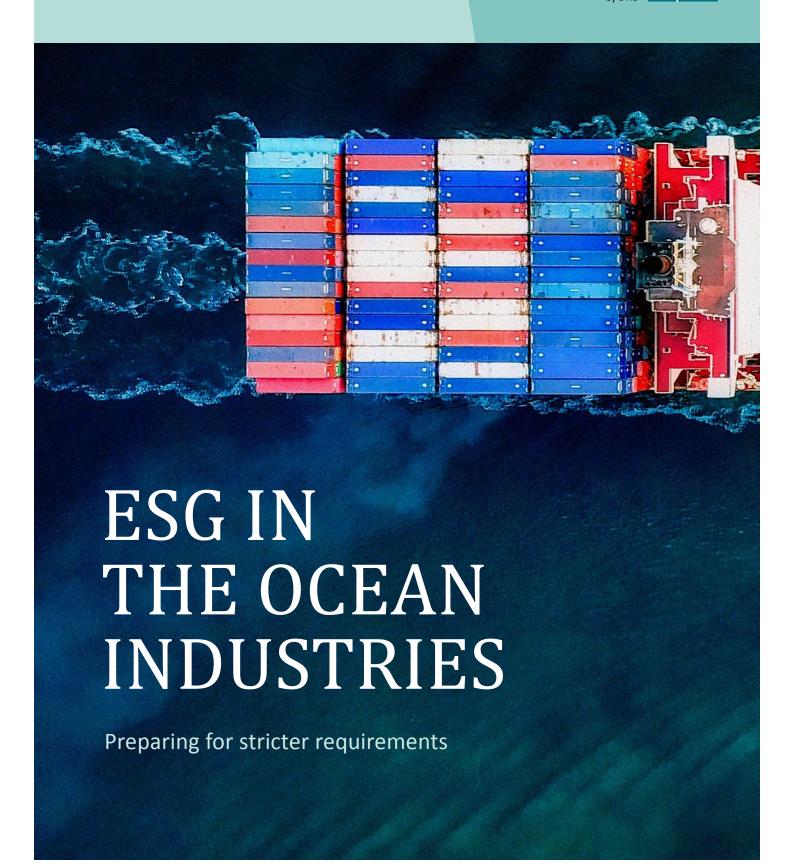


Report commissioned by DNB





ABOUT THIS REPORT:

DNB has commissioned this report from The Governance Group (TGG). TGG bears full editorial responsibility for the complete content. TGG has undertaken the mapping of sustainability risks for the shipping and seafood industries, and the analysis of the ESG disclosures of the companies listed on the Oslo Stock Exchange, while Arabesque has contributed with an analysis of ESG data for the two industries at a global level. DNB has contributed with its perspectives on ESG risks in both industries.

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The Governance Group

The Governance Group AS (TGG) is an advisory firm specialising in risk analysis and sustainability strategies. TGG has a core team in Oslo and a network of affiliated experts in Africa, the Americas, Asia and Europe. Clients include large corporations in the energy, shipping, telecom, real estate and finance sectors, as well as government agencies in several countries.

DNB

DNB ASA is Norway's largest financial services group and one of the largest in the Nordic region in terms of market capitalisation. The Group offers a full range of financial services, including loans, savings, advisory services, insurance and pension products for retail and corporate customers. DNB plays a vital role in a number of industries, including the energy sector and the fisheries and seafood industries. DNB is also one of the world's leading financers of the shipping industry.



The ocean covers more than 70% of the Earth's surface, contains 99% of the habitat for life, generates half the oxygen we breathe, and provides food and income for a substantial part of the world's population.



cean industries are a driving force in the Norwegian economy, representing about 70% of our exports and about half of the Oslo Stock Exchange's market capitalisation.

The health of the ocean is not only key for Norway but also for our common future on the planet. With increasingly stretched land based resources, we all depend on ocean industries to supply a growing world population with enough food and energy. At the same time, these industries must themselves strive to become more sustainable.

All companies should understand the broader environmental and social consequences of their business operations and continuously evaluate risks and opportunities. As providers of capital and other financial services, banks and other financial institutions in particular have a responsibility and an opportunity to contribute to society and to promote responsible business conduct.

DNB has worked to promote corporate responsibility for many years. In 2017, DNB made the promotion of corporate responsibility one of its four strategic priorities. We are pleased to note that now, in 2019, most banks active in the ocean industries are incorporating ESG issues in their internal risk evaluations of clients and projects.

Ten years ago, environmental, social and governance (ESG) challenges were only included in a risk assessment if they were already prominent and seen as potentially material. At present, all DNB clients are screened and assessed for ESG performance. We are already noticing that ESG risks increasingly impact client prioritisation and capital allocation. We believe this is just the beginning and expect that in the future ESG preparedness and performance will more systematically influence the flow of capital.

In today's climate, shareholders, financial institutions, NGOs and other stakeholders expect full disclosure of a company's ESG policies and performance. As documented in this report, we are gratified to note the positive development on ESG reporting by ocean industries listed on the Oslo Stock Exchange. Room for improvement, however, remains.

While ESG reporting is still in its infancy, we appreciate that companies are striving to be more open about sustainability challenges and performance. This information is important when trying to understand the risk landscape and the values of a company.

Kristin Holth
Global Head of Ocean Industries, DNB

Introduction Financial perspectives on sustainability in the ocean industries



successful company operates in a sustainable manner: it is profitable today and in ten years' time. Short-termism — whether it comes to emissions or business conduct — eventually extracts

a substantial long-term price.

A mere ten years ago, the three letters ESG meant little to finance professionals. Today, most portfolio managers and bankers understand that ESG (environmental, social and governance) issues ought to be considered when making an investment or lending decision. However, methodologies for including ESG considerations into these decisions, and access to reliable data, represent a challenge.

The World Economic Forum calls the oceans the Earth's new economic frontier¹, and the OCED estimates that the ocean industries will grow to 3 trillion USD by 2030². Oceans cover 71% of the Earth and contain 99% of the living space on our planet³. Given rapid population growth and the fact that farmland is now stretched to its maximum capacity, the ocean and the food it provides are ever more vital to human survival. However, if not managed wisely our oceans' yields will decline, with severe financial and human consequences.

Whether investing in or providing credit to a company, financial institutions must consider the full spectrum of risks affecting the sustainability of a company's business model. Risks have costs and thorough and prudent analyses provide a fair pricing of that risk. A company's financial sustainability, therefore, requires that ESG factors be adequately evaluated.

This report aims to highlight the key ESG risks facing the ocean industries, specifically the *shipping* and *seafood* industries.

