them to overvalue measurable monetary returns, to which they are ultimately assessed by their peers, and undervalue social, environmental, poverty reduction and employment outcomes which is the real purpose of the DFI.

2.5 Methodology and data

According to the theory of home bias, asymmetric reward, overestimated risk and other issues indicated in the preceding chapter, Western capital will underinvest in development countries compared to optimal risk adjusted returns. The first step in the analysis is to calculate the actual return on investment by institutions that do invest in development countries. The second step is to compare this outcome with alternative investment in OECD countries. The third step is encountering explanations for possible underinvestment through qualitative interviews and academic literature.

Norfund has calculated the return on 21 co-investment projects with KLP since inception in 2013 up to end 2024 on behalf of this author. I then benchmark with return on listed shares on different stock exchanges. The study interviews several key informants in KLP and Norfund, as well as other actors within the financial sector and development aid bureaucracy about observed strategies, as well as explanations for seemingly lack of interest in development countries investments. Finally, I use evidence from the financial and behavioral economic literature to inform the observed outcomes.

3 Norfund's mandate, strategy and results

3.1 The total portfolio

Norway has taken the aim of 1% of GDP in development aid seriously as the allocated NOK 58 billion (USD 5.8 billion[9]) in the state budget for 2024-25, which constitute 1,01% of Gross National Income (GNI) and thereby surpass the ambitious target (MFA, 2024a).[10]

Norfund received NOK 2.7 billion in 2025 over the state budget, equivalent to 4.6% of total Norwegian development aid over the state budget, which emphasizes that "Norfund is Norway's main instrument to invest in businesses that contribute to job creation and poverty reduction in development countries" (ibid, p. 167). The allocation is separated into two different lines in the budget. One line is the general transfer to support Norfund's main activity of development, job creation and poverty reduction mostly in Afrika, hence denominated the Development Investment Mandate (DIM). The other line is a separate allocation to reduce greenhouse gas emissions in development countries that is popularly denominated The Climate Fund, but this publication will rather apply the Norfund preferred term Climate Investment Mandate (CIM).[11]

DIM instructs Norfund to create jobs and reduce poverty to improve lives by investing in businesses that drive sustainable development (Norfund, 2025). This mandate targets 30 poor countries, mostly in Sub-Saharan Africa and Asia, based on the three criteria *Competence*, i.e. Norfund has solid market knowledge of and expertise in these countries, *Additionality*, i.e. the projects have considerable investment needs, but few alternative investors, and *Attractiveness*, i.e. the country has sufficient investment opportunities within Norfund's investment area. Norfund is expected to ensure that portfolio companies in the projects referred to as investees, are sufficiently profitable to ensure a continuation of their activity after a Norfund exit.

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[9] The exchange rate between USD and NOK has developed over time, from NOK/USD 6 in 2014 to 11 NOK/USD 11 in 2024. This article will mostly apply nominal values in NOK which is the preferred reference currency by Norfund as well as KLP and apply (the average) NOK/USD 10 exchange rate whenever a reference to USD is needed.

[10] Chapter 140-172 in the Norwegian state budget is defined as development aid in line with OECD-DAC standard and methodology.

[11] Norfund receives in addition a third allocation of USD 25 million (NOK 250 million) over the state budget to support Ukraine which is similarly denominated the Ukraine Investment Mandate (UIM) which will not be integrated into this analysis as the country is not categorized as a development country.

DIM resources are allocated to Norfund's four main investment areas: (a) Renewable energy, i.e. electricity production and distribution from solar and wind farms, and some biomass; (b) Financial inclusion, i.e. microfinance and loans to banks; (c) Scalable enterprises, i.e. small and medium enterprises (SME) with potential to grow; (d) Green Infrastructure, i.e. water, wastewater and waste management. Norfund's DIM portfolio was NOK 46.6 billion as of 31st December 2023 with an 7.8% IRR in nominal NOK since inception of the fund (Norfund, 2025, p. 90).[12]

The CIM on the other hand only requires Norfund to reduce greenhouse gas (GHG) emissions in an OECD Development Assistance Committee (DAC) classified developing country. Most investments are hence in the renewable energy sector, and the core partners are reduced to Asian and one African medium income countries (Norfund, 2025, p.32).[13]

CIM was established in 2022 and has only NOK 2.1 billion invested in 2023 with an IRR since inception of 20.4% by the end of 2023. CIM is expanding rapidly since they were allocated an additional 2 billion NOK granted in 2024 over the state budget and Norfund in addition transferred "free" DIM funds to CIM. [14]

It follows that Norfund achieve a much higher return when they put less emphasis on job creation and poverty alleviation since they are free to invest in the profitable climate project and country on the list.

The CIM also requires competence, additionality and attractiveness in line with DIM. Most CIM investments are directed to production and transmission of solar-, wind- and some bioenergy converted to electricity. The business concept for such green energy sources is simple. Both new and existing fossil-based electricity production plants require small investments, but the operating cost is high since the feedstock is expensive fossil fuel. New green energies like solar and wind energy, on the contrary require large upfront investments, but the operating costs are minimal since sun and wind are a free feedstock in production. Discounting future costs at low interest rates in OECD

[12] Norfund report to have received from the government NOK 1.7 billion under DIM and NOK 1.0 billion NOK over CIM in 2024, with an additional NOK 0.25 billion in base capital for the new Ukraine fond under Norfund third mandate, the Ukraine mandate (Norfund, 2025). The total capital contribution over the Norwegian state budget in 2024 amounted to NOK 2.9 billion (Norfund, 2025, p.164).

[13] India, Vietnam, Philippines, Cambodia, Indonesia, Sri Lanka, Bangladesh, and South Africa.

[14] The increase of CIM funding was a requirement from the Green party to accept the overall state budget for 2026. It was meant to compensate for the laps of the initially accorded increases of the CO2 taxation in Norwegian transport fuels. The Green party hence implicitly accept the principle of international trade in CO2 emission reductions. https://www.panoramanyheter.no/klimainvesteringsfondet-statsbudsjett2025-statsbudsjettet/klimainvesteringsfondet-far-to-milliarder-ekstra/409839

countries to calculate the net present value of the energy cost indicates that green energy is the most profitable option, while fossil fuel fed electricity becomes more profitable at higher interest rates in development countries. Whether costs come early or late, and the level of interest rate on capital, is decisive in the choice between investments in green or fossil energy.

The return on CIM investments will hence be higher than DIM investments. However, climate investments are not necessarily more profitable than investments in other sectors in development countries. Private investors might hence prefer to enter these sectors or prefer listed stock market listed companies. CIM investments implicitly include subsidies if Norfund could have invested with higher risk adjusted returns in other sectors from a pure financial point of view.

Incomplete contracts characterize development countries with often dysfunctional legal systems. Project specific investments might have few other alternative uses and buyers might not respect initial commitments, but rather "re-negotiate" since they know investments are sunk costs to the plant owners who has no alternative outlet markets known as the hold-up problem in industrial organization of the so-called hold-up problem in finance.[15]

On the other side, there is still a considerable upside for CIM investments as Norfund's climate projects are still not remunerated for their GHG emission reduction effect. This will hopefully be realized in the future to secure that private return equals the social return of investment projects. The United Nations Framework Convention on Climate Change (UNFCCC) Paris agreement (PA) §6 now opens for international trade in GHG emission reductions for Nationally Determined Contributions (NDC) fulfilment, i.e. agreed CO2 emissions level by country.

One solution is that host countries allow the issuance and sale of internationally tradable CO2 emission reduction certificates or pays for GHG emission reductions to fulfil their own NDC pledges. Another way would be to tax GHG emissions and thereby strengthen the competitiveness of green energies and increase profits from Norfund's green energy investments.

[15] Energy supply in development countries has long suffered from time inconsistent agreements. The solution has often been to build movable powerplants, for example moored in the harbour of large cities. The owners can then threaten to move the whole powerplant in case of defaulting payments, something which reduces the host country's ability to renegotiate the contracts.

Such international trade in GHG emission reductions under PA §6 has just started since there is just one transfer of carbon emission reduction certificates carried out so far[16] Reported Swiss willingness to pay is about 30-40 USD/tCO2e, well above single digit numbers at the voluntary carbon market prices (Wiig, 2025). However, the price of CO2 emission reductions is expected to rise to the marginal abatement cost in a truly global carbon market, e.g. 150 USD/tCO2e as in Norway today (NEA, 2025).

3.2 Mandates open for interpretation

3.2.1 Guidelines

Norfund was created as a Norwegian special state enacted company with the passing of what has been short named The Norfund Act in 1997. The Norwegian MFA is the formal owner on behalf of the Norwegian state. Guidelines for investments is written in several separate documents like (i) the Norfund Act, (ii) the articles of association of Norfund as a state enacted company that were updated by the Norfund general assembly in 2017, (iii) the annual state budgets allocating resources to Norfund and (iv) the annual instruction letters for grant under respectively DIM and CIM (MFA, 2022; MFA, 2024a; MFA, 2024b; Norfund, 2017; GoN, 1997).

