Strategy 2020-2022 Close Out

Norges Bank Investment Management

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Contents

Introduction

Norges Bank Investment Management manages the Government Pension Fund Global on behalf of the Norwegian people. The investment strategy for the fund is laid down in the management mandate from the Ministry of Finance. We manage the fund within the limits of this mandate.

In September 2019, the Executive Board adopted a strategy plan for the period 2020-2022. Following the change in management in Norges Bank Investment Management autumn 2020, some changes were made to the Bank's management strategy, and the Executive Board issued a revised strategy plan for 2021-2022 on 24 March 2021. The plan otherwise built on the previous strategy plan.

The management of the fund during this strategy period has been influenced by the coronavirus pandemic. Close to all employees in Norges Bank Investment Management worked from home in periods following the virus outbreak in March 2020. Flexible employees, good IT solutions and delegation of authority meant that the necessary decisions could be made and executed. At all times since the outbreak of the virus, we have been able to carry out our management assignment and manage the fund in line with the strategy set by the Executive Board.

Our main achievements in the strategy period were:

- We have developed an investment simulator to analyse our investment decisions and provide portfolio managers with feedback to make better future investment decisions.
- We have strengthened our expectations towards companies. We launched our 2025 Climate Action Plan.
- We made our first investment in unlisted renewable energy infrastructure.
- We have invested in new technology and data analytics capabilities.
- We have focused on remaining a small, flexible, and cost-effective organisation. We have built a strong, diverse, and more inclusive workforce to drive growth and success.
- We have communicated more frequently and proactively and reached a broader audience. We have increased our visibility externally and engagement in social media.

Performance

The market value of the Government Pension Fund Global grew from 10,088 billion kroner at the end of 2019 to 12,429 billion kroner at the end of 2022. The fund is invested in equities, fixed income and real assets across the world. The fund provided an annualised absolute return of 2.9 percent over the strategy period. The annual net return adjusted for inflation and management costs was -1.2 percent in the period. The fund outperformed the benchmark by 0.7 percentage points annualised in the same period.

The fund's investment strategy has been developed gradually over time. We contribute to this development through our role as an advisor to the Ministry of Finance. In the strategy period, we provided advice on a range of different topics. On request from the Ministry, we gave advice on the composition of the equity benchmark, including the number of companies in the benchmark, followed by a proposed transition plan to the new equity benchmark. As part of a larger project in the Ministry of Finance on climate risk, we gave advice on how to address climate risk in the fund and expressed our view on the report from the external experts on Climate risk and the Government Pension Fund Global. Further, we proposed changes to our mandate on climate risk.

Following Russia's invasion of Ukraine, the Ministry of Finance decided to freeze our investments in Russia, and we were asked to prepare a plan for selling off the fund's investments in Russia.

Our advice to the Ministry is supported by internal research and analysis. We publish some of this research as Discussion Notes. Through the strategy period we have published five Discussion Notes; *Portfolio delegation and the effects of benchmarks, The asset pricing effects of ESG investing, Modelling equity market term structures, Fundamental drivers of asset returns,* and *Expected returns on a multi-asset portfolio.*

The fund marked its 25th anniversary during the strategy period. We published in total seven books in a series of historic reviews about how the fund got to where it is. These publications contributed to transparent management of the fund by providing historic accounts of different parts of the fund's investment strategy.

Investment strategies

Central to our mandate is the benchmark index consisting of 70 percent equities and 30 percent fixed income. The mandate puts certain constraints and requirements on our operational management against this benchmark. We manage the fund close to the benchmark index, but all our investment strategies have active elements. We use diversified investment strategies to manage the fund in a risk-controlled manner within the limits of our mandate. The strategies are complementary. They are tailored to the fund's unique characteristics as a large, long-term investor with low short-term liquidity needs and low-cost management.

Prior to the revised 2021-2022 strategy plan, the fund's relative positions were to a greater extent driven by allocation positions like systematic risk factors and segments that sought to diversify the fund beyond the benchmark index. In line with the revised strategy plan the allocation strategies were scaled down, and the reference portfolio as a tool to manage these positions was closed. Still, we have continued to take allocation positions both to manage the fund's total risk profile and exploit periods of excessive variations in asset prices. Investments in unlisted real estate, unlisted renewable energy infrastructure and selected segments outside the benchmark in fixed income, such as government related and emerging market bonds, have been part of the fund allocation strategy and have positively contributed to the fund's return.