Today, few investors and bankers consider sustainability risks systematically when making financial decisions — it simply is too cumbersome to compare different information for different financial products. Moreover, current ESG data lacks substance and quality compared to traditional financial metrics. As a result, most financial decision-makers disregard or underestimate the long-term effects that sustainability factors will have on the performance of their assets.

To address this lack of commonly agreed ESG metrics, the EU is currently developing a standardised taxonomy for sustainable finance⁴⁵. The EU is seeking greater transparency when it comes to investing in or funding activities, so that the consequences of these are compatible with the climate scenario of the Paris agreement – preventing global temperatures from increasing beyond our ecosystems' tolerance levels. The EU taxonomy will provide investors, banks, companies and issuers with concrete and transparent information on environmental sustainability – a prerequisite for informed decision-making⁶. Corporations and financial markets should, therefore, prepare for stricter ESG requirements in the near future.

As we wait for regulators to specify how to measure, value and assess the sustainability of companies, this report aims to create greater clarity on the status of ESG reporting. We believe this report will enhance the debate, provide insights into these issues, and provide a clearer understanding of the expectations of the financial market.

This report will also highlight key features of the information currently available to enable a better understanding of the risks at hand.

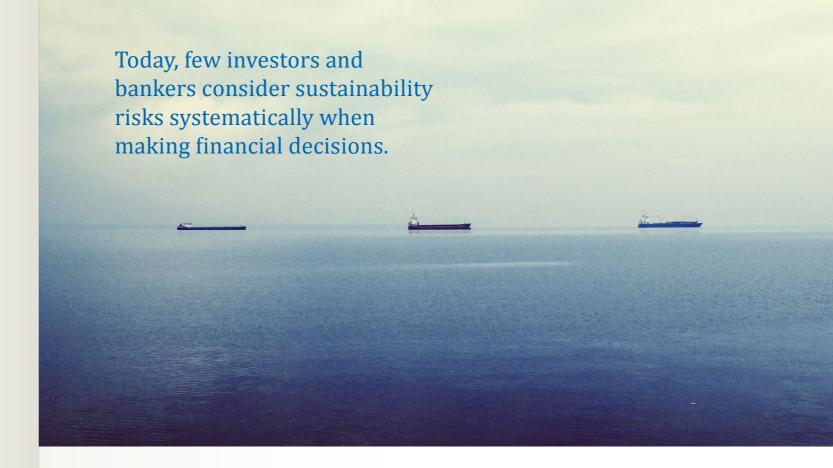
Our report comprises the following:

- An analysis of the ESG information provided by the 33 largest shipping and seafood companies listed on the Oslo Stock Exchange, which is the world's second largest securities marketplace for shipping and the largest for seafood⁷.
- A deep dive into the ESG requirements of DNB, one of the world's leading lenders to the shipping and seafood industries.
- An analysis of the ESG performance of these two industries globally, based on the ESG database Arabesque S-Ray.

Our analysis shows that many companies are ill prepared for more stringent ESG disclosure requirements.

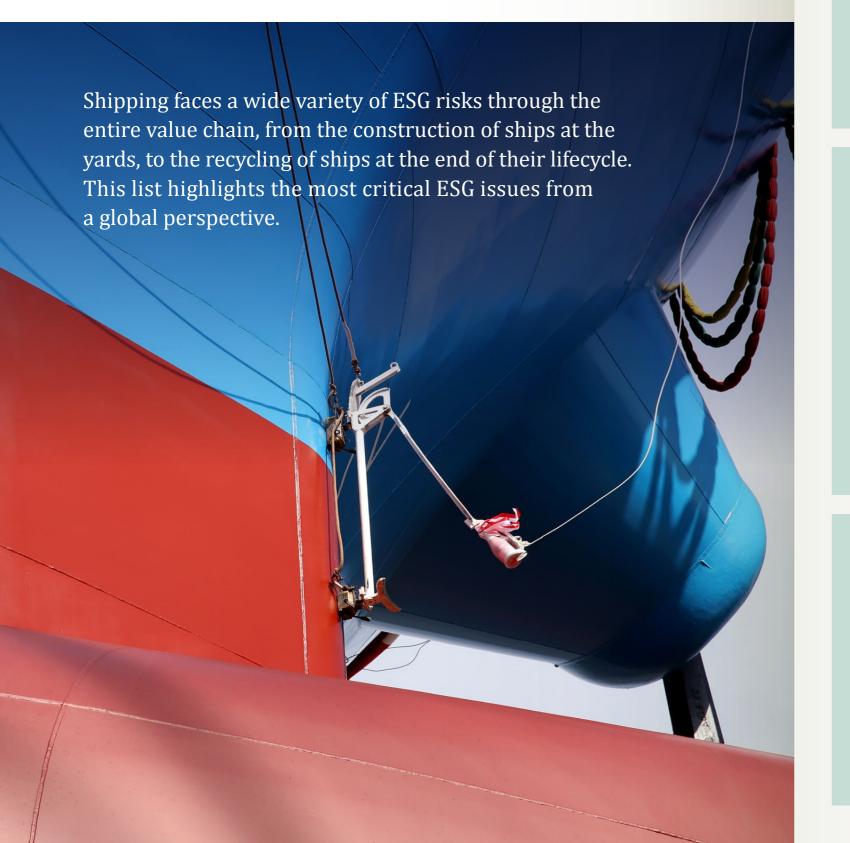
ESG risks are real and need to be assessed and priced consistently by the financial markets. Our analysis shows that many companies are ill prepared for more stringent ESG disclosure requirements. Information is scarce, and standardisation is needed for more accurate benchmarking and thus better measures of the risk levels involved.

Until clearer guidance is provided by regulators, shipping and seafood companies will benefit from disclosing concrete information on ESG issues material to their business models.



- 1 https://www.weforum.org/agenda/2015/08/are-the-oceans-earths-new-economic-frontier/
- 1 OECD (2016). The Ocean Economy in 2030. Paris: OECD Publishing. Retrieved from http://dx.doi.org/10.1787/9789264251724-en
- 1 https://www.oceanicinstitute.org/aboutoceans/aquafacts.htm
- 1 https://www.ipe.com/news/esg/european-parliament-agrees-stance-on-sustainability-taxonomy
- 1 https://ec.europa.eu/info/files/sustainable-finance-teg-outreach-plans_en
- 1 https://www.la-francaise.com/en/who-we-are/news/news-details/coming-soon-a-green-taxonomy-from-the-european-commission/
- 1 https://www.oslobors.no/ob_eng/Oslo-Boers/Listing/Shares-equity-certificates-and-rights-to-shares/Energy-shipping-and-seafood

Shipping industry Main sustainability concerns



ENVIRONMENT

E

EMISSIONS AND ENERGY REDUCTION

The main concern is GHG emissions and the ability to meet stricter climate related regulations, but also concern over air pollution emission from ships, including Nitrogen Oxides (NO_x), Sulphur Oxides (SO_x) and Particulate Matter (PM) in harbour areas.