These guidelines are rather general and hence open for interpretation. This analysis does not aim to trace the process of deciding Norfund's investment strategy. We assume multiple actors influence both directly and indirectly, i.e. the MFA as owner and the government as such represented by the prime minister, while other ministries and institutions including NGOs, the labor union and companies or even foreign governments and other entities might have indirect influence on the choice of Norfund investment strategy. The parliament has the final say through the acceptance of the annual transfers in the proposed state budget.

3.2.2 Interpreting blended finance

The traditional approach to blended finance is that governments and philanthropic capital subsidize the investments in some way or another, denominated concessional rate of return or concessional

[16] These are denominated Internationally Transferable Mitigations Outcomes (ITMOs), which equals one ton of GHG emission reduction, between Thailand and Switzerland to reward the electrification of public buses, see https://www.klik.ch/en/news/news-article/first-ever-itmos-for-ndc-use

interest rate, for part of the capital requirement, while private capital invest the rest with the expected market rate of return.

The argument for subsidies is that the social return of investment is higher than the private return of investments, e.g. due to positive externalities to society for which the investor is not remunerated. There are several possible positive projects externalities in Third World countries. Imminent examples are clean green energy production or treatment of residual wastewater that reduces environmental pollution, greenhouse gas (GHG) emission, and health problems. However, nearly any economic activity in development countries has some kind of positive externality as it leads to the modernization of the economy. The successful establishment of a given industry where no such industry exists is a type of innovation that reduces the perceived risk for other investors and furthermore a source of knowledge, employee, and infrastructure overflow to entering projects according to cluster theory (Porter, 1998). Norfund informants report that technology risk for example in solar panels in Mozambique is reduced to zero as their project has demonstrated how it can be done.

3.2.3 Following IFC

Flammer et al. (2024) analysis 173 blended finance projects involving concessional finance by the International Finance Corporation (IFC), the private investment branch of The World Bank.[17] The conclusions are relevant also for Norfund.

The IFC calculates the monetary value of the diverse types of concessionary support and services under five requirements to the projects[18], e.g. subsidized insurance with a first loss guarantee has a monetary value even if the projects are profitable. The authors find that 5.2% of the total investment value in the 173 IFC project were concessional, i.e. a de facto subsidy/gift. The variance in the

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[17] The five IFC principles are: (1) a rationale for blended concessional finance. i.e. the financing goes beyond what is available from the market and should not crowd out the private sector; (2) crowding- in and minimum concessionally, i.e. the financing contributes to catalysing market development and mobilization of private sector resources, with concessionally not greater than deemed necessary; (3) commercial sustainability, i.e. the impact achieved by each operation is expected to be sustainable and contribute towards commercial viability; (4) reinforcing markets, i.e. the financing addresses market failures effectively and efficiently minimizes the risk of market distortion or crowding out private finance; and (5) promoting high standards, i.e. adherence to high standards, including in areas of corporate governance, environmental impact, integrity, transparency, and disclosure (IFC, 2018).

[18] The projects received concessional support through loan financing (34%), equity (16%), risk reduction (15%), first loss guarantee (13%), risk sharing facility (4%), interest rate buy-down (2%) and performance-based incentives (24%).

concessional share is 7.5 percentage points which reflects that some projects receive much support and others hardly any. This is a significant positive correlation between the projects' share of concessional financing and social impact of the projects instrumented by the number of UN Sustainable Development Goals (SDG) contributed. Furthermore, the degree of concessionally is significantly higher for projects in countries with a higher degree of political risk and information asymmetries (Flammer et al., 2024). IFC hence uses their concessional finance in a development-oriented way as they subsidize projects with externalities in countries where capital costs are high rather than seeking the highest return within a certain investment category.

However, IFC in addition invests in commercial terms in the same projects. IFC hence give free or subsidized handouts with one hand and strictly business with the other hand. 59% of the total investment costs in the 173 projects is financed by IFC loans and equity on mostly commercial conditions.[19] It is an open question whether few private investors were interested at the offered conditions, or if IFC simply take the insider advantage given by their concessional support to close a good investment deal with their non-concessional funds.

3.3 No concessions and high returns

Other DFIs are also investing commercially in line with the IFC example. Norfund approach under the CIM is even more radical as concessions are deemed unnecessary. They believe the negotiated terms with initial project owners shall be sufficiently profitable to secure a return which more than compensates for risk taken. Anyhow, Norfund claims Western private capital are not willing to invest on the same terms, hence their investments are additional. The reason is that investors tend to overestimate risk and thereby underestimate the risk adjusted return on investments.

This type of home-bias effect explains why Western investors are not willing to enter emerging and development countries. First, they tend to lack detailed information on specific national and sector markets and are often unable to differentiate risk and institutional realities by sectors and regions within a given country. Hence, they tend to overestimate the political, production, climate and social risk affecting a given investment project. They often interpret previous bad experiences in sectors and countries in a given moment in time to be generally valid and furthermore extrapolate to other

[19] "It is common for the IFC to also provide financing at market rates in the form of regular (that is, non-concessional) debt and equity. On average, 44.3% and 3.5%, respectively, of the project cost is funded in this fashion. Summing up these numbers, 58.9% of the project cost is financed by the IFC. The remaining 41.1% is financed through private markets" (Flammer et al, 2024, p. 16)

markets and geographical locations which for them is perceived to be similar. Norfund hence claims to screen potential projects more efficiently than Private Equity (PE) funds do. The real risk in Norfund investment projects is hence often lower than what is perceived by the capital market.

Finally, Norfund as project manager, acts on behalf of the private joint investors indicates that the latter does not need to acquire detailed knowledge of all development markets. At the same time, KLP requires Norfund to maintain their focus on profits rather than other development goals such as economic development and poverty reductions to be a trustworthy partner to identify and propose projects for their KNI collaboration.

The DFI Norfund hence acts like a traditional private PE fund in the CIM projects with the main motive to maximize income within the fund's sector/country restriction. The additionality requirements can still be satisfied if private capital refuses to participate for example due to overestimated risk or herd behavior. Furthermore, Norfund reinvests profits in other projects in development countries rather than to withdraw the funds back to Norway.[20]

The policy of Norfund is also to introduce "good social values" like gender equality, labor rights and non-discrimination in the operation of the company which in OECD-DAC terms is coined "value additionality". Norfund hence still fulfils the criteria for being an FDI and the government grants can be filed as development aid under OECD-DAC rules.

If Norfund fulfills the additionality requirements by not crowding out private sector, this shows that private investors require an even higher expected return on their investments projects in development countries. Norfund could hence alternatively have competed on these projects and thereby earn more money. The difference between the return on the current portfolio and counterfactual fully commercial possible portfolio can hence be considered a type of subsidy (Wiig and Torvanger, 2024)

3.4 Overestimated risk and herd behavior

Both former and current Norfund employees stress that "herd behavior" to some degree can explain their limited success in recruiting private capital to take part in their investments in development countries.

[20] However, all values will be returned to the Norwegian state if the funds are terminated (MFA, 2022).

Scharfstein and Stein (1990) built a game theoretical model of the financial sector of Keynes herd behavior claim. An investment manager will be judged and rewarded as either “dumb” or “smart” investors based on (i) return on the investment and (ii) whether others invest similarly. Publicly known investment behavior indicates that sequential followers will weigh in first movers’ decisions with the signal they receive themselves. This leads to copy-cat behavior since overall losses will not give a bad reputation when the majority invested equally, while failure while other succeeds will cost you the job.

Most empirical studies prove herd behavior in finance indirectly. Morck et al. (1988) finds that top management tend to be fired more often when their performance is relatively bad compared to other top managers in the same sector rather than compared to top managers in all sectors in general. They interpret this signal to mean that the board can only fire directors that do worse than other directors within the same sector. A manager maximizing his/her possibility of remaining in the job will hence copy the behavior of other managers within the sector.

Several empirical studies of PE fund managers confirm herd behavior out of career concerns. Chevalier and Ellison (1999) collected information on 453 portfolio managers and find that young managers take less unsystematic risks. The probability of contract “termination”, i.e. to be fired, increases when performance is below average performance, but does not decrease when performance is above average. They claim this verifies the assumption of asymmetric rewards found in the theoretical herding models of behavioral finance.

3.5 Additional and catalytic

Norfund negotiate with the investee to maximize their share in the project for a given financial support, or to pay as low financial support for a given share, as possible. These negotiations can be regarded as an auction where the investee invites several possible investors to bid for the offered stake in the project. The concept and claim of “additionality” are hence dubious since other investors would have entered on marginally less favorable terms in the absence of a bid from Norfund.[21] The additionality requirement, operationalized as a dummy variable, either yes or no, is hence not fruitful for investment decision-making and should rather be replaced by a sliding scale (Carter et al, 2021).

[21] “The winners curse” is auctions means that the highest bidder has by definition lost money since no other values the object similarly high, i.e. the resale price is always lower than the winning bid.

Norfund defines financial additionality in practice as whether the country, region and sector lacks investment capital rather than evaluating each project. If yes, they can invest independent of the specific condition for a given project.[22] However, they admit it is often a tradeoff between additionality and capital mobilization. An investment in Mozambique is clearly additional as no other will invest in this country and they have hence also a limited ability to mobilize private capital to be part of the project. Similarly, other investors might be interested in financing a project in Egypt and India and the additionality is hence low, while, on the other hand, Norfund is then able to mobilize other partners and are hence catalytic.