We use a range of investment strategies in our management of the fund. They are grouped into three main categories: market exposure, securities selection, and fund allocation. Our investment strategies are complementary and tailored to our characteristics – a large fund with a long horizon. We report risk and performance according to these three main strategies. The three main strategies are pursued across equity, fixed income, and real assets.

Equity investments

The fund is the largest single owner in the world's stock market and is broadly invested across countries, sectors and currencies. Due to our size and global reach, it is critical to manage overall market exposures and trade efficiently. We have taken advantage of internal expertise and innovative technologies to improve our portfolio construction, trading strategies, risk management and to reduce implementation cost. To enhance portfolio returns, we have increased our active positioning around corporate actions and capital market events. We have expanded selected direct lending activities to increase securities lending income.

- We consolidated our enhanced indexing portfolios into fewer and larger mandates managed by investment teams to increase our excess return potential through more specialisation and collaboration.

- We continued our efforts on portfolio optimisation and risk management tools. We established a new team to further improve transitioning between investment strategies and implementation of inflow and outflow to the fund. This has given us the opportunity to reduce turnover and transaction costs.

- We strengthened our foundation for trading analytics including rebuilding our underlying data structure and improving our existing trading strategies. With this, we significantly improved our electronic and algorithmic execution performance, specifically in the US. We have increased collaboration with our trading counterparties throughout the period. This improves the electronic services provided to us and our ability to implement investment decisions effectively.

- We strengthened collaboration between our technology and investment teams. We have developed an innovative and scalable application platform which is used by investment and trading teams. The platform is tailored to our unique needs as a large, global investment fund and facilitates better communication and collaboration around investment opportunities between our teams.

- The equity capital markets landscape changed materially over the strategy period, moving towards lower performance and lower activity level in the market, in line with the financial cycle. Our responsiveness to these changes and consequent positioning around capital market events have contributed to our excess return.

- We have increased our positioning around corporate actions. To achieve this, we have recruited additional expertise, increased collaboration with research providers, and improved our internal processes and systems.

- We have continued to lend our equities responsibly and added additional restrictions to our securities lending activities. We generally exclude company investments from our securities lending programme where we are among the largest shareholders, or where we have an intensive dialogue with the company. We always retain shares in each investment to vote at shareholder meetings. We added a fourth synthetic lending counterparty, further increasing the return potential within our securities lending activities.

We closely cover our largest company investments to achieve the highest possible return after costs, improve risk management and fulfil our ownership role. During the strategy period, we further developed our capability to analyse long-term developments in company fundamentals and make good investment decisions.

- We conducted a thorough review of our investment process for securities selection and have implemented among other changes to financial modelling requirements, benchmark construction and investment restrictions. The changes provided portfolio managers with more freedom, flexibility, and time to focus on alpha generation.

- Our portfolio managers continued to conduct their own research on companies. During the strategy period, we added in-house capabilities in both advanced data analytics and behavioural analytics to further support portfolio managers in their research process.

- Our access to companies continued to be a unique competitive advantage for the fund throughout the strategy period and a central part of our portfolio managers' investment processes. During 2022 we held 2,911 company meetings and the majority of the meetings returned to in-person. Our internal management covered almost 900 companies in depth against a target of 1,000 companies.

- We have established an investment team with the mandate to build a portfolio of short positions based on forensic accounting analysis and primary research. We have built a system to screen for potential anomalies, we scrutinised many accounts and we have sold off all or part of the fund's holdings in several companies as a result of our analysis.

- We use external managers that have deep understanding of companies and local market dynamics where we believe they will enhance returns and reduce our exposure to companies with ESG issues. We focused on selecting smaller privately owned managers and managers that are recently established. In the strategy period, we selected 53 new and terminated 31 mandates. At the end of 2022 we had 105 external managers, up from 83 in the beginning of the period. The percent of the fund managed by external managers increased from 3.8 to 4.6 percent during the period.