BIODIVERSITY AND MARINE POLLUTION

The main concern is the transfer of invasive species through ballast water, impacts on marine life from anti-fouling chemicals, and insufficient on-board waste management.

SHIP RECYCLING

Reputational damage due to ship recycling taking place on the beaches in southeast Asia, where the health and safety of workers are not respected, and environmental protection is lacking.

ACCIDENTAL SPILLS AND EMERGENCY PREPAREDNESS

Financial markets are concerned with largescale environmental damage from accidents not properly handled or mitigated.

CLIMATE RISK

Concern over the fleet's preparedness to meet harsher and more unpredictable climatic conditions, and stricter emission requirements.

SOCIAL

S

HEALTH AND SAFETY

There are approximately 6 fatalities per 100 million work hours on board ships (excluding fishing) per year, which is 10 times the OECD average for all industries.

LABOUR RIGHTS

Extensive use of temporary employment agencies and short-term contracts weaken worker's rights and their ability to organise.

FORCED OR COMPULSORY LABOUR

Several cases of forced or compulsory labour (modern slavery) have been uncovered in recent last years, particularly involving migrant workers.

DIVERSITY AND EQUAL OPPORTUNITY

Shipping is a male dominated industry with limited opportunity for women and non-Western crew to advance, including to the rank of captain.

SECURITY OF ASSETS AND PEOPLE

Shipping routes in high-risk areas (e.g. risk of piracy and the responsible handling of refugees and migrants in need) require a greater focus on security practices.

GOVERNANCE

G

ANTI-CORRUPTION

As an industry, shipping is highly vulnerable to corruption and the demand of facilitation payments, a vulnerability that increases with the widespread use of agents, brokers and intermediaries in the industry.

POLITICAL ACCOUNTABILITY

Controversy over the industry's supranational nature means it often escapes enforcement of national regulations and international agreements.

TAX TRANSPARENCY

Controversy over tax transparency and tax liabilities, the use of tax havens, and (according to critics) tax evasion.

Shipping industry A capital provider's take on ESG risk



PERSPECTIVES FROM DNB

Capital providers such as investors and banks are incorporating ESG factors in their total risk assessments and selection of clients and projects. As a consequence, the capital allocation of banks and investors are increasingly influenced by ESG assessments, and such factors thereby influence the access to and price of capital for companies and their projects.

To assist in these ESG assessments, DNB uses external databases and services, as well as internal guidelines and tools, are increasingly being used. Generic approaches have obvious limitations, and industry specific insights are needed to understand what factors and topics are material, based on actual risk exposure and the footprint of the industry. DNB has, therefore, developed industry specific guidelines and checklists, which are updated regularly to ensure relevance and precision.

For DNB, client selection is a thorough process where strategy, quality of operations and good governance are some of the key parameters used. Once on board, all clients are subject to regular reviews and analyses, which include, in addition to the more traditional financial analysis, ESG risk assessments. The ESG assessment considers 26 different parameters, covering environmental, social and governance related topics. The areas with the highest priority for DNB (and many other banks lending to shipping companies) are:

- recycling practices
- emissions and waste (including carbon)
- risks related to transactions and trading such as money laundering
- sanctions
- human rights
- corruption

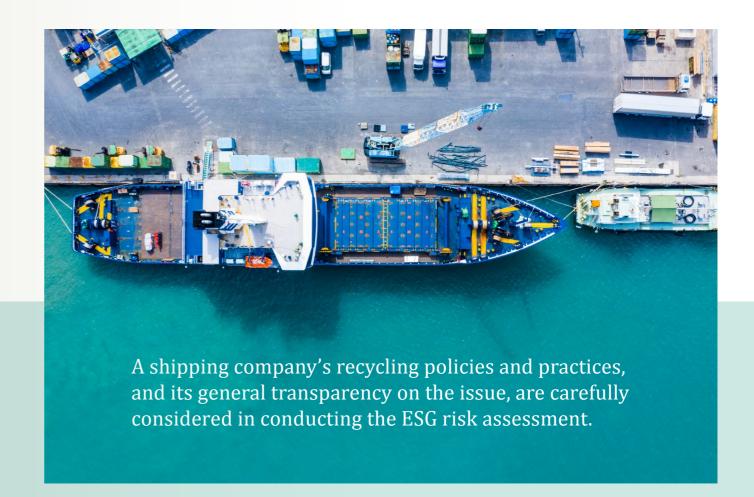
In addition, DNB increasingly scrutinises the overall quality of operations and general adherence to best practices and voluntary standards.

Unsustainable ship recycling practices are arguably the issue currently having the most negative reputational effects for the industry as a whole since these practices entail large risks to the environment and human health. Working conditions are often poor, and the risk of accidents is high. In general, it has taken time for the shipping industry to acknowledge that ship recycling is an integrated part of the shipping value chain for which the entire industry is responsible for. Some companies are leading the way by taking a stand, developing policies and implementing responsible procedures for recycling vessels.

A shipping company's recycling policies and practices, and its general transparency on the issue, are carefully considered in conducting the ESG risk assessment. It is important that the policies clearly reference the Hong Kong Convention (at a minimum) and/or the EU regulations on recycling, and contain guidelines on reporting and follow up.

DNB is part of the bank initiative Responsible Ship Recycling Standards. It is also introducing requirements regarding recycling standards in new financing agreements. The bank is aiming to have such requirements contained in all new agreements by 2020.

After recycling, **decarbonisation of shipping** is an issue that will increasingly dominate risk assessments and policies of banks. We do not know today exactly what is needed to enable the industry to reach IMO's goal



of reducing, by 2050, shipping's carbon emissions 50% from their 2008 level, let alone how to fully decarbonise (deep sea) shipping. However, rapid developments in new propulsion technologies now being applied in short sea shipping will likely provide us with many more answers regarding enabling technologies for deep sea use, over the next five to ten years.