Norfund's definition of financial additionality is broader than the OECD definition. "An investment is financially additional when the private sector partners are unable to obtain financing from capital markets (local or international) for a specific activity at the necessary terms and/or scale, or where it mobilizes finance from the private sector that would otherwise not have been invested.[23] The first part of the sentence is normally defined as financial additionality, while second part indicate that the investment is *catalytic*, i.e. have a *catalytic* effect. Either-or will hence qualify for Norfund investments. This demonstrates that a project financed by (i) mobilized (foreign) private capital can still crowd-out other (local) investors, hence not additional or (ii) only by DFIs without private capital, hence not catalytic, will be defined as blended capital by Norfund.

The strategy to induce catalytic co-investment with Norfund is just explicitly formulated in the UIM. This mandate for investments in Ukraine explicitly states that "The Ukraine Fund shall contribute to the mobilization of private capital by private investors investing together with the fund or inspired by the fund." (MFA, 2024b). Neither the mandate for DIM nor CIM require that the investment shall be catalytic but still indicate that "The fund can collaborate with .... including Norwegian and foreign companies" (MFA, 2022; Norfund, 2017)

The updated mandate for the CIM only states that "The fund shall contribute to triggering investments in renewable energy that would otherwise not be carried out." (ibid). It does not explicitly require "catalytic investments" or give any instructions on how both financial additionality and catalytic shall

[22] This implies that profitability of the actual project, i.e. income potential and production reflected for example in the energy potential of a waterfall for hydroelectricity, is not evaluated by the investment team once the country, region and sector is found to lack investment capital.
[23] https://www.norfund.no/annualreport-2023/this-is-norfund/additionality/

be implemented in practice. However, the UIM formulation might reflect a change in the Norfund management strategy for both DIM and CIM without leading to explicit changes in mandates.

The latest DFI trend is to finance projects and exit as soon as private actors are willing to buy. By speeding up the divestment and reinvestment recycle will the DFIs be able to realize more projects in shorter time and thereby induce a stronger development effect (Gregory and Alarcón, 2025). Another approach is to buy future income streams from private projects which release funds for formal project owners to reinvest in other project developments.

Norwegian regulations limit Norfund ownership to 49% of a company and they hence always invest together with others. However, they experience that mostly DFIs and public entities are willing to co-invest in risky projects while it is possible to mobilize private capital in less risky projects (Sbertoli, 2024). When applying the OECD calculation methodology that only attributes private capital and not public capital to the DFIs investors, they estimate that their CIM equity investments attributed (mobilized) 2.7 times more private capital (ibid).[24] Their rule of thumb is that they are on average able to mobilize twice their own equity investment from both public and private sources for all funds, which will furthermore make it possible to loan seven times more on the market. Their initial equity contribution will hence be multiplied into a 10 times larger realized investment (ibid). Norfund informants also emphasizes that the OECD methodology to measure mobilization does not include financing that is achieved at a later stage due to the initial investment. They often experience that investees become bankable due to the Norfund entry into the company. Other institutions tend to consider Norfund involvement to be a "stamp of approval" both regarding the income potential and the transparency and professionality in the management of the company.

However, this analysis does not consider the risk of crowding out private capital. Leon (2025a) finds that DFIs lending to banks in Africa reduces the banks growth rate by 8 percentage points. The explanation is that more profitable DFIs financing require disproportional administrative capacity, and the African banks with limited human capital will then have to terminate other activities to administrate the DFI loans.

[24] There seems to be a general confusion on how to measure the capital mobilizing effect of blended finance. NORAD misguiding claimed, "multiply 50 times" (Sbertoli, 2024).

4 The KLP and Norfund co-investments experience

4.1 Initial agreement

The public employees' pension fund KLP[25] is the only private investor that has co-invested in traditional projects with Norfund over an extended period.

The process started when CEO Sverre Thornes during a hunting trip to Zambia in 2007 observed that a farmer who irrigated with water pumped from the river would achieve 5 times higher yields than his neighbors. Puzzled, the owner explained that the others did not undertake the seemingly profitable investment due to lack of capital. Back home, Thornes initiated a discussion believing that the organization would be more open to entering unknown territories as seemingly well understood and analyzed markets failed under the financial crisis, leaving mature markets just as risky as emerging markets.

They were first involved in a microfinance initiative joint with Norfund and other institutional investors in 2008 where Norfund contributed 300 million NOK and each of the four private capital partners contributed 75 million NOK each. Then KLP alone invested a minor sum in the Omega Smartbuild housing project outside Kampala, Uganda, in 2011. The seller of the land withdrew from the contract at the last moment. They would probably have won a legal action, but time and costs would surpass possible profits. He realized that single investors are vulnerable in development countries and they would hence need a strong partner that could not be treated arbitrarily by local counterparts and authorities. The solution was to seek partnership with a DFI that "represent a kind of brotherhood, if one is treated badly, they all withdraw" increasing the cost of misconduct of the investee and its home country and thereby reducing the investor risk considerably.

They started with 100 million in direct investments in developing countries but met relatively strong scientism from the investment managers. They believed that investments in emerging market

[25] Full name for KLP Holding company in Norwegian is *Kommunal landspensjonskasse gjensidig forsikringsselskap*. It receives pension contributions from the public entities, whose ownership shares in KLP are according to contributions. It is a Defined benefit pension system where KLP is the owner of the pension contributions from the workers and employees but are then responsible to pay according to what is agreed later. KLP hence takes all risk of investments. Profits/losses are then redistributed to the employers which constitutes the owner of KLP and thereby reduce/increase their contributions needed to cover their payment responsibilities to the pensioners. The more profitable KLP investments are, the more competitive they are towards private pension scheme providers. However, the individual employee and pensioner does not benefit from increased profits of the investments.

unlisted equity could give the same return as the stock market in developing countries, but with the considerable downside of being illiquid investments are hard to sell if such was deemed necessary.

Thornes valued direct investments through partnership with Norfund as a way to learn how markets worked in the upcoming part of the world economy, but the investment managers advised against it. They would rather wait for growing companies to end up on the stock exchange to buy shares. The investment managers were also skeptical to partner with Norfund without evaluating what other DFI could offer, but CEO preferred to act fast by reaching an agreement with Norfund rather than risk spending too much time analyzing the alternatives. This would also strengthen Norfund.

KLP invests in two ways. One is purely financially maximizing profits, while the other is to build a sustainable future with an acceptable return. It is vital to avoid that market perceive a potentially poor overall result to be due to philanthropic investments in developing countries. The contemporain KLP decision to withdraw from coal mining for climate reasons gave financial room. The board was presented with four possible society co-benefits above the financial return of (i) strengthening Norfund's operation, (ii) improve life in developing countries (iii) possibly supporting Norwegian companies like the Norwegian solar panel company Scatec and (iv) green energy substituting fossil energy and they accepted a new mandate of 5 billion NOK for investments in developing countries. The mandate focused on (green) energy and the financial sector, learning from Norway's own history of building an economy based on hydroelectricity and loans to small scale private initiatives through local banks.

With a given mandate, an in-house investment manager was appointed and the investment process and reporting agreed, including to what index the portfolio's return should be measured.[26] KLP employees in general supported the investments and were enthusiastic about contributing to improving the life of people in developing countries.

It is unclear whether KLP approached Norfund, or the other way around, in 2012. Anyway, KLP would not have acted without their CEO making his first-hand observation of business opportunities in Africa. The first joint investment took place in 2013.

[26] KLP has a clear division of roles and the employees are only measured against their job descriptions. There is hence no incentive for employees to come up with new business proposals that are outside their mandate. They furthermore receive more proposals than they can take a position. Today, it is the management's job to make suggestions, and they then ask skilled employees to investigate and analyze whether they are good. The alternative setup would be to create an in-house think-tank to develop new ideas.

The defined benefit pension provider KLP sought insight into how to invest in developing countries and hence welcomed Norfund's invitation to co-invest. Norfund had proven insight and ability to choose profitable projects as well as manage them afterward. In addition, Norfund as a state owned DFI was perceived to be more willing to share insight and knowledge in a trustworthy manner than a private PE fund would be. Another benefit was that Norfund as a government entity would tackle public critique better than KLP as a private entity.

4.1.1 Constrained by illiquidity

The competition between pension fund providers in Norway has become stronger. The risk of customers moving their pension funds to another provider limits KLP's allocation of capital to illiquid investments. This affects unlisted Norwegian hydroelectricity and start-up companies as well as projects in developing countries. They have no plans at the moment to expand the 5 billion NOK limit on the category of direct investments in developing countries.