Our internal equity management contributed 0.4 percentage point annually to the fund's excess return over the strategy period. Our external equity management contributed with 0.1 percentage point annually to the fund's excess return.

Fixed-income investments

The fund is invested in a broad range of bonds issued by governments and corporate issuers. We have continued to construct cost-efficient portfolios with exposure to key risk drivers, while taking advantage of opportunities at security, issuer, and sector level. We have strengthened our ability to implement fixed-income investments at low cost and evolved our fixed-income lending.

- We have improved our utilisation of liquidity provisioning strategies, increasingly taking advantage of short-term opportunities in the market. We extended and simplified our internal pricing model for all foreign exchange trading, allowing for more internalisation and cost-efficient implementation.

- We have extended the instrument and currency universe in derivatives with credit default swap indices and interest rate swaps in selected emerging markets to take advantage of attractive market opportunities and lowering trading cost. We have significantly enhanced the trading process and reduced the operational risk of these instruments through automation and streamlining.

- The corporate bond portfolio continued to be managed by a team of portfolio managers and research analysts. The basis for a substantial amount of the portfolio's positioning came from internal fundamental company research. Team members based in Oslo, New York and London completed over 150 investment cases. Cooperation with equity portfolio managers and shared company meetings were part of the due diligence process.

- We have invested a higher portion of the fixed income portfolio in government related debt than the benchmark index to systematically harvest attractive liquidity premia that aligns with the fund's investment horizon.

- The transition of taking emerging market issuers out of the reference index was completed. We continued to invest between 2.5 and 4.5 percent of our bond portfolio in selected emerging market issuers.

- We have actively sized our bond lending exposure depending on market conditions. Due to a less attractive risk/reward market environment we continued to reduce our traditional fixed income agency lending in 2021. Towards the end of the strategic period, the market recovered somewhat, and we increased our activity again, primarily through direct lending.

Fixed Income management contributed 0.2 percentage point annually to the fund's excess return over the strategy period.

Real assets investments

Our real asset investments include listed and unlisted real estate and renewable energy infrastructure investments. The investment teams are organised within one department, with improved synergies between the teams. Our focus on cross-team collaboration has led to increased effectiveness and yielded a broader set of perspectives, an increasingly important advantage in complex and uncertain markets.

- We have invested alongside high-quality partners with proven operational experience. We have expanded our portfolio of unlisted real estate partnerships, adding Mitsubishi Estate, Alexandria Real Estate Equities Inc., Swiss Life Group, PSP, and Longfellow Real Estate Partners. Our first investment in unlisted renewable energy infrastructure is in partnership with Ørsted.

- At the end of 2022, we have invested 4.4 percent of the fund in real estate, of which 60 percent of our real estate investments are in unlisted assets and 40 percent in listed assets.

We have completed 38 transactions in unlisted real estate comprising 30 acquisitions and 8 disposals.

- We have made our first investment in unlisted renewable energy infrastructure, the Borssele I and II wind park in the Netherlands. The investment comprises 0.1 percent of the fund value. We have onboarded power futures as a new instrument for hedging of power price fluctuations.

Real asset management contributed -0.1 percentage point annually to the fund's relative return, measured against the equities and bonds sold to finance these investments.

Responsible investment

Through responsible investment, we seek to improve the long-term economic performance of our investments and to reduce the financial risks associated with the environmental and social practices of companies in our portfolio. Our ambition is to be a global leader in responsible investment. We work at market, portfolio and company level to achieve this.

Market

We recognize a set of international standards and contribute to their further development. We express clear investor views aimed at markets and companies, and we support academic research.

- We have continued our work with standard setters and other stakeholders to improve global standards and practises related to sustainability, governance, and well-functioning markets. We submitted our views on 44 consultations. We have also worked to promote new standards. This included supporting the creation of the International Sustainability Standards Board to develop a set of global standards for corporate sustainability reporting, participation in International Capital Markets Association for better transparency regulation for bond trade reporting in Europe, support for the establishment of a contender (Ediphy) for provisioning of a consolidated tape to disseminate bond trade data at low cost to the broader market. In 2022, we were elected by asset owner signatories to the board of directors of Principles for Responsible Investment.