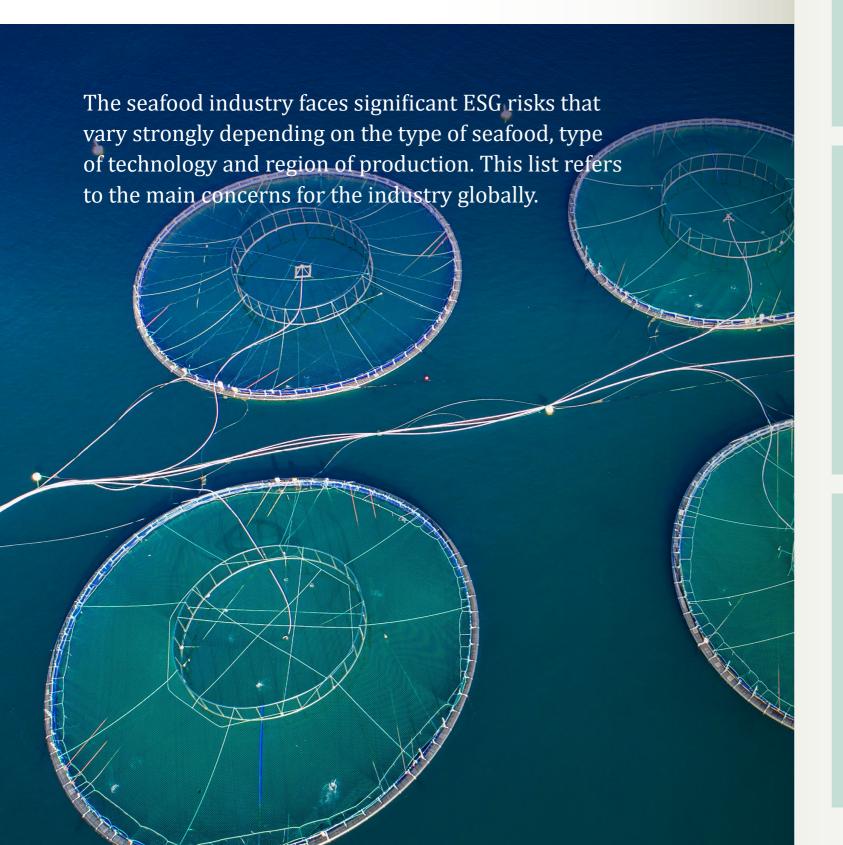
Currently, banks lending to shipping companies are starting to measure the carbon footprint and climate risks of their shipping portfolios. Even as banks assess the action plans for reducing greenhouse gases in other industries, it is not obvious today precisely what such strategies for shipping companies should entail other than overall efficiency efforts.

We have noticed large variations among ship owners regarding the importance they assign, and the initiatives they undertake, concerning climate risks and their carbon footprint. As both technology and regulations evolve, so too will banks' assessments in this area. In the short term, the main focus of an ESG assessment will be on general energy efficiency and emissions of fleets.

For the various **risks related to transactions and trading**, banks are already allocating significant resources on thorough KYC (Know Your Client) processes and monitoring client activities. Key parameters include transparency of ownership structures and implementation of anti-corruption policies. In comparison to several other key ESG areas where existing regulations are weak or even absent, the minimum regulatory requirements pertaining to areas such as anti-money laundering and sanctions are high and clearly defined. Any failure of compliance may be costly with severe consequences for a bank.

Traditionally, environmental issues and safety at sea have been the focus of discussions concerning ESG in shipping. Many of the current IMO regulations are a consequence of major accidents and spills. Looking forward, we expect ESG assessments of the shipping sector to increasingly focus on human rights issues and also to consider the entire shipping value chain, from shipbuilding, through operations to ship recycling.

Seafood industry Main sustainability concerns



ENVIRONMENT

E

FISH HEALTH AND WELFARE

Parasites and diseases adversely affecting animal welfare

BIODIVERSITY

The escape of fish leading to genetic changes and the spread of diseases to native, wild species.

UNSUSTAINABLE FISH FEED

Fish feed from unsustainably sourced protein sources; e.g. soy plantations causing deforestation, over-harvesting of marine protein sources.

LOCAL POLLUTION

Pollution of local water bodies and sediments close to production sites.

EMISSIONS

Emissions inherent in the global nature of the seafood value chain, from transport of feed, hatcheries, processing and distribution.

CLIMATE RISK

The industry is high-risk in terms of vulnerability to climate change; extreme weather events, rise in ocean temperature, ocean acidification and sea level rise will have severe consequences.

SOCIAL

S

FOOD SAFETY

Adverse public health impacts caused by contamination from heavy metals and agrochemicals, and in some regions the use of antibiotics, animal by-products and genetically modified ingredients in fish feed.

CONFLICTS OVER ACCESS TO WATER AND LAND

Local conflicts over access to water sources and land necessary for feed production, hatcheries and other land-based production facilities.

HEALTH, SAFETY AND WORKING CONDITIONS

Poor health and safety practices, and controversy regarding poor working conditions and lack of respect of labour rights.

REPUTATIONAL RISK

The aquaculture industry meets increasing stakeholder criticism for its adverse social and environmental impacts. The level of conflict is on the rise and the industry struggles to effectively address the criticism.

GOVERNANCE

G

POLITICAL ACCOUNTABILITY

Aquaculture companies applying undue political pressure to secure licenses and access to land and water, and undertaxation of the industry's use of public resources (privatisation of the oceans).

LACK OF GOVERNANCE

Aquaculture is a lucrative business that has grown rapidly, often out-pacing the ability of government agencies to regulate the practices having adverse impacts.

CORPORATE GOVERNANCE

Seafood companies often operate with close ties to local communities, and many are family owned, leading to unclear roles and division of responsibilities.

Seafood industry A capital provider's take on ESG risk



PERSPECTIVES FROM DNB

Overfishing has been a key problem of sustainability in the seafood industry. Other problems are the impact on the sea bottom from trawling (especially of coral reefs), lost fishing nets killing fish and sea mammals, and slave-like working conditions on some vessels.

Aquaculture is becoming an ever larger part of total seafood production, receiving increased attention as it grows. Key topics include the impact on the local environment caused by pollution and disease. Increasingly, global issues – related to the entire value chain and climate risk – are becoming more prominent.

Value chain issues include sourcing of raw materials, its impact on rain forests, and working conditions at soy farms in Brazil. Use of antibiotics in aquaculture and the rights of indigenous people are also important issues. Increasing global challenges are accompanied by the realisation that aquaculture can become an important part of solving the challenge of feeding a growing global population.

The Earth's natural resources have already been exploited to their breaking point. Given pressure on available farmland, and depletion and contamination of water resources

for use in agriculture, aquaculture's low environmental footprint is but one of its many advantages when compared to other means of animal protein production.

DNB has been concerned with sustainability issues related to seafood seafood for years, for the simple reason that the link between sustainability and financial results are more apparent in seafood production than in most other industries. Fisheries where fish stocks are poorly regulated are financially risky because volumes may disappear due to overexploitation.

If aquaculture is not well managed from a biosecurity perspective, it will be prone to devastation from disease and parasites, and revenues and profits will, like the fish, become scarce. Although the seafood industry is global, fishing often occurs within a nation's territorial waters. This makes the industry easier to regulate than, for example, shipping where most activities occur in (largely unregulated) international waters. Moreover, ships can be registered in any country, usually a country other than the one where the shipping company is incorporated and also where regulations are lax.