The CEO Thornes indicates that KLP would be willing to invest more in developing countries projects if the DFIs could offer tranches of secure payment streams from existing projects packed into funds with BBB+ from the rating agencies and thereby become a highly liquid asset. This will prevent a lock-in of capital over a long period as there will be considerable competition from investment institutions to buy the stream of secure revenues. The DFI can keep the more volatile part of the income stream or package them into a fund for less risk averse investors.[27]

4.2 KLP investments strategy with Norfund

The NOK 5 billion (USD 0.5 billion) in their annual budget set by their board has several elements in addition to the KNI collaboration with Norfund (to be discussed in subchapter 4.4)

KLP has chosen to participate in 21 projects proposed by Norfund through the KNIs, with repeated deposits in many of them (see appendix 8.2 and 8.3). KLP has experience in renewable energy and the financial sector, which represents a substantial share of KNI's investments in developing markets. This expertise enables them to contribute in a fruitful way to the project selection process. KLP holds the right to refuse Norfund's proposals. Such decisions were initially more politically

[27] Such securitization is championed by the current president of the World Bank Group, Ajay Banga, that presented sin a seminar in Oslo in March 2026. Norfund and other DFIs are currently collaborating to create such fund structures.

sensitive and required the CEO's active approval. Following a procedural change, investments can now be made without the CEO's direct authorization.

KLP does not engage in speculative trading or attempt to anticipate future market movements. If adverse political developments occur (such as a wind power tax), asset prices adjust immediately, and there is generally no reason to sell, though it may reduce the incentive to expand positions. However, a decline in equity valuations may require divestments to comply with solvency regulations for life insurers in situations with large market corrections. Their investments in KNI are guided by a dual objective: to generate positive societal impact while achieving financial returns. KLP may reconsider their participation if the Norfund shift toward stronger prioritizing job creation and poverty alleviation and less emphasis on return.

The KNIs are regarded as an attractive component from a diversification perspective for all KLP investments. The investments broaden the portfolio and thereby provide more stable returns. However, KLP does not explicitly employ hedging strategies or assess potential negative correlations between sectors and markets.

KNI's investments in Myanmar has been written down to zero following the military takeover. KLP consider that company performance can be unpredictable, e.g. Copenhagen Infrastructure Partners (CIP) is performing strongly, while Ørsted is underperforming, despite that both funds origin in Denmark and operate in the global offshore wind energy sector.

KLP expect global demand for electricity to increase given the anticipated impacts of climate change. They hence perceive KNI's focus on green power generation to be strategically sound even though they indicate that the long-term returns so far are not above other asset classes.

4.3 Profitable return

4.3.1 Outcome and structure of KNI investments

KLP manages in total NOK 1.147 billion (KLP, 2025). The KNIs have mostly invested in green energy in Africa and Asia, which were part of DIM before the creation of CIM.[28] The rate of return (IRR) since inception by end 2023 for DIM is 7.8% in NOK and the CIM 20.4% (Norfund, 2025, p. 90).

[28] Green energy projects fell under DIM before CIM started up in 2022, and most would hence be filed and financed by the latter today.

Norfund has calculated the value adjusted returns on the joint investments with KLP through the KNIs on the request of the author for this study (Appendix 8.2). They shared the initial and follow up allocations in either equity or loans contribution from the KNIs to the investees from 2013 to end 2024 (appendix 8.3) They calculated an IRR for each project based on calculated exit value, which means realized sales values for 5 terminated projects and assessed values of the 16 projects still in the KNI portfolios (Appendix 8.2).[29] Norfund mostly used (i) sale price or stock emissions by the investee or similar company/projects in the same geographic location and (ii) discounted future sale income based on long term sales contracts of the investee, which are normally fixed price agreements with a government entity in development countries, and hence stable as long as the government honor their contracts. Norfund did not identify either company or project name of the 21 KNI investments due to a non-disclosure agreement with KLP. The author was still able to identify with reasonable precision each of them by comparing commitment values and country published in statistics and news articles on the Norfund webpage, which were then presented to and orally verified by KLP.

4.3.2 Return calculations based on assessed market value

The resulting 12.6% IRR since inception demonstrate that the collaboration with Norfund has turned out to be profitable for KLP (Appendix 8.2). However, the project level variance of the 21 projects behind this year and commitment weighted average is considerable with extreme values of -16% and +92%. The former is the renewable energy project Yoma Micro Power in Myanmar from where they had to withdraw after the military coup in the country in 2021, while the latter is the investment in Copperbelt Energy Corporation which source and supply electricity in the copper belt province of Zambia. Norfund calculates an IRR of 9.0% for the KNIs since inception until end 2022, down to 7.4% by end 2023 and then increase to 12.6% when the Copperbelt project is included by end 2024.

The Copperbelt Energy Corporation investments are in some sense a typical example of one highly lucrative large project that can outweigh the loss of low return in many small projects in development countries. Investments in development countries hence resemble the startup sector in Western countries. KLP and Norfund informants indicate this is a one-off value that cannot be extrapolated to

[29] Sales prices might be delusional if one party is represented at both sides of the negotiating table, e.g. Norfund financed Globeleq bought a Norfund financed solar plant in Mozambique (not relevant in this case since neither were owned by the KNIs). Another example is that non-registered benefits are implicitly included in the deal and thereby affects the price paid. However, the author has no explicit reason to doubt Norfund's 21 exit valuations of KNI projects in this study.

the coming years; hence the IRR will go down as this value increase will be spread over more years. KLP informants rather emphasize that Norfund was able to negotiate low prices. The seller, a private fund, was closing and under time pressure to return money to their investors and thereby willing to sell at a discount price even though other potential buyers also demonstrated interest. The higher market valuation based on the underlying values of the company was set just months later and there is no reason to expect similar “windfall gain” in future years. The IRR for this investment will hence go down over time. A simple calculation of unweighted average returns in nominal NOK is reduced from 12.1% for all projects to 8.1% when the Copperbelt project is exempted.

4.3.3 The KNI return compared to overall KLP return

This outcome is far better than KLPs average return for all investment categories that is of only 5.5% per year in the period, although the overall return refers to mixed asset classes (see appendix 8.4).

4.3.4 Alternative returns in counterfactual stock market investments

KLP could alternatively have invested in the listed companies on the stock market in development countries like their Norwegian pension fund competitor Storebrand have done. The outcome of such counterfactual strategy of investing the same amount of money on the same dates depends on the market chosen. Benchmarking by investing according to the MSCI emerging market index would have given 7.1% IRR in NOK since inception[30] (see appendix 8.7).

A rather large share of the KNI investments in green energies are in India and the return on the Indian stock market is hence relevant yardstick. The NYFTY 500 index on the National Stock Exchange of Mumbai include the 500 most important listed Indian companies. The return on this alternative approach would have been 20.2% IRR in NOK and is hence above the KNI results. However, the NYFTY500 index includes all types of companies and is not directed towards climate initiatives with green energies that constitute most of the KNI portfolio. The co-benefit of reducing CO2 emissions is valued at its own, especially by CIM where the mandate limits investments in climate projects.

The alternative return compared to return in Western markets is also relevant for a private investor. An identical volume-time investment plan on the Oslo Stock Exchange (marker OSEBX) would have

[30] Part of the increase in the MSCI emerging market index is due to the weaking of NOK against the USD since the unadjusted currency return in USD would only be 1.9% IRR.

given 9.1% IRR in nominal NOK and similarly in US equities following the MSCI US index converted to nominal NOK would have given an IRR of 20.5%.

The return on KNI investments is hence above return on alternative investment with the same timing and volume in equities in emerging market and KLP's home country Norway, but still below the alternative return in Indian and US equities.

4.4 KLP slow expansion in development countries

4.4.1 Other investments in development countries

The NOK 5 billion (USD 0.5 billion) allocated for projects in development countries represents only 0.4% of total funds.

KLP became partner of the microfinance initiative Abler Nordic in 2008 and hence before they started to co-invest with Norfund. KLP recognizes both a responsibility and an interest as a Norwegian pension fund to support new Norwegian finance institutions and networks.

They also collaborate with Norfund and the Dutch development bank FMO, as well as commercial bank Rabobank, in financial lending activities through the investment company Arise with considerable activity in Africa. The CEO Thornes indicates that KLP after a while chose to collaborate with more DFIs and funds to increase the speed of investment beyond the Norfund capability.

One example is the collaboration with Copenhagen Infrastructure Partners (CIP) fund at the very start of their green investment activities in 2018. CIP is a private entity that invests mostly in green energies and infrastructure in both development countries and OECD countries.

Finally, KLP also co-invests with the Climate Fund Manager (CFM), a Dutch blended finance fund initiated by FMO which takes a "junior" position in co-investments with private capital, i.e. they are willing to cover first loss and thereby shelter KLP and other private institutional investors from initial losses.

KLP informs us that the total investment by these five initiatives[31] has been slowly increasing since the start of 2008 and is now approaching the maximum committed NOK 5 billion investment limit allowed by the KLP board. The informants hence consider that the institution's drive for investment

[31] It is unclear whether OECD investments under CIP is included in the NOK 5 billion limited development investments category or not.

to be a success, and that KLP might consider increasing the investments limit for this category. The limit for investments in development countries still constitutes only 0.4% of the total capital of KLP which is minimal compared to the optimal risk adjusted return and intertemporal allocation following international and intertemporal capital asset market models, leading pension funds in OECD countries to invest between 5 and 10 percent of their equity capital in emerging markets (OECD, 2025). The level of KLP, as well as other Norwegian pension funds, are hence below several comparable institutions in other OECD countries.