- We have had an increased focus on responsible conduct in emerging markets. This covered among other things a field trip to India as part of our company engagement on child labour, response to the China Securities Regulatory Commission's consultation on reporting rules and continued work with the Asian Corporate Governance Association to promote good corporate governance.

- We published two expectation documents on *Biodiversity and ecosystems* and *Human capital management*, and six position papers spanning *Board independence, Board diversity, Shareholder rights in equity issuances, Multiple share classes, Related-party transactions* and *Corporate sustainability reporting*. As part of our work on biodiversity, we became a member of the Taskforce on Nature-related Financial Disclosures (TNFD). We supported six academic research projects on topics such as climate change, companies' ownership structure and the effect of voting pre-disclosure.

Portfolio

We integrate environmental, social, and corporate governance considerations in our investment decisions to assess companies' resilience, and to identify long-term investment opportunities. We also seek to reduce our exposure to unacceptable risks.

- We have further integrated ESG data into our investment processes. We have made information on companies' board of directors easily available to our portfolio managers and developed internal indicators for quantifying the quality of a company's governance, as well as its tax behaviour.

- We improved the process for our sustainability assessments, by leveraging machine learning methods to source and collect more accurate data in an efficient manner.

- We have taken steps to further develop responsible investment management in fixed income and real assets. We have an ongoing internal research project on ESG in fixed income, and we have set a net zero carbon target for our unlisted real estate portfolio. Environmental, social and health and safety risks was an integral part of the due diligence process in our investment in unlisted renewable energy infrastructure. We started using the GRESB (formerly the Global Real Estate Sustainability Benchmark) framework for assessing the sustainability of specific infrastructure assets.

- We published two Asset Manager Perspectives related to climate change, followed by the launch of our 2025 Climate Action Plan. The plan outlines our approach to managing climate related risks and opportunities and sets out the actions we aim to take over the period 2022-2025.

- In 2021, we started systematically analysing ESG risks across all companies before they enter the fund's equity benchmark. We have continued to use a broad range of tools to monitor ESG risk in the portfolio such as daily risk monitoring, in depth research, monitoring movements and events, and quarterly screening of the whole portfolio. We have divested from 156 companies in the strategy period following assessment of ESG risks.

Companies

We engage through dialogue with companies and voting at their shareholder meetings. These are our key ownership tools to promote long-term value creation by companies and safeguard the fund's assets. There are also companies we choose not to invest in for ethical reasons.

- We had nearly 3,000 company meetings per year and have initiated several new thematic dialogues related to our expectations.

- We have continued our aim at voting at all shareholder meetings. In 2022, we voted at 97.5 percent of the shareholder meetings of companies in our portfolio, a percentage that remained quite stable through the strategy period. When we do not vote, it is generally because voting would lead to share blocking, thereby restricting our ability to trade, or because other rules make it difficult to exercise our voting rights. In 2021, we began publishing our voting intentions five days before each shareholder meeting. We have made operational changes to enable a more efficient voting process.

- We have continued to vote against individual directors to hold them accountable for the company's conduct. We voted against boards that had not acted in shareholders' interests or managed the company responsibly. We also voted against remuneration committee members where there was a history of problematic executive pay, and against audit committee members where the external auditor had found problems with the annual financial statements. We voted against the re-election of 57 directors at 17 companies due to failures in adequately managing climate risk in 2022.

Investment process

Our management assignment requires a robust, efficient, and secure investment process for our portfolio management and transaction processing. During the strategy period, we have continuously looked for new ways to challenge and improve the investment process through technology and developing our people. We have strengthened our risk-taking, fine-tuned our processes and decision-making and continued to develop a culture where we learn from our mistakes and leverage our successes.

- We have established the Human Performance Program to improve decision-making, increase resilience and instil a performance mindset in our organisation. At the end of 2022, around 80 employees have completed the program. We have recently launched a Team Performance Program to mobilise our teams' knowledge and capacity, their ability to learn, give and receive feedback, take responsibility, and support each other.

- We continued to emphasise a long-term mindset in our investment processes. Long-term investing requires mental resilience, a contrarian mindset and comfort and confidence in targeted risk-taking. We also believe it benefits from a work environment where employees are comfortable expressing their opinions, admitting mistakes, and suggesting improvements. We have worked on improving our feedback culture and psychological safety for all employees through coffee-talks, feedback training and e-learning. We have also made changes to incentive structures to further align them with the fund's long-term investment horizon.