Increasing global challenges are accompanied by the realisation that aquaculture can become an important part of solving the challenge of feeding a growing global population.



DNB has a general framework for Corporate Responsibility (CR) for its corporate clients. In addition, the bank has specialised guidance notes for a handful of different industries — among them seafood — and the guidelines apply to all segments of the industry and to the entire value chain. These guidelines state that DNB will not finance unregulated fisheries with sustainability risks, fisheries using harmful fishing techniques, or fishing of species at risk, as described in so-called CITES agreements.

They also emphasise that the bank has an obligation to encourage its clients to continue to improve their ESG performance.

DNB will always demand that potential clients comply with local and international regulations, and ethical guidelines, and that they have relevant licenses when required.

OCEAN INDUSTRIES ON THE OSLO STOCK EXCHANGE

The Oslo Stock Exchange is the world's largest and most important financial marketplace for the seafood sector, and Norway is currently the world's fifth largest maritime nation. Measured by the number of listed companies, the OSE is the leading securities marketplace for shipping in Europe, and the second largest in the world.

ESG risks need to be assessed and priced consistently by the financial markets. This analysis investigates ESG information disclosed by the largest shipping and seafood companies on the OSE for the financial year of 2018. Of the 100 largest companies listed on the OSE, 33 are from the shipping and seafood sectors.

METHODOLOGY

The analysis below is based on the companies' 2018 annual and sustainability reports, as well as material published online before June 2019. Most of the companies' published reports and material are easily accessible online. Important information may have been omitted where we were unable to determine sources. Two independent researchers have conducted the assessment.

Defining clear boundaries for industry sectors is challenging as companies may not fit solely in one category. The definitions used for this report are as follows:

Shipping – companies with a fleet, whether defined primarily as companies within the maritime industry, shipping, freight, logistics, or companies in the wider shipping supply chain such as seismic ships.

Seafood – companies within the aquaculture value chain, including technical solutions, biotechnology, production and processing. The sample does not include retail companies.

Companies are assessed and ranked on a scale from 0 to 4, using four different criteria:

- The quality of the overall sustainability reporting
- Disclosure of climate strategy and emissions
- Climate risk reporting in line with the recommendations from the Task Force on Climate related Financial Disclosures (TCFD)
- Integration of the UN Sustainable Development Goals (SDGs)

See the table on the next page for a more detailed description of the assessment criteria. Please note that in the graphical presentations Harvey balls are used to illustrate the numerical score.

ASSESSMENT CRITERIA PER SCORE

SCORE







3



SUSTAINABILITY REPORTING

No reporting

Some information on various topics. No systematic reporting. Namedropping. Information on relevant topics but no information on material topics and stakeholder perspectives.

Reporting in alignment with GRI. Well reasoned stakeholder dialogue and materiality assessments. Goals/ KPIs and monitoring. Sustainability reporting in alignment with GRI. Extra points for external verification. Clearly defined targets/KPIs and monitoring.
Sustainability integrated into annual report.

UN SUSTAINABLE DEVELOPMENT GOALS

Not mentioned

Mentioned in general terms. Relevant goals namedropped. Relevant goals identified, information on company contribution to specific goals, but no systematic reporting.

Relevant goals identified, information on company contribution to specific goals. KPIs/reporting loosely related to SDGs.

SDGs thoroughly integrated in sustainability reporting with clear KPIs and strategic considerations.

CDP RATING*

Score: O

Score: D

Score: C

Score: B

Score: A

CLIMATE RISK (TCFD)

No climate risk reporting or reporting on emissions.

Risks or opportunities related to climate change is mentioned briefly. Responsibilities for climate related risks are defined. Climate risk mentioned in relation to the strategy. Reporting only on emissions. Board/managerial responsibility for climate risks defined. Climate risk management explained in light of strategic priorities. Some targets/reporting on climate risk.

Responsibilities defined. Climate risk integrated as a company risk. Applying company-relevant scenarios. Strategic, concrete KPIs on climate related risks.

4 ESG IN THE OCEAN INDUSTRIES ESG IN THE OCEAN INDUSTRIES 15

^{*}Companies rated 'F' receives a score of -1

Sustainability reporting

What constitutes a good sustainability report? In our analysis, we do not require that companies report information according to a specific standard, but instead follow the quality principles of the Global Reporting Initiative (GRI) and the Oslo Stock Exchange (OSE) guidance on the reporting of corporate responsibility.

Both documents consider (1) whether reporting is based on stakeholder dialogue and (2) an assessment of the *material sustainability topics* for the specific company. Companies should qualify what topics they choose to focus on in their sustainability reporting by explaining how the sustainability topics relate to their business.

Of the 33 companies assessed, ten report satisfactorily on sustainability (receiving scores of 3 or 4), presenting systematic and concrete information on sustainability topics that have been defined through stakeholder dialogue and materiality assessments. Among these ten, only two companies (Mowi and Grieg Seafood) receive the highest score for having integrated sustainability topics thoroughly in their general company reporting.

Additionally, their reports have been externally verified by an independent third party, bolstering their credibility.

13 of 33 companies report on sustainability topics that are more or less relevant to company operations but do not base this reporting on meaningful assessments of material ESG issues. Eight companies report to a limited degree on certain topics and are therefore awarded a score of 1. In these cases, the reporting often corresponds to the minimum requirements put forth in Norwegian Accounting Act §3-3c, stating that listed companies are required to report on human rights and labour rights, social issues, the environment and anti-corruption. Two companies do not disclose any information on sustainability.

Overall, we see that the seafood industry scores significantly higher than the shipping industry; 10% of shipping companies do not report any information, and none of the shipping companies receive top scores.

United Nations' Sustainable Development Goals

While many of the sustainability reports refer extensively to the UN Sustainable Development Goals (SDG) and use them as measures of responsibility, few companies provide company information that is meaningfully aligned with the SDGs.

It is difficult to translate the goals directly to companyrelevant KPIs (Key Performance Indicators). Seven companies, however, manage to report meaningfully on the SDGs, with two companies (Mowi and Norway Royal Salmon) receiving top scores for aligning the goals with their general sustainability indicators and their business strategy.