KLP informs that the return on development investments projects meets the target set to the average for the whole KLP portfolio. This implies that Abler Nordic probably underperform since the KNIs has consistently outperformed the marked, KLP indicates that CFM and CIP give a higher return than the KNIs.

4.4.2 The KNI investments in 2025

Norfund continues to invest in 2025 as the allocation as the government transfers over the state budget has increased. The total investment in projects through 2025 by early December was NOK 4.8 billion in 24 different projects.

KLP and Norfund made two joint investments through the KNIs in 2025. The first is a joint USD 17 million (USD 8.5 for KLP) in the green energy platform «Anthem», where Norfund under CIM put in an additional USD 68 million separately, with plans to install 11GW solar capacity in South Africa under the Climate Investment Mandate. KLP chose not to take part in Norfund's USD 76 million investment in the solar energy producer Mulilo in South Africa under the CIM or the B5 Plus Limited for refurbishment of and solar energy for green steel plant in Ghana under DF. Both would have been in line with KLP's investment policy so far (see appendix 8.6).

KLP informants explain that they have invested in some of the other Norfund projects in 2025 through other initiatives, see subchapter below, rather than through the KNI initiative. They believe concentrating on their ownership through only one partner rather than co-own through several partners in a given project will be most beneficial to them and at least avoid being part of several consortiums that end up in a bidding contest for the same project.

4.4.3 Constrained by illiquidity

The competition between pension fund providers in Norway has become stronger. The risk of customers moving their pension funds to another provider limits KLP's allocation of capital to illiquid investments. This affects growth in allocation towards unlisted Norwegian hydroelectricity and start-up companies as well as projects in development countries. They have no plans at the moment to expand the 5 billion NOK limit on the category of direct investments in development countries.

The CEO Thornes indicates that KLP would be willing to invest more in development countries projects if the DFIs could offer tranches of secure payment streams from existing projects packed into funds with BBB+ from the rating agencies and thereby become a highly liquid asset. This will prevent a lock-in of capital over a long period as there will be considerable competition from investment institutions to buy the stream of secure revenues. He proposes that DFI keep the more volatile part of the income stream or package them into a fund for less risk averse investors.[32]

5 Limited mobilization

5.1 Top-down initiative required

Norfund had less success with the alternative bottom-up approach by contacting middle management in other organizations rather than the top-down approach by involving CEOs from the very start. Both overestimated risks and career concerns would carry more weight in the decision of middle management than for a seasoned and respected CEO. Such major changes in company strategy are normally initiated from the top, and the idea is then appropriated by the organization through discussions and analysis conducted by their staff.

The former CEO of Norfund, Kjell Roland, contacted several other Norwegian pension funds and insurance companies at the same time as they started the KLP collaboration without success. One example is insurance company Storebrand, which preferred to invest in listed equities in emerging

[32] Such securitization is championed by the current president of the World Bank Group, Ajay Banga, who presented in a seminar in Oslo in March 2026. Norfund and other DFIs are currently collaborating to create such fund structures.

markets since they did not experience any demand from the market for investing in projects in development countries.

Norfund does not expect KLP to increase in their collaborative investments. However, KLP has used their acquired insights into equity markets in development countries through the collaboration with Norfund to invest in PE funds that operate in development countries, e.g. Climate Fund Managers (CFM) in The Nederland and the Copenhagen Investment Partners (CIP) in Denmark.

5.2 Return is not sufficiently high

The IRR 12,6% since inception of the KNI portfolios is above the KLP average return of 5.5% (see appendix 8.4) but might still be considered insufficient for the institutional investors to compensate for illiquidity, operational complexity, and concentration risk.

KLP actually calls for deconcentrating in KNIs as they would prefer more investments in other Sub-Saharan African countries since they the find too much of the investments are concentrated in South Africa. The investor director Saugestad in Storebrand informs in an email exchange that «In short, we are always looking for strategies were, in addition to investing our own life capital, we can mobilize additional institutional capital. Both because it provides scale benefits and lowers costs and because it provides commercial opportunities. Our assessment is that a blended finance strategy has not been particularly suitable in this regard since there are few institutions that actively seek this."

5.3 Relation to state matters less

KLP informs that good relationship with government is important for their activity as an insurer of public employees in Norway and that co-investments with public entities like Norfund can improve their working relationship with both the state and their customers. Other investors like Storebrand have less incentive to participate constructively in state initiatives than KLP insuring public employees.

5.4 Reputational vulnerability

Company leaders fear bad publicity since it might affect both customers as well as employees' perception of company and their activities. A highly profitable investment in development countries might hence still not be worth the potential reputational cost at home.

One illustrative example is how the Norwegian part government owned electricity company Statkraft pulled out of Chilean hydropower projects due to bad press following indigenous resistance. Norfund shun any investments in areas with Indigenous populations in fear of bad publicity, thereby causing economic harm to the overall local population in need for such investments.[33]

Another example is the Siem family with a business conglomerate within international shipping, oil service and offshore companies. They were accused by a business magazine, owned by the former partner Trygve Hegnar with whom they had a disagreement, for trade in narcotics and swindling partners in a minor agricultural project in Colombia (Kapital, 2004). The court agreed that the article was misleading and untruthful, but the judges still did not side with Siem in the resulting libel case. They considered the freedom of the press to be more important than the reputational negative effect for Siem through discreditation in the eyes of employees and business partners.

Co-investing with Norfund can reduce the risk of such bad publicity as demonstrated by the KNI investment in green energy production in Honduras. A new social democratic government in 2023 would not accept the tax exemptions given by their predecessors. Norfund responded by bringing Honduras in for The International Centre for Settlement of Investment Disputes (ICSID) in the World Bank. Norfund were criticized by NGOs and Norwegian press for taking advantage of former corrupt governments and refuting to solidarize with the "people's government" that finally had come to power.[34] There are two interesting lessons to learn from this case. Norfund fronted the critique, while their co-investor KLP escaped the spotlight. Furthermore, public attention to the case subsequently faded.

By putting a state institution with some credibility of combatting poverty in the front of investments in development countries, people hence tend to judge their actions more positively. A similar case with a standalone KLP investment would probably have met harder critique in the press, causing harm to their public image at home. The collaboration implies KLP as private investor can "hide behind" the governmental Norfund which takes the public attention of any unfortunate event related to the investments.

[33] Personal communication with former CEO Kjell Roland of Norfund.
[34]https://folkehjelp.no/nyheter/norske-akt%C3%B8rer-m%C3%A5-trekke-s%C3%B8ksm%C3%A5let-mot-honduras and https://klassekampen.no/artikkel/2023-05-12/vil-kutte-i-stotta-til-norfund

6 From ODA to Oil fund?

6.1 Norfund negligible compared to NBIM

There is an ongoing public debate in Norway questioning the correctness of filing of Norfund's investments as ODA due to the profit motivation and because CO2 emission reductions benefit Norway as well (MFA, 2024c; Mofoss, 2025). This critique is partly motivated by a politically imposed geographically division in investment responsibility between the supposedly development focused Norfund and the Sovereign wealth fund (SWF) of Norway that is set up to maximize return taking limited risk. The regulation of the latter both explicitly and implicitly blocks investments in development countries.

The funding of Norfund hence origin in the Norwegian natural resource rent. All petroleum related income to the Norwegian state is first channeled to the Government Pension Fund Global (popularly denominated "The Oil fund") which is administrated by Norge's Banks Investment Management (NBIM) that forms part of the Central Bank of Norway. The government is then allowed to annually transfer a maximum of 3% of the Oil fund's capital stock (more than USD 2 trillion today) to the state budget to cover public expenditures.[35] The Oil Fund is hence the largest SWF in the world and set up to last forever (so-called *evergreen fund*) since the state can just withdraw the calculated return on its investments. This transfer of natural resource rent and return on the SWF now constitutes more than 25% of the Norwegian state budget for 2025.[36]

NBIM is instructed to roughly invest about 1/3 in government bonds and 2/3 in listed shares and bonds[37] according to an adjusted market capitalization on stock markets of world reference indexes which has led to investments in 68 countries.[38] These rules imply that most of the fund is invested in

[35] Total annual state income from the oil sector (Statens netto kontantstrøm fra petroleumsvirksomheten) is estimated to be 66 billion USD 2025, consisting of 40 billion USD from the 78% surplus tax on extraction companies, 1 billion USD in environment licence fee, 25 billion USD profits government co-investment in oil fields through The State Direct Economic Involvement (SDØE) and 4 billion NOK in dividends from Equinor where the state has 67% of the shares, see appendix 8.5. The total income is expected to decrease to 52 billion USD in 2026 (MF, 2025).

[36] https://www.regjeringen.no/no/statsbudsjett/2025/statsbudsjettet-2025-statens-inntekter-og-utgifter/id3055676/

[37] FTSE Russell Group index for listed shares and Bloomberg index for interest bearing securities which weights according to the countries market capitalization (MF, 2023).

[38] The composition in June 2026 was 71.3% equity and 26.5% fixed income, as well as 1.7% real estate projects and 0.4% renewable infrastructure project in Western countries, https://www.nbim.no/en/investments/all-investments/.

large Western economies, e.g. 55% in USA, and hardly any in development countries where only the most advanced companies are listed on the market. NBIM investments do not reflect the current geographical value creation of the world or future business opportunities that should reflect expected increase in populations, living standards and equities of natural resources in different parts of the world.