- We have developed an investment simulator software to analyse our investment decisions. The simulator enables portfolio managers to capture rationales and reasons behind investment decisions, conduct analysis to test various hypotheses which may impact our performance, and provide portfolio managers with feedback to make better future investment decisions. Extensive research and development resulted in a goal-oriented decision support framework which was rolled out to Equity Strategies portfolio managers. The work will continue into the next strategy period.

- We improved our ability to extract information from company meetings through the further roll-out of communication training and interview techniques to our portfolio managers and more frequent sharing of best-practise.

- In our government bond portfolio, we have improved our performance attribution system to better track our performance and underlying drivers.

We maintain a high level of cost awareness in our management of the fund and work to automate processes and streamline operations to realise economies of scale.

- Total internal management costs fell from 3.7 basis points in 2019 to 3.0 basis points in 2022. The absolute internal costs increased from 3.4 billion in 2019 to 3.6 billion in 2022. More than 70 percent of costs are billed in foreign currency and fluctuations in relevant exchange rates have led to an increase in costs measured in kroner in recent years.

- We have run a competitive tender process for global custody and security lending and entered a new contract with our existing global custodian. The new contract will substantially reduce the annual custody fees compared to the current agreement.

- We have a continued focus on process improvements and technology through the strategy period by further use of automation and system support. We have improved the rate of fully automated transactions from 96.8 percent to 97.7 percent across all transaction types. The improvement has increased efficiency and reduced operational risk. Two of the concrete items driving this improvement is better settlement rate tracking and higher automation rate for bond trade data enrichment.

- We maintain comprehensive and robust governance, risk and compliance frameworks and controls. We have strengthened ongoing control monitoring activities and implemented a structured control maturity assessment framework. Our training and awareness program has been improved by introducing new ways of raising awareness through designated compliance scenario training activities.

Technology

We utilise technology to ensure robust, effective, and secure investment processes. During the strategy period we have focused on automation, innovation, removal of legacy solutions and robust cyber security measures. We have adopted the latest proven data solutions ensuring better performance, more scalability and higher operational robustness.

- We have continued to improve and utilise our cloud platform ensuring security, adaptability, and scalability. Our network, cloud infrastructure and end point management has been uplifted based on configuration-as-code, modernisation, and security. We have more potential to draw from and our efforts will continue in the next strategy period.

- We have grown in prioritised areas, primarily on full-stack developers working in autonomous teams closely with the investment areas. These teams ensure that we build solutions for our unique investment processes tailored to investment areas and support functions. We have increased our capacity in the US and Asian time zones.

- We have insourced our global service desk to improve support quality, improve the utilisation of our resources, and to strengthen our IT security. During the period we have improved our service level while reducing team size with 50 percent.

- We have implemented a cloud-based data warehouse platform to better support data and analytics in all parts of the organisation. Additionally, we have continued to replace legacy platforms with software as a service-based tools. We have also started taking data marketplaces in use, both to access external vendor data and to share our data externally.

- We have increased IT development capabilities throughout the organisation by launching training initiatives related to our core competencies on technology and data analytics. This work will continue into the next strategy period.

Cyber threats continue to pose a significant risk to the fund as threat actors are becoming specialised, sophisticated, and well-funded.

- We have increased our cyber security capabilities through new hires and reduced use of consultants and have sourced and built tools to increase efficiency. This has improved the coverage and quality of our cyber security processes and controls, most notably the ability to detect cyber security incidents and respond to these.

- We have expanded the security awareness program to include targeted training for high-risk roles in addition to the regular training to all employees. We have performed targeted training on business e-mail compromise for those that execute payments, ransomware, and spear-phishing training for the leader group, in addition to regular phishing exercises for all employees.

People

People are the driving force behind our success and our most important resource. During this strategy period we have grown in prioritised areas and invested in the skills and wellbeing of employees to effectively harness the value of our human capital over time. We have prioritised developing a diverse and inclusive organisation. We are looking for diversity of mindset, ethnicity, age, academic background, and life experience. We have supported career development, flexibility, and training and this is also reflected in our recruitment processes.

- The fund has grown from 540 employees at the end of 2019 to 572 at the end of 2022. In addition, there were 23 employees in wholly-owned management companies. We have grown mainly within investment, technology, and recruited young talents through the graduate programme.

- To complement our international investment organisation and to offer better career mobility, we have increased the number of portfolio managers based in Oslo by 18 percent.

- We have continued to build a global organisation. A total of 45 percent of the employees are working at our international offices outside of Oslo, compared to 43 percent at the end of the previous strategy period. We have increased mobility between offices. 17 percent of our employees have been on international assignments or transferred to one of the other offices during the strategy period.

- We have strengthened our relationship with educational institutions through various initiatives and raised our profile among students by giving several talks and presentations. The launch of NBIM Teach has helped with our visibility among students and contributed to strengthening our relationships with universities in Norway and internationally.

- We have established a summer internship programme with approximately 30 interns accepted every year. The re-established graduate programme has grown by 60 percent in application numbers and contributed to our solid position as number three ranking on the Universum's most attractive employer among business students survey in Norway. The young professional programmes have encouraged and prioritized candidates from different socio-economic- and minority backgrounds.

- We believe the combination of the best talents from technology and finance will allow us to succeed in building an investment organisation for the future. We have increased our visibility with technology students and IT professionals resulting in climbing from 38th place in 2020 to 16th place in 2022 among IT professionals in the Norwegian Universum ranking.

- We have provided more training opportunities for our people through the launch of a new e-learning platform and the launch of core competencies that we want all our employees to possess. We have introduced a new career framework and continued to offer sponsored education. We have offered greater flexibility and introduced a work from home scheme. For our leaders, we have established a leadership summit, provided training and forums for knowledge sharing and rolled out a 360-feedback process for all managers.

Communications

External communications

We have communicated frequently, proactively and reached a broad target group. Our employees contributed to many national and international events. We have built better knowledge and understanding of the fund among journalists and younger generations. We also extensively increased our presence in social media and launched our own podcast.

- We have increased our participation at external events - ranging from large national and international conferences to student presentations. In 2022 we participated at more than 200 events, compared to 120 annual presentations in the previous strategy period. Investment, technology, and environmental, social and corporate governance topics were the most visited. We also promoted our experts as participants at relevant forums and spokespersons in subject panels. We had a special focus on students, with an aim to build knowledge about the fund among younger generations and for recruitment purposes.

- To reach a broader audience we participated at the annual Norwegian democracy forum "Arendalsuka" in both 2021 and 2022 where we also opened our press conference to the general public.

- We had editorial meetings with Norwegian and international media to build knowledge and understanding of the fund. We have promoted more spokespersons to represent the fund in the media. We have highlighted our work and our people within the technology domain and our summer intern and graduate programmes to attract young talent. We have increased our presence in social media, and more than doubled our followers. Our main target group on LinkedIn has been students to highlight our career opportunities. We have also encouraged employees to engage in social media with content that contributes to increased transparency and knowledge about the fund.

- To give insight to the companies we invest in and its management, we launched an international podcast series where our CEO interviews executive management of some of the world's largest companies. We launched 20 podcast episodes during 2022, with an average of 20,000 listeners per episode.

- We increased the transparency and accessibility to all the funds' investments by re-building our digital holdings overview on our web site.

- We have hosted many internationally recognised experts to present in our different forums such as Equity Strategies Forum and Norwegian Financial Research Conference.

- We met with other organisations in Norway and abroad to learn from how they work with communications. We focused on simplifying information, our collaboration culture and internal communications.

Internal communications

We have extensively increased internal communication and transparency across the organisation, and we believe this has been a driver for higher motivation, better strategy execution, good culture, and more collaboration.

- We have experimented with new channels to improve internal communications and find better ways of working across the organisation.

- We have encouraged information sharing from all levels across the organisation, to allow for more transparent information. We increased the leader group's visibility by sharing minutes from all leader group meetings. We have extensively increased the number of internal news stories, which we believe contribute to strengthening our performance culture.

- All our offices have hosted townhalls to ensure inclusion and visibility. We have increased the number of internal events significantly, from 15 in 2019 to 45 internal events in 2022.