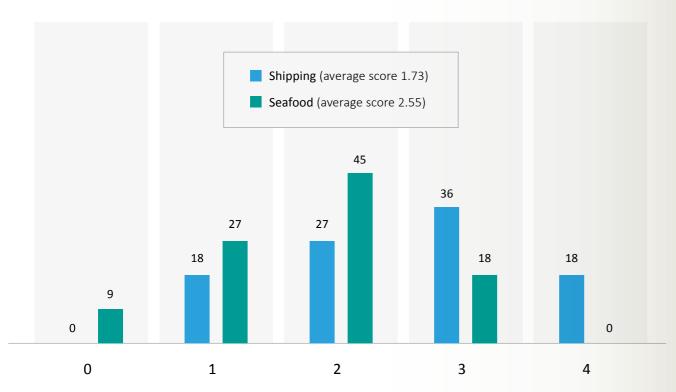
Seven companies receive a score of 2 for defining the goals that are relevant to their operations and giving some information on how these operations contribute to the goals, combined with reporting on related sustainability topics elsewhere. Two companies receive a score of 1 for merely namedropping the goals or pointing out which goals are relevant to the company. 17 companies do not mention the SDGs at all.

When it comes to reporting on the SDGs, the shipping industry lags notably behind the seafood industry; half of the shipping companies make no mention of the UN Sustainable Development Goals.

We expect significant developments in reporting frameworks and guidelines that integrate the SDGs with company goal setting and reporting. Through initiatives such as SDG Impact, SDG Compass and other practical guides and frameworks, reporting on the SDGs is likely to be increasingly useful and to provide more meaningful information on companies' concrete contributions to the 17 goals.

Currently, SDG reporting has an inspirational function and does not really convey any useful ESG information to the financial markets.

AVERAGE SCORE SUSTAINABILITY REPORTING



AVERAGE SCORE SDG INTEGRATION



CDP reporting

This score reflects the rating made by the CDP (formerly the Carbon Disclosure Project), a global system for businesses' disclosures on climate impacts. Today, the CDP represents the largest collection of self-reported environmental data in the world, covering over 20% of global emissions.

Among the 33 companies in the shipping and seafood industries, only one company, Grieg Seafood, receives the highest score, 4, for its A minus rating in the CDP system.

Seven companies are given the score 2, reflecting C-ratings in the system, and one company is given a score of 1, for its D minus rating. 13 companies have

not reported to the CDP and are given scores of 0. A total of eleven companies receives the score -1 in our assessment, meaning that they have been asked by their investors to submit information, but have failed to do so, thus signalling a lack of will to comply with investors' need for information.

Reporting to the CDP requires time and resources. Given the increasing attention on companies' reporting on emissions, however, it is interesting to observe that so many of the companies belonging to the shipping sector fail to report: 17 companies do not report at all, eight of which have been explicitly asked by investors to provide information.

Climate risk (TCFD)

Reporting on climate risk is an area of reporting that is subject to increased interest by investors and regulators. This is due to a better understanding of the consequences of climate change on finances and operations.

Managing climate risk is, often, mistakenly understood as a call for a company to reduce or mitigate its emissions. However, when assessing a company's reporting on climate risk, we have given weight to a company's reported management of the risks to its operations that can be attributed to climate change. For example, companies might face severe economic consequences due to climate change in terms of 'physical risks' such as higher sea temperatures or more extreme weather, or 'transitional risks' such as stricter environmental regulations due to developments in climate politics.

Only one company, **Mowi**, reports on climate risk in a way that we deem to be transparent and informational. Mowi displays in a clear way how climate risk is a priority for the Board and top management, how it influences strategic decisions, and how it is an integrated part of risk assessments. Additionally, measurements are in place for defined climate risk KPIs.

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

In the aftermath of the Paris negotiations, Bank of England Governor Mark Carney, and Michael Bloomberg, the founder of Bloomberg LP, chaired the Task Force on Climate-related Financial Disclosures (TCFD). The TCFD has issued a set of disclosure recommendations that assist companies in providing information on climate related risks in a clear and consistent way. The recommendations are based on four core thematic areas: governance, strategy, risk management, and metrics/targets.

10 companies report on climate risk in a way that indicates that the issue is on the company's agenda, but provide little information on how the company is managing the risk of physical and/or transitional risks.

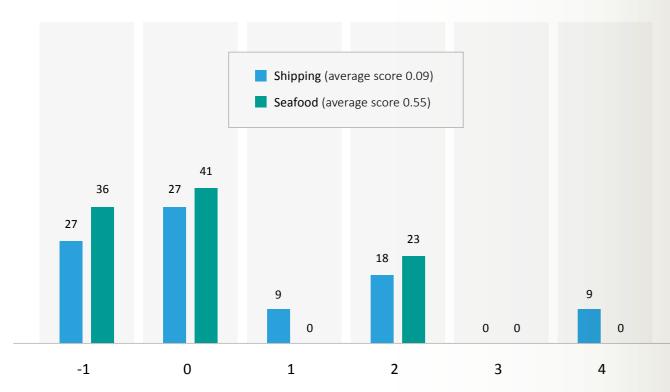
22 companies do not report on climate risk at all.

While climate – or the environment – may be mentioned, these companies have not made available any concrete deliberations on how to manage climate related risk.

Reporting on climate risk is still in the early stages for most companies. To a varying degree, 4 out of 10 seafood companies have included some relevant information on climate risk in their reporting. 73% (16) of the shipping companies make no attempt to report on climate risk. 10 out of 11 seafood companies do not report meaningfully on their climate risk exposure or management of climate risk. This is a reason for concern, given that stricter regulation, acidification, rising sea temperatures and extreme weather events may cause large financial losses to the industry.

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AVERAGE SCORE CDP REPORTING



AVERAGE SCORE CLIMATE RISK (TCFD)



ESG IN THE OCEAN INDUSTRIES ESG IN THE OCEAN INDUSTRIES

Top five companies

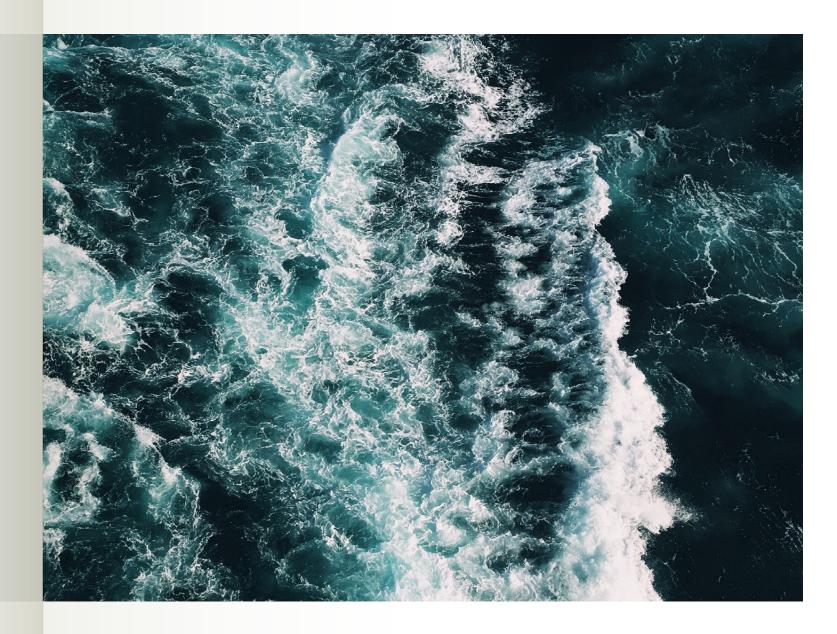


- 1 Petroleum Geo-Services
- 2 Golden Ocean Group
- 3 Kongsberg Gruppen
- 4 Wallenius Wilhelmsen
- 5 Odfjell ASA