Norwegian politicians have so far not allowed NBIM to invest in unlisted equities of two reasons. First, listed equities require less human power and are perceived to be more manageable for NBIM. Second, unlisted equities (especially in development countries) are perceived to be "speculative", and the policy markers hence fear that losses might undermine the public and voters trust in and normative adherence to the Oil fund set up. However, risk is overestimated in development countries, and the pricing of their companies are normally driven by backward rather than forward looking analysis (Øygard, 2019).

This reference index rule-of-thumb regulation hence prevents Norway from acting as an expected profit maximizing capitalist by underplaying development countries where most values and economic activity is not listed on stock markets. Non-OECD countries constitute about 54% of Gross Domestic Product (GDP) of the world.[39] A similar share of the Oil Fund would then mean an astonishing NOK 11,000 billion would be invested outside OECD which leaves the current NOK 50 billion Norfund investments negligible in comparison.

However, the disproportional share of US equities reflect that US listed companies often operate abroad as multinational companies (MNC) and thereby take part in in the overall global value creation.[40] Private capital tends to prefer to invest in the US market because (i) strong institutions, (ii) large home economy and (iii) strong protection of investors and a functioning legal system. The cost of capital for a US given investment in development countries is hence lower than for a national company and thereby lead to the dominance of American MNCs. This reinforcement mechanism can be interpreted as a de facto discrimination against national companies (Wiig, 1999).

[39] https://www.oecd.org/en/data/insights/statistical-releases/2024/05/share-of-oecd-economies-in-global-gdp-broadly-stable-at-46-in-2021-compared-to-2017.html
[40] NBIM and the Norwegian Ministry of Finance only indirectly argue that US equities imply world coverage: "The fund is invested in international equities, bonds, real estate and renewable energy infrastructure. Investments are spread across most markets, countries and currencies to achieve broad exposure to global growth and value creation. The fund has a long-term investment horizon and limited liquidity needs." https://www.nbim.no/en/investments/investment-areas/,

This US stock market dominance and the risk aversion by Norwegian politicians hence probably impedes economic growth in both our own country and development countries. By allowing NBIM to maximize risk expected return of the Oil Fund without geographical, sectorial and capital object restrictions, more investments would flow to non-OPECD countries and furthermore increase Norwegian's financial wealth at the same time.[41] Norwegian politician's risk aversion towards development countries has probably a more negative impact on overall Norwegian investments in these countries than private sector risk aversion.

NBIM is instructed to invest in green energies projects in western countries, while Norfund shall invest in similar projects in development countries. The return on green investments will hence differ between the two institutions. An alternative would be to let NBIM invest in development countries too or transfer more money from NBIM to the state and then redirect these funds to Norfund to equilibrate the two institutions.[42] Allowing NBIM to invest in unlisted green energy in development countries can hence lead to a considerable increase of investment in development countries as NBIM might find such financially rewarding.

The formal division of labor between the two institutions, where Norfund is responsible for green investments in development countries and NBIM in Western countries, has hence become a serious limitation since the capital distribution for green unlisted investments is set politically rather than reflect business opportunities.[43]

6.2 Other Norwegian blended finance initiatives

The Norwegian Agency for Development Cooperation (NORAD) has introduced the program Norwegian Sovereign Guarantees for Renewable Energy Investments in development countries with

[41] Although, social democratic Norway will find it hard to accept the "Greed is good» thesis of Gordon Gekko figure in the legendary film *Wall Street* also might apply to our investments in development countries. The current NBIM management of the Oil fund shows how presumably good norms of prudence causes poverty in poor countries through lack of investments.

[42] https://www.finansavisen.no/finans/2025/01/29/8235683/oljefondet-fikk-en-avkastning-pa-2.511-milliarder. However, NBIM report a positive 18% return for 2025 https://www.nbim.no/no/nyheter-og-innsikt/rapporter/2025/arsrapport-2025/nettrapport-arsrapport-2025/.

[43] A technicality differing the two is that 25% of the Norfund investments will formally be filed as expenditure in the state budget, and 75% is filed as re-investments and hence not part of the state budget even though the money leaves the NBIM account and balance. This budgetary practise is popularly denominated "under the line".

a maximum of NOK 1 billion guarantees issued in the latest call.[44] NORAD furthermore support companies within renewable energy, infrastructure and start up initiatives, especially in Africa. Both elements are part of a new Norad strategy of blended finance developed in the latter years (NORAD, 2022). Norad informants indicate that the low costs of issuing guarantees, i.e. low concessional financing, experienced by their Swedish counterpart SIDA convinced the Norwegian Ministry of Finance (MF) to accept their new guarantee arrangement. High returns, hence low concessional capital, have similarly been used as an argument for the NOK 2 billion increase in funding to Norfund's CIM over the 2026 state budget.

Norway's International Climate and Forest Initiative (NICFI), an initiative to protect natural rainforest under the Ministry of Climate and Environment (KLD) directly funded over the state budget, allocated nearly NOK 1 billion in 2018 to as start-up capital for the Andgreen fund managed by SAILs Venture. This fund lends money at commercial terms to companies that transfer to green and deforestation free value chains mostly in agriculture, food and timber sectors. It is also set up as an evergreen investment foundation where the donors elect the initial advisory board members to decide on restrictions for the management of the fund.[45] The Andgreen business concept is innovative in the financial sector as it combines lending with advisory services in the transfer to deforestation free value chains. Loan compliance also requires sustainability requirements are met, thereby introducing both a carrot (access to loans) and a stick (default) for companies and managers that want to make the green transition in production methods. The donor money served as a basis to start the fund and after eight years they have now a proven track record which gives access to institutional investors in commercial terms.[46]

The Norwegian government has decided in 2025 to donate USD 3 billion to the Tropical Forests Forever Fund (TFFF) initiative in 2025 conditional on other donors engage to become the intended USD 25 million "evergreen fund".[47] The donations will serve as junior capital to attract another USD 125 billion of private funds that will be rewarded the expected return. The resulting excessive returns from the TFFF investments (if such concept actually exists) will be distributed as payment for

[44] https://www.norad.no/en/for-partners/private-sector/call-for-proposals-guarantees-for-renewable-energy-investments-in-low--and-middle-income-countries/
[45] http://www.andgreen.fund/downloads/KLD-Contribution-Agreement.pdf
[46] Personal communication with AndGreen management.
[47] https://www.regjeringen.no/en/whats-new/norwegian-government-to-provide-nok-30-billion-to-new-fund-to-preserve-tropical-forests/id3137591/

ecosystem services to tropical countries with an estimated USD 4 per hectare of standing rainforests. The involvement in TFFF illustrates the Norwegian government's increased interest in blended finance solutions to solve pressing challenges in the world.

7 Conclusion

The Norwegian DFI Norfund has become a financially successful investor in development countries and claims that its investments are both additional and catalytic. Their blended finance approach is to maximize return in order to tempt private capital to join or copy their effort rather than to use the funding from the Norwegian government to subsidize joint investments with private investors, i.e. concessional capital.

We have analyzed in this study a specific blended finance initiative between Norfund and the KLP pension fund in 21 projects in development countries with a calculated 12.6% IRR in nominal NOK by end 2024 since inception in 2013. However, it is unclear whether this commercial success has mobilized more investments. KLP has not increased their investments under the cooperation, and no other institutional investor has been inspired to start a similar collaboration with Norfund. This experience may have encouraged KLP to co-invest with other commercial funds operating in development countries, but their total engagement still constitutes only 0.4% of their total capital

Both the 12.6% IRR on the KLP-Norfund KNI portfolios and the reported 20% return on the CIM indicate that green investments in development countries are profitable and would, in principle, be expected to attract additional investor. Ironically, the most notable "mobilizing" effect of the positive CIM result is to convince the Norwegian government to increase their transfer with USD 0.2 billion in 2026. Increased confidence by politicians in emerging markets will have enormous impact if it moves the Norwegian government to allow NBIM with USD 2 trillion in capital to invest in unlisted equities and thereby open for considerable investments outside the OECD countries.