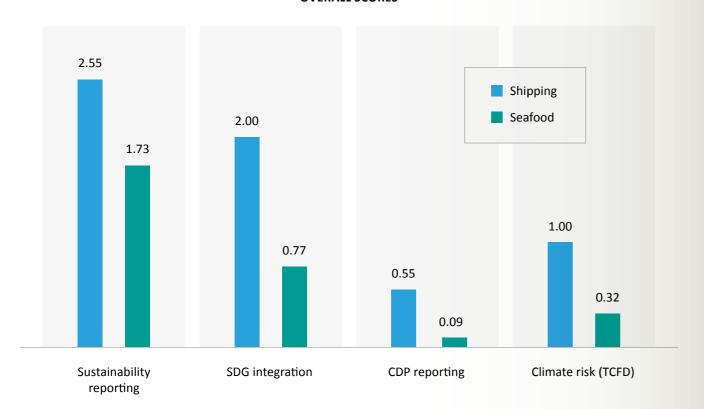




- 1 Mowi
- 2 Grieg Seafood
- 3 SalMar
- 4 Bakkafrost
- 5 Lerøy Seafood Group



OVERALL SCORES



MAIN FINDINGS

The overall conclusion is that sustainability reporting as a general practice is becoming mainstream. The seafood industry, in particular, produces high quality sustainability reports. The shipping industry is clearly lagging behind, most likely due to less direct exposure to the general public, lack of regulatory oversight and enforcement authority and less attention from consumers.

In contrast, seafood companies operate in local communities (often with some degree of local conflict) and sell their products directly to the consumer, while the shipping industry is less visible and mostly works business-to-business.

The same pattern – where seafood outperforms shipping – is repeated in the reporting on the UN Sustainable Development Goals. However, this current reporting practice on the SDGs provides little useful ESG information for investors and seems more geared towards branding and consumer markets.

Climate change and climate risk reporting is at a rather low level in both industries, with the shipping industry lagging behind again. We expect this information to improve significantly over time, as the financial institutions are working diligently on understanding and pricing climate risk from a financial perspective.

ESG DATA PROFILE: SHIPPING & SEAFOOD

This section provides an analysis of the ESG performance of the global shipping and seafood industries, provided by Arabesque. Using the S-Ray tool, Arabesque has analysed how the Global Shipping Industry and the Global Seafood Industries financially material, ESG criteria.

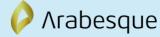
perform according to sector specific,

The ESG score is calculated on a scale of 0-100 and is a sector specific analysis of a company's performance on financially material ESG. Is used to identify companies best positioned to outperform their competitors in the long-run.

Companies with high scores tend to outperform the stock market.

The chart depicts the cumulated stock price performance of the companies assessed. The 'universe' is the performance of all companies which are included in the evaluation. The graph indicates that the top 20% of companies that have the highest ESG scores outperform the bottom 20% companies by 3.4% per year. The bottom 20% companies underperform the overall company universe by 2.2% per year.

ARABESQUE is a global asset management firm using self-learning quant models and big data to assess the performance and sustainability of companies. Arabesque S-Ray® allows anyone to monitor the sustainability of over 7,000 of the world's largest corporations. Through machine learning and big data, Arabesque S-Ray® systematically combines over 250 environmental, social and governance (ESG) metrics with news signals from over 30,000 sources published in over 170 countries.



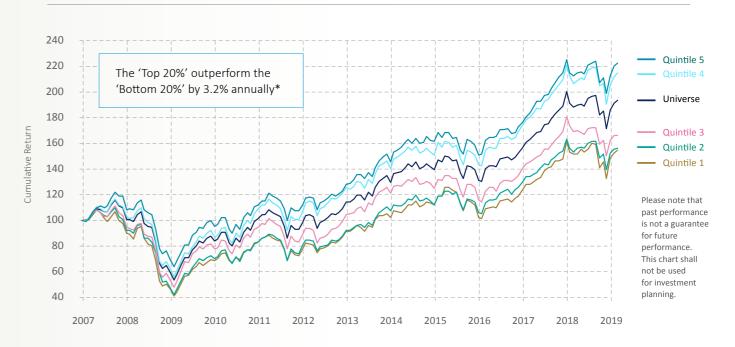
SHIPPING INDUSTRY

Analysis of the marine shipping industry covered 93 companies in total, domiciled in 27 countries. The ESG data covers companies from all geographies, and only listed companies are included. The industry classification encompassed companies that exclusively ship goods as well as companies that service offshore oilfields or are involved in offshore drilling. Specialised oil companies were excluded because their operations are too broad and are not relevant to the shipping industry.

SEAFOOD INDUSTRY

Analysis of the aquaculture and seafood industry covered 28 companies in total, domiciled in 15 countries. The ESG data covers companies from all geographies, and only listed companies are included. The industry classification encompassed food providers specialised in seafood as well as companies involved in fishing and fish farming. Food retailers were excluded because the proportion of their revenues derived from seafood is too small to be relevant to the industry.

CUMULATED STOCK PRICE PERFORMANCE OF SIX PORTFOLIOS



^{*} Performance from 31/01/2007 to 31/03/2019 in USD, gross of fees and transaction costs.



Main findings Global shipping industry

Assessing the shipping industry on financially material ESG issues, the average ESG score across the industry was 48 on a scale from 0 to 100 for 2019. On average, shipping companies score higher on Social (52) and Environmental issues (49) than they do on Governance issues (46). Two of the top 10 companies are Norwegian.

Diving deeper into the details, in total the shipping industry performs worse on water issues than the general universe of companies. However, this is mainly driven by the lack of reporting on Water Resource Management and water-related information. On Water Recycling, Use and Management, the shipping industry performs on par with companies from other industries.

The shipping industry also performs worse on Labour Rights. This is mainly caused by issues in the supply chain and the relatively low number of companies which conduct in-house/third-party inspections of suppliers, and companies which report inspections on suppliers and violations of Code of Conduct.

Compared to other industries, many companies across the shipping industry are likely to be highly leveraged, as suggested by low Capital Structure scores.

There are areas where the shipping industry is doing better than average companies. When it comes to Training and Development, for example, the shipping industry beats the average by far in providing relevant training for employees as well as having policies that support the skills training and career development of its employees.

Another example is Emissions. On average, more shipping companies disclose their greenhouse gas emissions data than companies in other industries, as well as having programmes in place to reduce air emissions. However, when it comes to actual greenhouse gas emissions, the industry is lagging slightly behind.

Main findings Global seafood industry

Assessing the Aquaculture and Seafood industry on financially material ESG issues shows that the average score was 51, on a scale from 0 to 100. This is a slight increase from 2018 and similar to the marine shipping industry (there is an increase in data coverage and more companies that are reporting). On average, aquaculture and seafood companies score higher on Environmental (55) and Social issues (54) than they do on Governance issues (47). The top scoring companies changed year by year and there is no correlation between ESG scores and geographic regions. For 2019, the two leading companies are Norwegian.

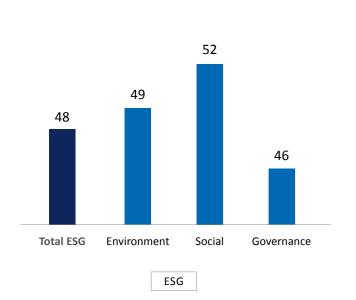
Diving deeper into the details, there are three defined areas where the seafood industry are lagging behind other companies and industries: Labour rights, Environmental Solutions and Forensic Accounting, which suggests that a company's reported earnings may not align with a company's financial health.

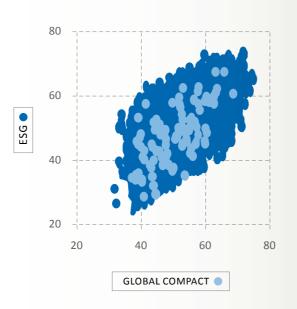
Similar to the shipping industry, low performance on Labour rights stems from challenges within the supply chain related to lack of monitoring of suppliers and the conduct of in-house or third party inspections of suppliers.

The lower scores of seafood companies on Environmental Solutions reveal that few companies report on issues such as renewable energy supply or how much they spend on environmental R & D projects. The industry also lags behind when it comes to Product Impact Minimisation, which includes how companies are reporting and working on take-back procedures and recycling programmes, or applications and services that will promote responsible, efficient, cost effective use.

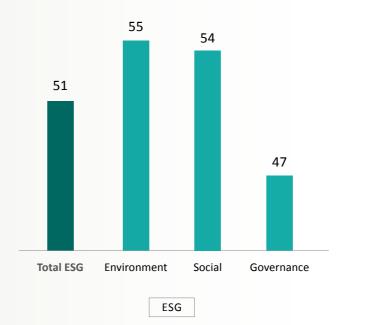
Seafood companies perform slightly better than average companies do on matters related to Occupational Health and Safety, which has been a recurrent theme for the industry over the years.

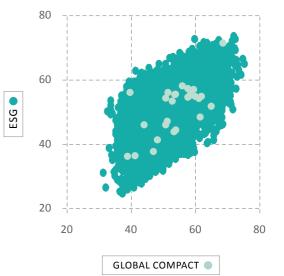
SCORES 0-100 (2019)





SCORES 0-100 (2019)





ESG IN THE OCEAN INDUSTRIES ESG IN THE OCEAN INDUSTRIES 25

CASE:

RESPONSIBLE SHIP RECYCLING STANDARDS

Ship recycling practices is probably the ESG issue that currently has the most negative reputational risk for the shipping industry as a whole. Lack of effective global regulations (beyond the Basel convention on waste export), capacity issues and economic incentives pointing in the wrong direction have been barriers to change for the majority of the global fleet.



However, positive developments in the regulatory framework, the capacity for responsible recycling, increasing media attention, recent transparency initiatives, and more vocal banks and investors are creating new momentum for change. The decision by the Norwegian Government Pension Fund Global in January 2018 to exclude from the investment universe four Asian shipping companies due to unsustainable recycling yards in Bangladesh, was not only a strong signal to send, but was also also followed by other institutional investors and pension funds.

A similar example of investor concern which is also having a significant impact, is the so-called Responsible Ship Recycling Standards (RSRS) bank initiative. After having worked on the issue of banks' potential role in changing ship recycling practices since 2014–15, in June 2017, three Dutch banks – ABN Amro, ING and NIBC – launched the RSRS for banks closely involved in the shipping industry, with DNB joining at time of launch. The initiative now counts eight active banks.

The banks undertake actions to promote responsible recycling among their clients, as well as in the financial sector. The banks are further including specific requirements relating to recycling in new financing agreements on a best-efforts basis, and the clients are also noticing new expectations from their banks.

First and foremost, banks expect a general recognition of ship recycling as part of the total shipping value chain for which all actors have a responsibility. Banks now expect to see clients developing sound policies with clear references to the Hong Kong Convention (at a minimum) and/or the EU regulations on recycling, as well as including reporting and follow up procedures. Transparency of policies, practices and ship sale transactions is also encouraged (rather than opaque sales to unknown third parties, such as cash buyers).

In 2018, DNB had recycling clauses in 85% of all new loan agreements in shipping and offshore, and has set a target of 100% for 2020.

Recommendations to management and board

Successful companies manage risks effectively and efficiently. Successful investors and bankers assess risks in detail. The financial sector depends on insight into the risks companies are facing and how value creation may be affected. Over time, the risk landscape evolves, as markets develop and framework conditions change.

When assessing ESG in stock valuation or in the pricing of credit, there is still a lack of sophisticated and standardised approaches. However, a systematic process for reviewing the risks a company faces may be safeguarded by conducting materiality assessments regularly. Determining the materiality of risk factors is an important part of both management and reporting processes. Materiality is the threshold at which risk area becomes sufficiently important so that it is competently managed and candidly reported.

The aim of this report is to map how companies in the seafood and shipping sectors are disclosing ESG performance. It is evident that not all companies have adopted systematic approaches for managing and reporting on ESG issues. However, several companies have become skilled in explaining their ESG risks, and how these risks are assessed and managed. This is good news for both investors and bankers; it is a sign that ESG risks are becoming less opaque.

Identifying material ESG risks, and defining which targets a company must measure its performance against, is not only a matter for divisional managers in a company. A company's board should actively demand transparency in the area of ESG risks to the same extent it does in other areas of operations. By becoming transparent on risk tolerance levels and performance criteria for material ESG risks, the board also helps investors and bankers. Trust and disclosure are interdependent.







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