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8.1 Development aid in Norway

Kap. 162 Næringsutvikling, matsystemer og fornybar energi

(i 1 000 kr)

Post	Betegnelse	Regnskap 2023	Saldert budsjett 2024	Forslag 2025
70	Bærekraftig jobbskaping, næringsutvikling og handel, *kan overføres*	301 725	234 536	134 536
71	Matsikkerhet, fisk og landbruk, *kan overføres*	3 156 669	1 897 966	2 127 966
72	Fornybar energi, *kan overføres*	818 593	1 019 358	1 019 358
75	Norfund – risikokapital	438 288	438 288	438 288
76	Norfund klimainvesteringsfond – risikokapital	250 000	250 000	250 000
95	Norfund – grunnfondskapital ved investeringer i utviklingsland	1 239 864	1 239 864	1 239 864
96	Norfund klimainvesteringsfond – kapitalinnskudd	750 000	750 000	750 000
	Sum kap. 162	6 955 139	5 830 012	5 960 012

Development aid in the state budget 2024-25 in chapter 162 Business development, food systems, and renewable energy, 1000 NOK, by subsectors. The annual transfer from the government to Norfund in the four categories (post 75) risk capital, (post 76) climate investment fund - risk, (post 95) basic fund capital and (post 96) climate fund – capital contributions, sums up to 2688 million NOK or 240 million USD at the going exchange rate. Source: MFA (2024a, p.167)

8.2 KNI returns since inception

Project	Year initiated	Total commit	IRR since incepiton	Company	Description of company	Source
1	2024	55 595 464	12,5 %	Indigrid Investment Managment Limited	Indian power fund.	https://www.ind
2	2023	315 250 380	92,1 %	Copperbelt Energy Corporation PLC	Electricity generation and transmission, mainly supplying mines in Zambia and Nigeria.	https://www.nor
3	2023	58 787 661	25,0 %	ReNew Private Limited	Renewable energy in India	https://www.nor
4	2022	146 717 656	-17,9 %	Enel Green Power S.P.A	Italian company that, among other things, operates wind and solar power in India.	https://www.nor
5	2022	70 265 531	11,3 %	Koppal-Nareandra Transmission Ltd	Developed by ReNew, power grid in India.	https://www.nor
6	2022	141 234 912	8,4 %	Enel Green Power S.P.A	Italian company that, among other things, operates wind and solar power in India.	https://www.nor
7	2022	439 099 800	5,3 %	CrossBoundary energy	Energy provider in Africa.	2022: https://w
8	2021	63 603 630	-6,8 %	SUSI Asia Energy Transition Fund	Infrastructure fund in Southeast Asia.	https://www.nor
9	2020	560 222 128	17,5 %	Berkeley Energy CIS	Energy solutions in Asia and the Pacific.	https://www.nor
10	2019	130 329 990	4,2 %	Inspired Evolution Investment Managment Ltd	Renewable energy investment company with the fund Evolution Fund II.	https://www.nor
11	2019	8 201 345	16,1 %	Eco-Nor Energy Ltd	Hydropower.	https://www.nor
12	2017	57 099 455	-16,7 %	Yoma MicroPower	Solar power for remote, off-grid communities.	https://www.nor
13	2016	77 540 220	5,1 %	D.Light	Decentralized solar energy in Africa.	https://sikt-fvdb
14	2016	12 394 172	3,5 %	Central Solar de Mocuba	Solar power plant in Mozambique.	https://www.nor
15	2015	90 950 092	19,3 %	Scatec Solar Benban	Scatec Solar operates solar power; Benban is in Egypt.	https://scatec.c
16	2015	121 937 344	0,7 %	Scatec Solar Los Prados	Honduras	https://scatec.c
17	2014	47 669 861	6,7 %	Scatec Solar Agua Fria	Scatec solar power project in Honduras.	https://scatec.c
18	2014	4 034 960	-1,4 %	Scatec ASYV	Solar power in Rwanda and Mozambique.	https://www.nor
19	2013	93 945 550	17,0 %	Anergi Group	Develops and operates various power plants in Sub-Saharan Africa.	https://www.nor
20	2013	23 602 469	24,5 %	Simacel 160 Pty Ltd	Solar power in South-Africa.	
21	2013	11 841 512	28,3 %	Simacel 155 Pty Ltd	Solar power in South-Africa.	https://www.nor
		2 530 324 132	12,6 %			

Norfund's 51% share of and return on joint investments with Norfund through KNI AS and KNI India AS since inception of the fund in 2013, in nominal NOK. The commitment figure for KLP will hence be 49/51 share of committed sum in the table, while the IRR will be identical as both parties contributed to the vehicle companies at the same time. Source: Norfund, as informed upon personal request, 20th October 2025.

8.3 Commitment timeline

Project	Committed Date	NOK Committ
Project 1	15.08.2024	20 743 450
Project 1	15.08.2024	27 344 557
Project 1	15.08.2024	7 507 457
Project 2	21.12.2023	315 250 380
Project 3	02.02.2024	5 389 368
Project 3	02.02.2024	12 632 005
Project 3	15.11.2023	12 227 053
Project 3	15.11.2023	28 539 234
Project 4	30.12.2022	146 717 656
Project 5	21.10.2022	18 995 158
Project 5	21.10.2022	51 270 373
Project 6	02.08.2022	141 234 912
Project 7	20.12.2024	233 029 200
Project 7	12.07.2022	206 070 600
Project 8	25.05.2021	63 603 630
Project 9	05.04.2023	132 849 900
Project 9	16.07.2020	427 372 228
Project 10	28.06.2019	130 329 990
Project 11	01.01.2019	8 201 345
Project 12	07.02.2020	57 099 455
Project 13	20.12.2023	8 294 480
Project 13	30.12.2022	14 404 040
Project 13	01.07.2021	7 549 792
Project 13	30.11.2018	22 015 369
Project 13	28.12.2016	25 276 540
Project 14	31.10.2016	12 394 172
Project 15	19.10.2017	46 076 959
Project 15	19.10.2017	44 873 133
Project 16	31.12.2015	121 937 344
Project 17	23.12.2014	19 057 566
Project 17	23.12.2014	28 612 296
Project 18	01.02.2014	4 034 960
Project 19	19.11.2013	93 945 550
Project 20	03.05.2013	23 602 469
Project 21	03.05.2013	11 841 512

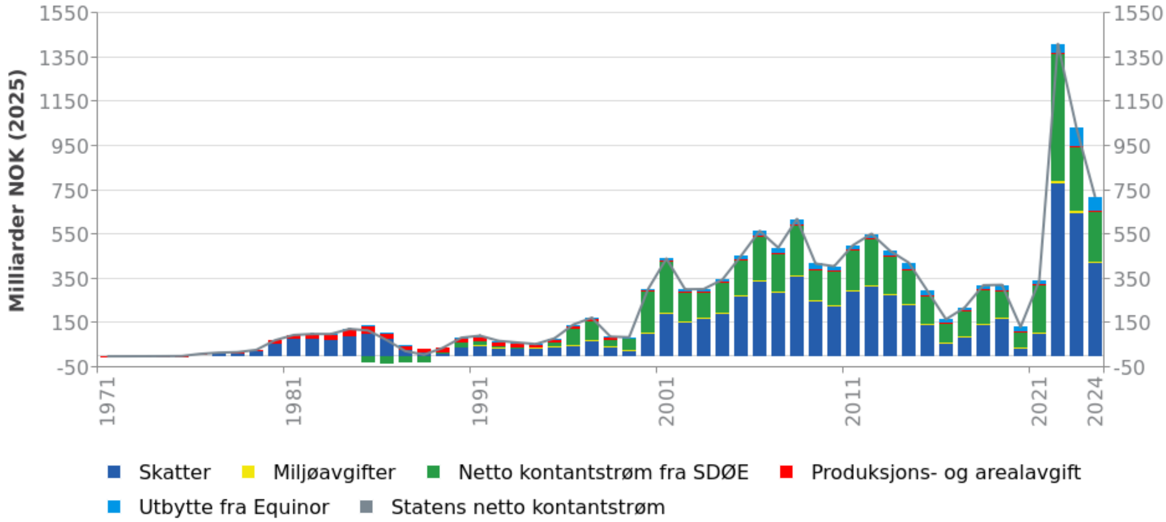
Norfund commitment by date, some projects have received several transfers over time. Source: Norfund, upon personal request by author, 15th October 2025.

8.4 KLP annual return on investments

	% value adjusted return on collective-portfolio (1)	% return on investment portfolio (2)
2023	6,4	
2022	-1,1	
2021	6,7	8,9
2020	5,5	4,2
2019	8,6	9,9
2018	1,5	0,6
2017	6,7	7,5
2016	5,8	6,2
2015	4,0	4,0
2014	6,9	7,3
2013	6,7	8,5
2012	6,7	7,5
2011	3,2	3,2
2010	7,5	7,5
2009	7,7	7,7
Average	5,5	6,4

Source: KLP annual reports, https://www.klp.no/om-klp/finans-og-ir/rapporter-og-presentasjoner, where variable name as reported in Norwegian are for (1) "% verdijustert avkastning kollektiv-portefølje» and (2) «avkastning investerings-portefølje».

8.5 Norwegian state net cash flow, fixed NOK 2025 values



Measured in billion fixed 2025 NOK values. Skatter (Tax), Miljøavgifter (Environment tax), SDØE (State direct investments), Produksjons og arealavgift (Production fee), Utbytte Equinor (Divident Equinor. Source: Norsk petroleum based on Statistics Norway and Ministry of finance https://www.norskpetroleum.no/okonomi/statens-inntekter/

8.6 Norfund and KLP investments and loans in 2025

Investeringer NF 2025						
Prosject	**Dato (1)**	**Total invest (NOK)**	**KLP invest (NOK)**	**Selskap**	**Beskrivelse**	**Investeringstype (3**
1	14.03.2025	134 339 400		Etana	Kraftleverandør i Sør-Afrika, investering sammen med Standard Bank	DF
2	11.03.2025	79 146 750		First Finance	Microfinans instutisjon som spesialiserer seg i førstegangskjøpere av bolig i Kambodsja	DF (Lån)
3	11.03.2025	79 146 750		Inside Equity Fund II	Investeringer i Zambia og Madagaskar, merk at sum er lik i D5 og D4 (?)	FI
4	03.02.2025	263 822 500		Mutual Trust Bank Limited	Bank i Bangladesh	DF (Lån)
5	09.04.2025	11 413 000		WeLight	Driver mini-grid i sub-sahara. Delinvestering.	DF
6	25.11.2025	135 000 000		FCTC EPT 2025-2040 (5)	Elektrisitetstilgang i Elfenbenskysten, investering i det nasjonale nettet gjennom sosial oblig	DF
7	23.11.2025	760 000 000		Mulilo	Vind, sol og batteriprosjekter i Sør-Afrika	CIF
8	19.11.2025	100 000 000		M10 Industrial Park, Ukrainafond	Lagerkapasitet i Lviv, vest i Ukraina	FI
9	31.10.2025	300 000 000		InterBanco og Banco de Antigua	Bank og mikrofinansinstutisjon, skal gagne småbedrifter og mikroentreprenører	DF (Lån)
10	13.10.2025	160 000 000		B5 Plus Limited	Stålproduksjon i Ghana	DF (Lån)
11	10.10.2025	70 000 000		Langeberg Foods	Produsent av hermetisk frukt i Sør-Afrika	DF
12	30.09.2025	235 000 000		SIPRA	Societe Ivorienne de Productions Animales, lokalt eid fjørfeselskap i Vest-Afrika	DF
13	17.09.2025	130 000 000		Mohinani Group	Gjennvinning av plast i Ghana og Nigeria	DF (Lån)
14	03.09.2025	60 000 000		Mobile Power Ltd	Utleie av batteri i Sub-Sahara	DF
15	22.08.2025	110 000 000		Kensta	Produsent av kontorutstyr, skal begynne å produsere bind i Uganda	DF
16	30.06.2025			Waves	Mobile finasielle tjenester i Vest-Afrika, felles investering med RMB og BII	DF (Lån)
17	12.05.2025	9 000 000		Konexa	Utbygging av fornybar energi og strømnett i Nigeria, DFA	DF
18	07.05.2025	75 000 000		OmniRetail	Teknologiplattform som gir småbutikker tilgang til kreditt i Nigeria, Ghana og Elfenbenskyste	DF
19	25.04.2025	166 000 000		CREI	Strøm til mobiltårn via solenergi i Mali	DF
20	21.03.2025	350 000 000		AFGRI Group	Støtter en tredjedel av Sør-Afrikas bønder	DF
21	08.03.2025	160 000 000		Pele Green Energy Group	Infrasturkturselskap som driver fornybare energiprosjekter i Sør-Afrika	CIF
22	06.03.2025	220 000 000		Erco Energia	Solenergi i Colombia, delinvestering	DF (Lån)
23	22.09.2025	850 000 000	170 000 000	Anthem	Plattform som har planlagt sol og vinkraft i Sør-Afrika. KNI sin andel er 170 millioner.	CIF
24	23.01.2025	400 000 000	200 000 000	CrossBoundary Energy	Selve overføring var trolig sent i 2024	DF
Total		4 857 868 400	370 000 000			

(1) Datoer fra prosjekt 1til 5 er nøyaktige og hentet fra NF sin tabell over investeringer, men denne har kun en noen av investeringene fra 2025. De resterende datoene er omtrentlige ettersom de følger publikasjonene på NF si

(2) Investeringssummer er omtrentlige da ikke alle kilder har nøyaktige tall, og er noen ganger konvertert fra dollar

(3) Investeringstyper skiller jeg mellom direkte finansiering (DF), Investering igjennom fond (FI), og investering gjennom spesifikt klimafondet (CIF)

(4) Kilder som har blitt brukt er Norfund sin oversikt i tabell på sin hjemmeside, som er begrenset for 2025, og nyhetsartikler fra NF sin hjemmeside

(5) Dette er en obligasjon som FCTC EPT står bak, og implementeringen av prosjektene er det statlige strømdistribusjonsselskapet i Elfenbenskysten CIE.

8.7 Alternative return in stock markets

Project number	Year initial	Total NOK commitment	KNI NOK % IRR	MSCI EM NOK % IRR	NIFTY500 NOK % IRR	MSCI US NOK % IRR	OSEBX NR % IRR
1	2024	55 595 464	12,5 %	21,6 %	16,3 %	40,5 %	-3,2 %
2	2023	315 250 380	92,1 %	18,2 %	27,1 %	36,6 %	8,5 %
3	2023	58 787 661	25,0 %	16,9 %	25,0 %	33,9 %	8,2 %
4	2022	146 717 656	-17,9 %	13,8 %	27,8 %	34,8 %	8,2 %
5	2022	70 265 531	11,3 %	14,6 %	22,2 %	27,5 %	9,8 %
6	2022	141 234 912	8,4 %	10,7 %	22,2 %	25,5 %	4,6 %
7	2022	439 099 800	5,3 %	5,8 %	24,0 %	25,0 %	7,0 %
8	2021	63 603 630	-6,8 %	2,5 %	20,7 %	20,6 %	6,6 %
9	2020	560 222 128	17,5 %	6,3 %	31,8 %	22,7 %	11,4 %
10	2019	130 329 990	4,2 %	5,6 %	18,3 %	20,8 %	8,6 %
11	2019	8 201 345	16,1 %	5,9 %	17,5 %	22,0 %	9,1 %
12	2017	57 099 455	-16,7 %	8,1 %	18,6 %	28,8 %	8,3 %
13	2016	77 540 220	5,1 %	6,8 %	17,7 %	19,3 %	8,1 %
14	2016	12 394 172	3,5 %	4,2 %	13,7 %	16,7 %	9,7 %
15	2015	90 950 092	19,3 %	4,4 %	17,9 %	19,3 %	7,7 %
16	2015	121 937 344	0,7 %	6,4 %	14,6 %	17,1 %	9,0 %
17	2014	47 669 861	6,7 %	5,7 %	14,3 %	17,2 %	8,5 %
18	2014	4 034 960	-1,4 %	6,2 %	19,5 %	18,3 %	9,1 %
19	2013	93 945 550	17,0 %	7,9 %	18,6 %	19,8 %	9,4 %
20	2013	23 602 469	24,5 %	5,4 %	15,1 %	19,1 %	11,0 %
21	2013	11 841 512	28,3 %	5,4 %	15,1 %	18,9 %	10,5 %
		2 530 324 132	12,6 %	7,0 %	20,2 %	20,5 %	9,1 %

Alternative returns: KNI NOK % IRR is the return on the KNI portfolio in Norwegian krone (NOK) since inception as informed by Norfund, i.e. on their 51% share of the total KNI investments. The MSCI EM USD is similarly the counterfactual return in respectively USD of having invested the same amount of money at the same time in listed equities in countries according to their country index in what constitutes the MSCI EM market, i.e. Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Kuwait, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Saudi Arabia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates. MSCI EM NOK is the preceding index applying converting to NOK for both the purchasing and sales price. NIFTY500 NOK is similarly the return in NOK for a counterfactual similar investment investing in the five hundred most important companies listed on the National Stock Exchange in Mumbai, India. MSCI US NOK is the alternative investment in the 85% most important US stock included in the MSCI US Index applying purchasing price in NOK and converting sales price to NOK. OSEBX NR NOK is the alternative investment stock listed in the Oslo Stock Exchange.

8.8 Oil fund reference index for listed shares

	Reference index (1)		**Market capitalisation (2)**		**GDP world (3)**
Region/Country	%	USD millions (4)	%	USD millions	%
North-America	56,63 %	788 892	54,12 %	65 979 696	30,07 %
South-Amerca	1,60 %	22 289	0,93 %	1 134 027	3,95 %
Europe	21,58 %	300 623	12,18 %	11 756 087	26,24 %
Asia	18,15 %	252 841	26,56 %	32 385 109	31,73 %
Oceania	1,90 %	26 468	1,50 %	1 831 655	1,91 %
Middle East	0,59 %	8 219	3,70 %	4 507 515	3,43 %
Africa	0,49 %	6 826	1,01 %	1 232 280	2,66 %
USA	54,08 %	753 369	51 %	62 185 685	25,91 %
India	2,14 %	29 812	4,21 %	5 131 397	3,52 %
Japan	6,49 %	90 410	5,18 %	6 310 681	3,63 %
Hong Kong	0,53 %	7 383	3,73 %	4 549 721	0,37 %
UK	4,73 %	65 892	2,54 %	3 095 983	3,32 %
South Africa	0,49 %	6 826	0,86 %	985 697	0,36 %
China	3,68 %	51 265	9,64 %	11 755 758	16,89 %

NBIM reference index compared to market capitalization and GDP in the world, March 2026. (1) The reference index is the strategic reference portfolio set by the Norwegian Ministry of Finance, source: https://www.nbim.no/no/investeringene/referanseindeksene/. (2) The market capitalisation of listed marked available shares, source: https://data.worldbank.org/indicator/CM.MKT.LCAP.CD?end=2024&name_desc=false&start=1985, (3) GDP compiled from The World Bank data, source: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD