



Lisbon School  
of Economics  
& Management  
Universidade de Lisboa

# **MASTER OF SCIENCE IN FINANCE**

## **MASTERS FINAL WORK PROJECT**

**EQUITY RESEARCH:  
D/S NORDEN A/S**

**HUGO SALVAN**

**OCTOBER 2021**



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**SUPERVISOR:  
PEDRO RINO VIEIRA**

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# Abstract

The present Master Final Work Project consists of a valuation of D/S Norden A/S (Norden) for the year end of 2022.

Following the CFA Equity Research contents, the present report starts with a brief description of the company, followed by an analysis of its operating segments, Dry Operator and Tanker Operator, with a depth industry analysis, through the analysis of the key demand and supply drivers.

Subsequently, we performed the forecast of the main financial statements for 2021F-2025F, through the use of several assumptions, in order to obtain 2022 YE Price Target.

In order to obtain the Price Target, several different absolute methods and also a relative model, through the estimate of enterprise value multiples as well as equity values multiples, were performed.

Our recommendation consisting of a Buy recommendation for Norden with a 2022YE PT of DKK 209.96/ share, using a Dividend Discount Model (DDM), implying a 28.8% Upside potential from August 31st, 2021, closing price of DKK 163.00, although with High Risk.

The current undervaluation of Norden is mainly explained due to i) Volatility of freight rates, ii) Expected decrease on vessel operating costs %.

In addition, following the company strong financial position, Norden management decided to adopt in 2018, a consistent dividend payment policy of paying out minimum 50% of adjusted result in form of shareholder dividends. Additionally, the management decided in 2020 and 2021F, to deliver additional \$50 million in form of share-buyback programs.

JEL classification: G10; G11; G17; G32; G34; G35.

Keywords: D/S Norden; Sea Transportation; Freight-Rates; Dry Bulk; Product Tanker; Equity Research; Valuation; Dividend Discount Model.

# Resumo

O presente projeto de Trabalho Final de Mestrado consiste numa avaliação da empresa D/S Norden, para o final do ano de 2022.

Seguindo o conteúdo do CFA Equity Research, o presente relatório começa com uma breve descrição da empresa, seguida de uma análise dos seus segmentos operacionais, Dry Bulk e Product Tanker, desenvolvida através da análise dos principais fatores que ditam a lei da oferta e da procura na presente indústria.

Posteriormente, realizámos a projeção das principais demonstrações financeiras para o período compreendido entre os anos de 2021 e 2025, através da utilização de diversos pressupostos, de forma a estimar o preço por ação para o fim do ano de 2022.

A nossa recomendação consiste numa compra para o final do ano de 2022, sendo o preço estimado de 209.96DKK por ação, usando o modelo de desconto de dividendos (DDM), implicando um potencial de aumento de 28.8% do valor da ação, comparando com o preço de fecho de mercado registado a 31 Agosto de 2021, 163.00DKK por ação, no entanto com elevado risco.

A presente desvalorização da cotação das ações da Norden, deve-se á elevada volatilidade das taxas de frete, e á esperada descida da percentagem dos gastos operacionais dos navios em função dos rendimentos.

Adicionalmente, seguindo a sólida posição financeira apresentada pela empresa, o conselho de administração deliberou em 2018, uma política de pagamento de dividendos, estabelecendo que no mínimo 50% do resultado ajustado do ano, seria entregue na forma de dividendos aos seus acionistas no ano seguinte. Adicionalmente, o conselho de administração decidiu entregar cerca de 50 milhões de dólares durante os anos de 2020 e 2021, na forma de programas de recompra de ações.

Classificação JEL: G10; G11; G17; G32; G34; G35.

Palavras-Chave: D/S Norden; Transporte Marítimo; Taxas de Frete; Dry Bulk; Product Tanker; Equity Research; Avaliação de Empresas; Modelo Desconto de Dividendos.

# Acknowledgements

I am honored and thrilled to announce that I would like to dedicate the most expected and important chapter of my academic life to my family, mainly to my parents, for all the financial and education support given to me during my life.

Also, would like to dedicate my master thesis in the memory of my missing grandparents, which certainly are proud of me even from the sky.

Lastly, a huge thank you to my supervisor, Pedro Rino Vieira, for replying to my questions, and to some good colleagues that I had the privilege of working and learn with on group projects, as well to my former professors.

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## Abbreviations

**APV:** Adjusted Present Value  
**CAGR:** Compounded Annual Growth Rate  
**Capex:** Capital Expenditure  
**CAPM:** Capital Pricing Asset Model  
**CBS:** Copenhagen Business School  
**CEO:** Chief Executive Officer  
**CFO:** Chief Financial Officer  
**CNY:** Chinese Yuan Renmimbi  
**COA:** Cargo Contract  
**DDM:** Dividend Discount Model  
**DKK:** Danish Kroner  
**DPS:** Dividend per Share  
**DWT:** Deadweight Tonnage  
**EBIT:** Earnings Before Interest and Taxes  
**EBITDA:** Earnings Before Interest Taxes, Depreciation and Amortization  
**EPS:** Earnings Per Share  
**ESG:** Environmental, Social and Governance  
**EU:** European Union  
**EV:** Enterprise Value and Equity Value  
**FCFE:** Free Cash Flow to Equity  
**FCFF:** Free Cash Flow to the Firm  
**FFAs:** Forward Freight Agreements  
**FX:** Foreign Exchange  
**GBP:** Great Britain Pound  
**GDP:** Gross Domestic Product  
**HSFO:** High Sulphur Fuel Oil  
**IMF:** International Monetary Fund  
**IMO:** International Maritime Organization  
**INSEAD:** Institut Européen d'Administration des Affaires  
**JPY:** Japanese Yen  
**K<sub>d</sub>:** Cost of Debt  
**K<sub>e</sub>:** Cost of Equity  
**KRW:** Korean Won  
**LNG:** Liquefied Natural Gas  
**LTD:** Light Weight Tons  
**MRP:** Market Risk Premium  
**NPP:** Norient Product Pool  
**PT:** Price Target  
**RFR:** Risk-Free Rate  
**ROE:** Return on Equity  
**SDGs:** Sustainable Development Goals

**SWOT:** Strengths, Weaknesses, Opportunities, and Threats  
**TKM:** Tonne-Kilometre  
**TV:** Terminal Value  
**UN:** United Nations  
**UNCTAD:** United Nations Conference for Trade and Development  
**USD:** United States Dollar  
**VLSFO:** Very-Low Sulphur Fuel Oil  
**WACC:** Weighted Average Cost of Capital  
**WTO:** World Trade Organization  
**YE:** Year End  
**YoY:** Year-on-Year

## D/S NORDEN: Trust powered by intelligence

(YE2022 Price Target of DKK 209.96 (+28.8%); recommendation is to Buy with High Risk)

### 1. Research Snapshot

We issue a **Buy recommendation** for Dampskibsselskabet Norden A/S (D/S Norden) with a **2022YE PT of DKK 209.96/ share**, using a Dividend Discount Model (DDM) implying a **28.8% Upside potential** from August 31st, 2021, closing price of DKK 163.00, although with **High Risk** (Figure 1).

In a volatile industry environment, with high exposure to freight rates, Norden relies its strategy on an agile asset-light business model. Through an asset trading-oriented ship ownership, by only owning a small percentage of its operating fleet, rather than passive ownership of vessels, Norden can actively capitalize on asset trading opportunities, with access to considerable optionality (extension and purchase options), being less capital intensive, where risk management represents a core part of the business.

#### Strong Financial Situation

Norden have been consistently profitable in the last years, being expected to reach at 2021F its best adjusted result since 2012 (Table 1). The Equity ratio, constantly above 50% during 2021F-2025F, as well liquidity and solvency ratios presented on Figures 58 and 59, shows that the company have ability to meet its short-term and long-term requirements without damaging its solid financial performance.

#### Stable Shareholder Return Policy

Norden management decided to adopt in 2018, a consistent **Dividend Payment Policy** of Paying Out **minimum 50% of Adjusted Result** in form of shareholder dividends. For 2021F, Norden management decided to pay-out 53.1% of previous year adjusted result to its shareholders, for 2022F-2025F the payout-ratio will be 55%.

Moreover, due to the stable financial situation of the company the management decided in 2020 and 2021F, to deliver additional \$50 million in form of **Share-Buyback programs**. (Table 2).

#### Bullish Dry Bulk and Bearish Product Tanker Outlooks

Dry Bulk segment is currently being shaped by a strong demand retake following COVID—19 pandemic and a slowing growth in the active fleet-the right conditions for rising freight rates. The segment is under soaring historical high rates, which are predicted to last until 2022YE.

On the other hand, the Tanker Operator segment is facing a negative economic cycle, with low freight rates, driven by a slow recovery in demand, which still below pre-pandemic levels, being expected to recover only during 2023.

**Price Target DKK** 209.96  
Closing Price August 31rd (DKK) 163.00  
**Upside Potential** ↑ **28.8%**  
**High Risk**

**Bloomberg/Refinitiv code** DNORD.DC/DNORD.CO  
**Market Cap (\$ M)** 1,042.95  
**Free float (%)** 66.99%  
**# Shares Outstanding** 37.7  
**52-week range (DKK)** 89.3-199.5

Figure 1: 52-week stock price vs Price



Source: Author Analysis

Table 1: Financial Highlights

	2020	2021F	2025F
Revenues (\$M)	2597.8	2720.6	2701.4
Contribution Margin (\$M)	435.6	496.2	520.7
EBITDA (\$M)	342.5	404.9	422.8
EBITDA Margin (%)	13.18%	14.88%	15.65%
EBIT (\$M)	119.4	204.8	180.7
<b>Adjusted Result year (\$M)</b>	<b>105.7</b>	<b>159.8</b>	<b>137.6</b>
ROIC (%)	9.44%	14.91%	10.89%
ROE (%)	9.76%	16.50%	11.52%
Payout Ratio (%)	64.0%	53.1%	55.0%
Equity Ratio (%)	49.46%	51.19%	54.60%

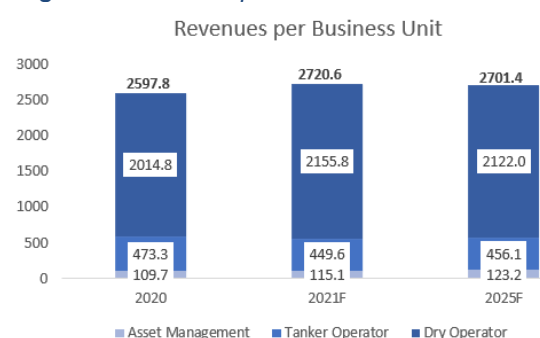
Source: Author Analysis

Table 2: Shareholder Return Policy

	2020	2021F	2025F
Dividend (\$/share)	0.39	1.52	2.01
Payout Ratio (%)	64.0%	53.1%	55.0%
Shares Repurchase(\$M)	24	25	0

Source: Author Analysis

Figure 2: Revenues per Business Unit



Source: Author Analysis

## 2. Business Description

### The Company

Dampskibsselskabet Norden A/S (D/S NORDEN) is a Denmark-based shipping company engaged in the provision of global tramp shipping services, providing industry-leading operations on the segments of Dry Cargo and Product Tanker, along with asset trading activities. Norden operates and manage a highly flexible fleet of both owned and chartered dry bulkers and product tankers. Every day Norden's vessels transport agricultural and industrial commodities as well as refined and soft oil products around the world.

In order to manage the increasing volatility and uncertainty affecting the shipping industry, as well the cyclical exposure to Dry Cargo and Product Tanker markets, Norden adopted an agile asset light business model. Thus, the company is structured in **Three Trading Oriented Business Units**. Asset Management, focusing on vessel trading & cyclical market exposure; Dry Operator and Tanker Operator, which focus their activities on short-term trading activities (Appendix 1).

### The History

Founded in 1871, by Mr. Mads Christian Holm, Norden is a 150-year-old Denmark's shipping company headquartered in Hellerup, Copenhagen (Denmark). Norden has one of the longest track records within global shipping making it one of Denmark's oldest global shipping companies. Incorporated in Denmark, Norden is listed on Nasdaq Copenhagen as a part of the OMX Nordic Mid Cap Index.

Throughout the last decades, Norden has grown from an international Danish shipping company to a global one. This process involved the establishment of 11 offices, in 6 different continents (Appendix 2), as well the expansion on the number of employees and trading services worldwide in both segments.

In 1973, Norden entered in the Dry Cargo department, which is today the core business of the company, through the delivery of the first's vessels, while in 1990 expanded its operations through the establishment of the Tanker department.

In 1994, a merge between Dampskibsselskabet Orient and Dampskibsselskabet Norden A/S took place. Orient continued as the "operating" company, but the name changed to Dampskibsselskabet Norden A/S.

Moreover, in 2005 Norden established the Norient Product Pool, with Interorient Navigation Company Ltd from Cyprus as partner. In 2018, Norden acquired 100% ownership of Norient Product Pool which is actually managed by Norden. Norient Pool is nowadays considered as one of the world largest Product Tanker operators, operating more than 100 vessels.

In addition to the Norient Product Pool (NPP), Norden's group structure (Appendix 3), comprises the fully ownership over several subsidiaries, as well the co-ownership of several joint ventures.

### Financial Highlights

Norden reached in 2020FY \$2,597.8 Million of revenues and an EBITDA value of \$342.5 million. Furthermore, reported a full-year 2020 Adjusted Result (Profit/loss for the year excluding profit/loss from sale of vessels) of \$106 million, which was the company best result in 10 years (Appendix 20).

Moreover, the company registered at 2020 cash flow from operations of \$396 million and ROE of 9.8%.

Regarding the Business Units Adjusted Result, all presented positive results, with Dry Operator presenting the best result, \$59 million, followed by Asset Management, \$29 million, and finally Tanker Operator with \$18 million.

### Norden's Business Segments

Per 1 January 2020, Norden has transitioned into a new business unit structure to bring more agility and focus, to ensure the realization of higher risk adjusted returns, through a stronger focus on short-term trading-oriented operator activities and active exposure management. Thus, the new business unit is structured in **Three Trading- Oriented Business Units**. Asset Management, focusing on vessel trading & cyclical market exposure, Dry Operator and Tanker Operator, which focus their activities on short-term trading activities.

### Asset Management

Asset Management business unit was created on 1 January 2020, comprising the previous business unit "Dry Owner" and a part of the previous "Tanker" business unit. The following equation summarizes the new business unit: *Asset Management = Dry Owner + Tanker Owner (including owned and long-term leased vessels)*.

This unit manages Norden's long-term exposure, handling all Norden's owned vessels, including ships from both Dry Cargo and Product Tanker segments, long-term chartered vessels as well as long-term coverage contracts, to Dry Operator and Tanker Operator at market rates and to third parties (Figure 3) (Appendix 4).

### Dry Operator

Dry Operator business unit provides global transport solutions and active management of Norden's short-term market exposure in the dry cargo market, by operating an ever-changing fleet of Panamax, Supramax and Handysize vessels, all with a trading-oriented mindset (Appendix 5). The unit provides global transport of agricultural and industrial Bulk commodities (Figure 4).

### Tanker Operator

Established in early 2020, Tanker Operator unit provides global transport solutions and active management of Norden's short-term market exposure in the product tanker market, through an ever-changing fleet of owned and chartered vessels. Moreover, the unit also manages all ships chartered in on short-term contracts, which are posteriorly outsourced to the Norient Product Pool. The tanker operator segment offers transport of fuel oil or refined oil products (Figure 5) (Appendix 6).

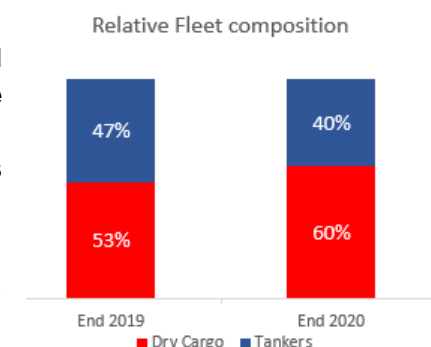
### Key Drivers of Profitability

The main driver that affects Norden's profitability at dry and tanker segments are the Freight Rates, by reason that most of Norden vessels trade in the spot market. Nonetheless, part of the income is generated through pre-paid time-charter contracts, which makes the company less exposed to market volatility. Both segments are very volatile due to large fluctuations in the freight rates, thus the level of the spot rates is the main driver of profitability

Moreover, commercial management income, mainly in connection with administration of pool arrangements is also an important stream of revenue to Norden. Regarding Norient Pool, the annual earnings that Norden captures is dependent on the preaged distribution key, that is established by the board of the Pool.

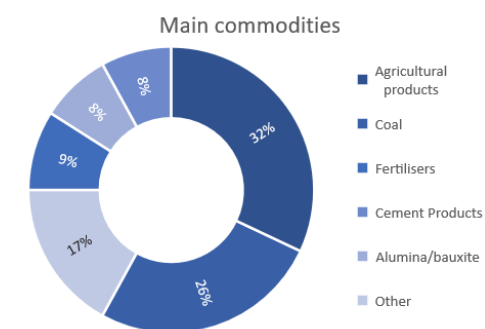
The last Driver of profitability consists in the secondhand vessels price, for the sale of vessels, and demolition prices, in relation to the scrapping of obsolete vessels, varying in accordance with the age, size and category of the vessels.

Figure 3: Asset Management Fleet



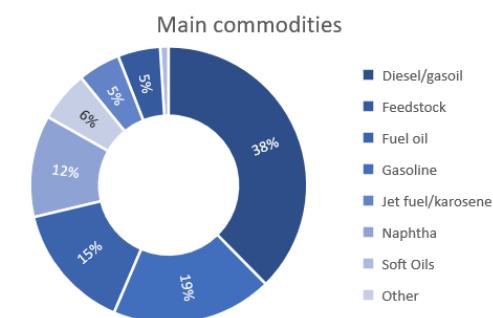
Source: Norden 2020 annual

Figure 4: Dry Bulk commodities transported



Source: Norden 2020 annual report

Figure 5: Product Tanker commodities transported



Source: Norden 2020 annual

## Norden Strategy

Norden's ambition is trading to the next level, based on an agile asset-light business model, focusing on active portfolio management and short-term operator activities, along with the objective of generating higher returns for the shareholders.

Through an asset trading-oriented shipowner, by only owning a small percentage of its operating fleet, rather than passive ownership of vessels, Norden can actively capitalize on asset trading opportunities, with access to considerable optionality (extension and purchase options), being less capital intensive, where risk management represents a core part of the business.

With its agile capabilities, Norden's business structure is not only focused on staying resilient towards an active management of shipping portfolio, but also capitalizing on market volatility, by allowing each business unit to continuously shift position and exposure to fulfill changing customer demands.

Norden implemented a clear strategy based on the following five current focus areas: Clients-access and liquidity; Data as an asset; Advanced analytics tools; New risk management capabilities; Leading transformation.

## Shareholder Structure

As of August 31, 2021 (Refinitiv), with a free float traded shares of 66.99%, from a total of **37,719,993 shares outstanding**, Norden shareholder structure is highly fragmented among a huge number of small investors, with Motortramp A/S being the biggest shareholder holding 31.58% of the outstanding shares, while the second one, Dimensional Fund Advisors, L.P., only holds 1.97% (Table 3).

Norden shares, in a total of **3,442,197 treasury shares** issued as of August 31, 2021, are traded on Nasdaq Copenhagen as a part of the OMX Nordic Mid Cap index. The shares hold by the CEO, Jan Rindbo accounts for a total of 99,595 shares, while the shares hold by the CFO, Martin Badsted accounts for a total of 74,525 shares.

## Dividend Policy

During 2021, Norden is paying a dividend of DKK 9 per share to its shareholders relative to 2020FY, according to the **Dividend Payment Policy** adopted by the company since 2018, of paying out **minimum 50% of Adjusted Result** in shareholder dividends.

The Pay-Out ratio for 2020FY was 65.3%, having this percentage registered a decrease of 11% compared to the previous year (Figure 6) (Appendix7).

For the 2020FY, the dividend payment represented 53.1% of the adjusted result. As a consequence of its strong performance and asset-light strategy, Norden continues to return capital to shareholders in the form of both dividends and share buy-backs, with almost \$50 Million returned in share buy-back programmes during 2020 and 2021 (Appendix 22).

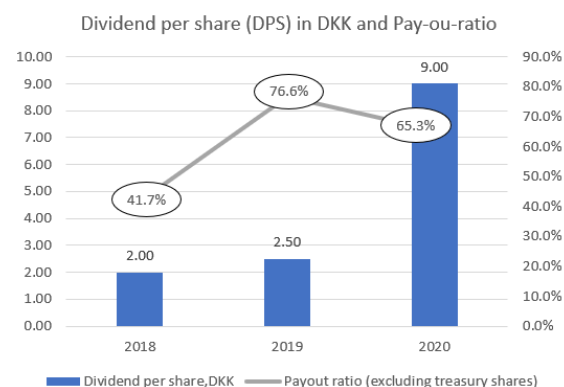
Regarding 2016 and 2017FY, there were no dividend payments to the shareholders, even though on 2017FY Norden registered a positive adjusted resulted higher even than 2018 and 2019, the dividend payment policy was only adopted since 2018FY.

**Table 3: Norden Top 10 Shareholders**

Investor Name	Investor Type	%
Motortramp A/S	Corporation	31.58%
Dimensional Fund Advisors, L.P.	Investment Advisor/Hedge Fund	1.97%
The Vanguard Group, Inc.	Investment Advisor/Hedge Fund	1.68%
Norges Bank Investment Management (NBIM)	Sovereign Wealth Fund	1.60%
Goldman Sachs Asset Management, L.P.	Investment Advisor	0.95%
BlackRock Institutional Trust Company, N.A.	Investment Advisor	0.92%
Wellington Management Company, LLP	Investment Advisor/Hedge Fund	0.89%
Mellon Investments Corporation	Investment Advisor/Hedge Fund	0.70%
QMA LLC	Investment Advisor	0.44%
LSV Asset Management	Investment Advisor	0.44%

*Source: Refinitiv Reuters (as of 31 August 2021)*

**Figure 6: Dividend per share (DPS) and Pay-out-ratio**



*Source: Norden 2020 annual report*

### 3. Management and ESG

#### Governance Model

Norden follows a **Two-Tier Governance Structure** consisting of a **Board of Directors and an Executive Management** (Figure 7). No individuals are part of both management bodies. The shareholders have the ultimate authority over the company and can exercise their rights by passing resolutions at general meetings.

The majority of the Board of Directors are elected by the shareholders at the general meeting, being the rest elected by the employees, The general meeting is the supreme authority, and resolutions are adopted by simple majority of votes, unless otherwise provided by legislation or by Norden's articles of association.

Norden continuously works on corporate governance issues to ensure that the company is managed and monitored in the best possible way, supporting the ultimate goal of developing for the benefit of its shareholders and other stakeholders.

#### The Board of Directors

The Board of Directors is made up of **9 members**, of which **6 are elected for a term of 1 year by the shareholders**, while **3 members are elected for a term of 3 years by the employees**.

The role of the Board of Directors consists in determining and approving strategies, policies, overall goals, and budgets for the group. In addition, it sets out the risk management framework and supervises the work, procedures carried out by the day-to-day management.

**The Board of Directors appoints the Executive Management and sets out its responsibilities and remuneration.** To avoid conflicts of interest, there are no transactions between closely related parties within the Board, and the Board does not operate with commission payments.

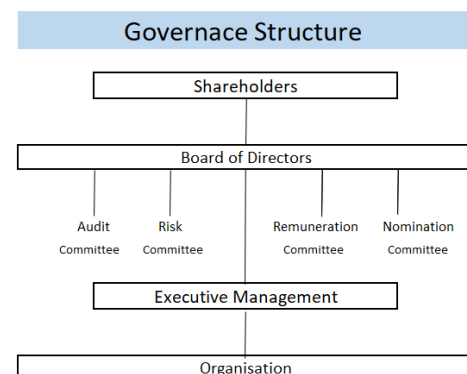
Board remuneration amounts to a total of USD 0.8 million. The Board of Directors proposes unchanged board fee remuneration in 2021 and furthermore proposes that internationally based Board members are eligible to receive a fixed travel allowance, when travelling to Board meetings and/or Committee meetings in Denmark.

The Board of Directors has established four board committees: **Audit Committee**, **Risk Committee**, **Remuneration Committee**, and the **Nomination Committee**; in order to prepare decisions and recommendations for evaluation and approval by the Board of Directors (Appendix 8).

In March 2021, occurred the elections for the Board of Directors, being the 6 previous members elected from shareholders being re-elected for one more year. Klaus Nyborg, Johanne Riegels Østergård, Karsten Knudsen, Thomas Intrator, Helle Østergaard Kristiansen and Stephen John Kunzer were re-elected Board members.

Moreover, the employees elected new employee representatives for the Board of Directors for the following three years. Norden welcomed three new Board Members: Benedicte Hedengran Wegener, Head of Operations in Asset Management, Christina Lerchedahl, Business Application Specialist in Norden's IT department, and Henrik Røjel, Head of Fuel Efficiency and Decarbonisation (Table 4).

Figure 7: Norden Governance Structure:



Source: Norden 2020 annual report

Table 4: Board of Directors Elected at March 2021

Board of Directors	
Klaus Nyborg	Chairman
Johanne Riegels Østergård	Vice Chairman
Karsten Knudsen	Board Member
Thomas Intrator	Board Member
Helle Østergaard Kristiansen	Board Member
Stephen John Kunzer	Board Member
Benedicte Hedengran Wegener	Board Member ( Elected by Employees )
Christina Lerchedahl	Board Member ( Elected by Employees )
Henrik Røjel	Board Member ( Elected by Employees )

Source: Company Filings and Author Analysis

## The Executive Commission

Norden executive commission comprises the Executive Management plus the Senior Management.

**The Executive Management comprises of the CEO and CFO**, who are responsible for the day-to-day management, organisation, and development of Norden, for managing assets, liabilities, equity, accounting, and reporting, and it also prepares and implements the strategy.

The ongoing contact between the Board of Directors and the Executive Management is primarily handled by the Chairman and the CEO (Table 5). The Executive Management participates in board meetings and is supplemented by other managers in the strategy meetings and when relevant.

As of March 2021, the members of **Norden's Executive Management** were as follows:

- Jan Rindbo, CEO
- Martin Badsted, CFO

**Senior Management:** Together with the Executive Management, the 5 department heads from the Senior Management:

- Henrik Lykkegaard Madsen, Head of Asset Management.
- Christian Vinther Christensen, Head of Dry Operator.
- Søren Huscher, Head of Tanker Operator.
- Heidi Nykjaer Persson, Head of People Communication and Sustainability.
- Karina Soudbaek, Head of Group Finance

Besides the highly skilled Executive Commission members, with relevance experience in the industry and in the company, as well as executive programmes in prestigious universities like INSEAD or CBS, the executive compensation scheme is a strong tool to encourage the strategy implementation success and the value delivery.

For instance, the CEO and CFO compensations results from a fix component (salary) plus variable component (bonus) and long-term incentive plans (Figure 8).

## Sustainability Performance and ESG

Norden has been a UN Global Compact signatory since 2009, working with focus on how to act responsibly as a business. Launched in 2019, Norden sustainability strategy is based on the UN Sustainability Development Goals (SDGs) where the focus is finding opportunities in the sustainability agenda.

Norden recognizes the following 3 areas as its operational foundation: **Climate & Environment, People and Anti-Corruption.**

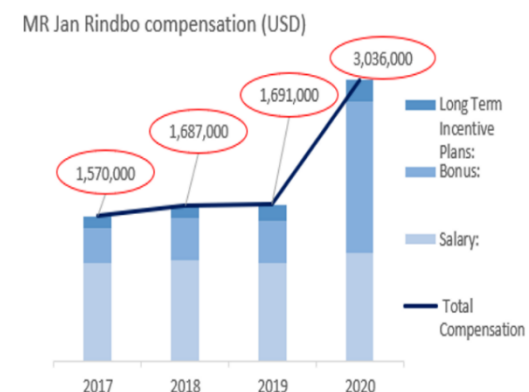
The 3 areas direct Norden's efforts, ongoing improvements and overall aims within sustainability and are furthermore used to map each of the **United Nations Sustainable Development Goals (SDGs)** of particular relevance to Norden's business activities. Based on internal

**Table 5: Mr. Jan Rindbo profile**

Mr. Jan Rindbo (47)			
TITLES			
Chief Executive Officer, Member of the Executive Management	6/1/2015	-	Present
Officer Start / End	6/1/2015	-	Present
Director Start / End			
BIOGRAPHY & EDUCATION			
Mr. Jan Rindbo serves as Chief Executive Officer, Member of the Executive Management of the Company. Mr. Rindbo has international shipping experience from Denmark, North America and Asia. Mr. Rindbo was previously employed with the Hong Kong listed dry cargo shipping company Pacific Basin for more than 13 years, most recently as Chief Operating Officer, member of the executive committee and the board of directors. Mr Rindbo is trained in shipping and has completed various executive training programmes at INSEAD and Copenhagen Business School. Danish Shipping (BM), A/S Dampskibsselskabet Orients Fond (BM) and BIMCO (BM).			
Career			
Dampskibsselskabet NORDEN A/S	Chief Executive Officer, Member of the Executive	6/1/2015	Present
Pacific Basin Shipping Ltd	COO/ Executive Director	Jan-10	Nov-14
Pacific Basin Shipping Ltd	Managing Dir: IHC & IHX	Apr-07	Jan-10
TORM	Chartering Manager		Former

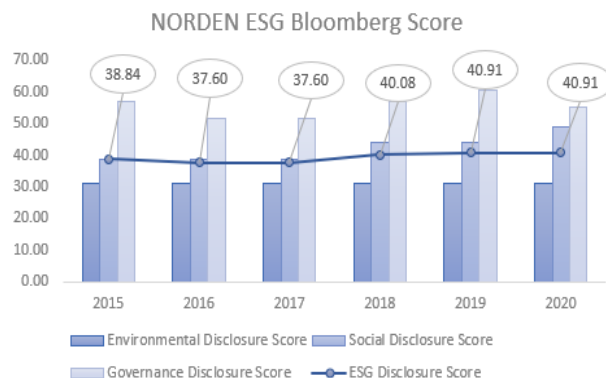
Source: Refinitiv Reuters and Author Analysis

**Figure 8: Mr. Jan Rindbo compensation**



Source: Refinitiv Reuters and Author Analysis

**Figure 9: Norden ESG**



Source: Bloomberg & Author Analysis

materiality assessments, Norden has selected a specific focus area to emphasize and improve upon each of the three overall areas:

- Decarbonation (Climate & Environment)
- Diversity, Well-Being, and Engagement (People)
- Bribery and Facilitation Payments (Anti-corruption)

Norden’s Executive Body for Sustainability, chaired by the CEO, is ultimately responsible for Norden’s sustainability efforts. The Executive Body for Sustainability consists of members of Senior Management, including responsible heads of Norden’s three business units. The Executive Body is responsible for mandating Norden’s Sustainability Strategy, focus areas, ambition level and policies.

Regarding Refinitiv ESG metrics, Norden received for the 2020FY an ESG score of 42.36 (Grade C+).

For DNORD.CO, Environmental, Social, and Governance pillars are weighted 34.29%, 37.14%, and 28.57% respectively in ESG score weighting

Environmental Pillar registered a score of 50.11 (B-), while Social Pillar Score was 40.46 (C), and Governance Pillar Score 35.54 (C), being the ESG Combined score of 42.36 (C+) for the year (Figure 9).

## 4. Industry Overview and Competitive Positioning

### World Economic Outlook

The global economy is currently under recovery, after 2020 recession (-3.3%). According to World Bank, global economy is currently poised to stage its most robust post-recession in 80 years in 2021.

The latest IMF forecast predicts a global growth of 6.0% in 2021, which is expected to gradually slow to about 3,5% annual growth rate into the following years, since IMF projection assumes that social distancing will continue into 2021 but will subsequently fade over as vaccine coverage expands (Figure 10).

As COVID-19 pandemic restrictions have been eased with vaccines coverage in many advanced economies driving the improvement, the expected recovery reflects unprecedented fiscal and monetary support stimulus registered in large economies, as the notably massive fiscal stimulus by the US government, as well the continued adaptation of economic activities to subdued mobility (Appendix 9).

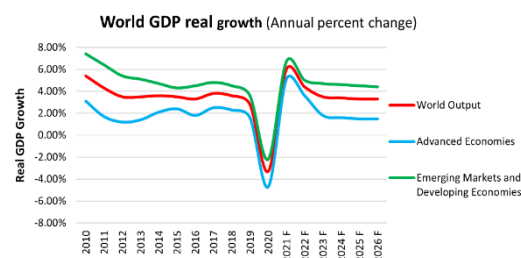
### Industry Analysis Outlook

#### Global Trade

The world trade started to recover in June 2020, from the drop suffered in first half, as infection rates came down, lockdowns were eased. Nevertheless, according to WTO the global trade volume growth contracted 5.3% during 2020. However, the contraction was way less than the 9.2% decline forecasted in October 2020.

The better-than-expected performance registered during 2020Q4 can be somehow explained by the announcement of COVID-19 vaccines at the end of 2020, which contributed to improve consumers and markets confidence.

Figure 10: World GDP real growth (Annual percentage change)



Source: IMF (2021) & Author Analysis

Figure 11: Global Trade Volume (Annual percentage change)



Source: WTO (2021) & Author Analysis

World merchandise trade volumes are projected to grow by 8.0% in 2021, and by slightly more than almost 4% average subsequent years (Figure 11), with the total global trade volume remaining below the pre Covid-19 pandemic trend (Appendix 10).

The actual strong vaccination pace at Europe and America, with most European countries reaching group immunity of 80% at October, is contributing for strong imports volumes growth at these continents during 2021, 8.3% and 7.7% increases, respectively. Since, mostly of global import demand is from Asia, this demand will be met by Asia exports that are expected to grow by 8.4% in 2021.

### Regulation

On January 1, 2020, the IMO's new regulation on sulphur emissions came into force. Globally, ships will be allowed to use fuel types with a sulphur content of under 0.5%, down from 3.5% applied since 2012. Certain areas, such as the EU and California, are subject to more stringent standards (Figure 12).

However, COVID-19 has softened the impact of the shipping industry's move to a low sulphur fuel.

### Demand Drivers

#### The World Economy- Global Economic Growth

The world economy is highly linked with the shipping demand. When economy grows, manufacturing activities and consumption tends to increase, arising more merchandise available for foreign trade. Since most of the merchandise trade needs to be shipped from its origin until its terminus destination, this drives the demand for global seaborne trade.

As show on Figure 13, seaborne trade demand is largely linked with developments in the world economy and trade. Therefore, we can observe that the Global GDP contraction registered during 2020 (-3.30%, IMF), mainly caused by COVID-19 pandemic, trade tensions between US and China and supply-side disruptions, resulted in a strong seaborne trade contraction (-3.6%, Danish Ship Finance, May 2021).

In 2021, Clarksons Research, predicts a recovery of 4.70% in world seaborne trade (millions ton loaded), after the 3.6% contraction registered in 2020, following an expected 6.0% increase of world GDP for 2021 according to IMF latest estimate.

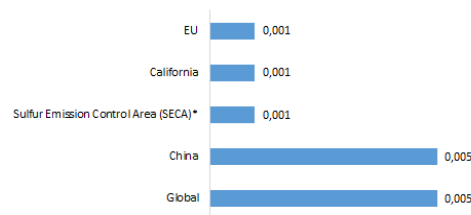
#### World Seaborne Trade

The demand side of global seaborne trade is heavily correlated to the health of the global economy and trade volumes.

Global merchandise trade volume has registered a decline of 5.3% in 2020, compared to the previous year. This contraction was mainly caused by Q2, which has contracted around 12% compared to the previous period, as COVID-19 containment measures affected economies around the world. As lockdown measures were reduced all over the world, Q3 and Q4, registered strong volumes growth, respectively 12% and 4.9%.

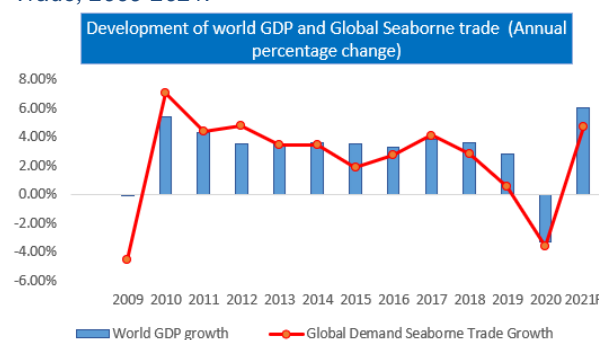
World merchandise trade volume has increased 2.3% in 2021Q1 compared to the previous quarter, as COVID-19

Figure 12: Limit on fuel sulfur content for the shipping industry by region 2020.



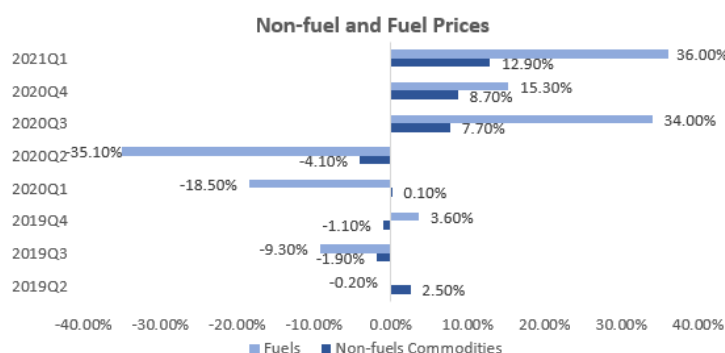
Source: Statista & Author Analysis

Figure 13: World GDP growth & Global Seaborne Trade, 2009-2021F



Source: IMF data for World GDP growth. Demand Seaborne trade growth: UNCTAD data (2009-2019), Danish Ship Finance, May 2021, for 2020 and Clarksons Research forecast for 2021.

Figure 14: Non-Fuel and Fuel Prices, 2019Q2-2021Q1, % change



Source: WTO-UNCTAD, June 2021.

containment measures were reduced in Asia (7.8% growth exports). However, other regions recorded flat growth, apart from Europe that recorded a contraction of 1.6% (imports) caused by the third wave lockdowns measures that affected economies around Europe financial crisis (Appendix 11).

Following the economy retake registered at 2020Q3, the prices of fuels registered a strong increase in the second half of 2020 and first quarter of 2021, with 2021Q1 registering an increase of 36.0% in the fuel's prices, as economic activity picked up again. Non-fuel prices also increased by 12.9%. The prices are expected to continue increase in the following months, however with a slower growth rhythm (Figure 14).

**Seaborne trade** measured in millions of tons loaded registered its record volume in 2019, when they achieved a high of 11 billion tons. According to Danish Ship Finance the volume **decreased 3.6% in 2020** to a total of 10.7 billion Tons. For the year of 2021, Clarksons Research (Seaborne Trade Monitor, October 2020) predicts an increase of 4.7% in the volume of demand for seaborne trade, reaching almost 11.1 billion tons, beating the record registered in 2019 (Figure 15).

### Average Haul

The Average Haul is an important factor for shipping services demand. This, consists in the distance the cargo is shipped, measured in tonne miles, as the amount of tons that needs to be shipped times the distance haul. The average haul has an impact on the transportation costs, bunker oil costs, and thereby also on demand.

Moreover, Seaborne trade measured in ton-miles reflects distances travelled and the employment of ship capacity. According to Danish Ship Finance (Shipping Market Review, May 2021), travel distances increased by 2% during 2020, absorbing partially some of the global demand for seaborne trade decline (3.6%).

Product Tanker (oil commodities), followed by LPG (Chemicals and Gas), contributed more to this growth, driven by demand increasing for long-haul cargoes to Asia and trade between the US and Asia, respectively (Figure 16) (Figure 17).

Travel distances for shipping can grow without any changes in volumes shipped. For instance, In March 2021, the Suez Canal was blocked for six days after Ever Given container being stuck sideways for nearly a week. During the time the Canal was blocked, a lot of ships were forced to sail around the Cape of Good Hope avoid waiting in the Red Sea or Mediterranean. This led to much greater sailing distances, approximately more 3000 nautical miles for Rotterdam Taiwan route (Appendix 12), during last days of March and April, increasing average hauls.

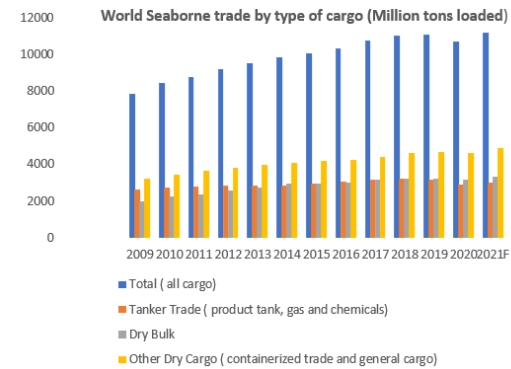
Situations like this, imply that ships would use longer time on each voyage, and effectively reduce the supply of ships in the market, pushing freight rates upwards in favor to shipowners, increasing their earnings.

However, during some days, until freight rates skyrocketed mainly in Dry Bulk and Containers segments, shipping companies had additional bunker oil costs, weighting this against the money saved in the Suez Canal's fees.

### Random Shocks

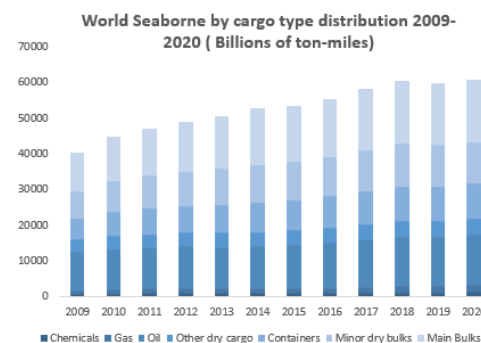
Seaborne demand is very exposed to random shocks in the macro environment, which are disruptive events that might influence the normal flow of the shipping industry drivers. Climate catastrophes like hurricanes, financial crises, wars, sudden changes in commodity prices, changes in political or economic policies, are all

**Figure 15: World Seaborne Trade by type of cargo (Million tons loaded), 2009-2021F.**



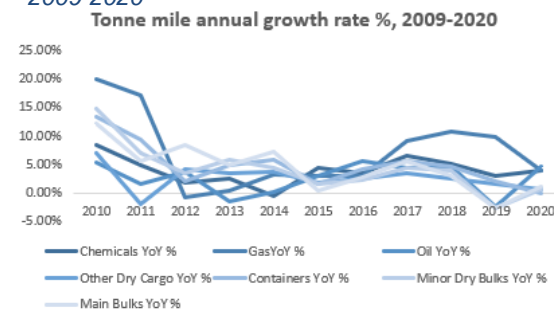
Source: UNCTAD Data (2009-2019); Danish Ship Finance, Shipping Market Review - May 2021 (2020); Clarksons Research (Seaborne Trade Monitor, October 2020) & Danish Ship Finance (2021F).

**Figure 16: World Seaborne distribution by ton-miles, 2009-2020**



Source: UNCTAD data and Clarksons Research (2009-2019); Danish Ship Finance, Shipping Market Review- May 2021 (2020)

**Figure 17: Average Haul, annual growth rate, 2009-2020**



Source: UNCTAD data and Clarksons Research (2009-2019); Danish Ship Finance, Shipping Market Review- May 2021 (2020)

examples of random shocks that considerably influence the “normal operation” of the shipping industry.

The IMO 2020 regulations can be categorized as a random shock, triggered by politics, which will have significant impact on the shipping market.

Suez Canal blockage in March 2021, made many vessels (Europe-Asia/Middle East Routes) diverted round the Cape of Good Hope, massively increasing average haul, and effectively shortening the supply of ships.

The COVID-19 pandemic is also an example of a random shock that severely affected the demand of seaborne trade. Due to the pandemic global lockdowns and restrictions registered in many ports, mandatory quarantines for seafarers, economic contraction, and many other factors, resulted in a contraction of 3.6% in seaborne demand volume in 2020, according to Danish Ship Finance.

### Transport Costs

In assessing how transportation costs will affect demand, it is necessary to evaluate the cost of bunker, as this accounts for a great amount of total transportation costs (Stopford, 2009).

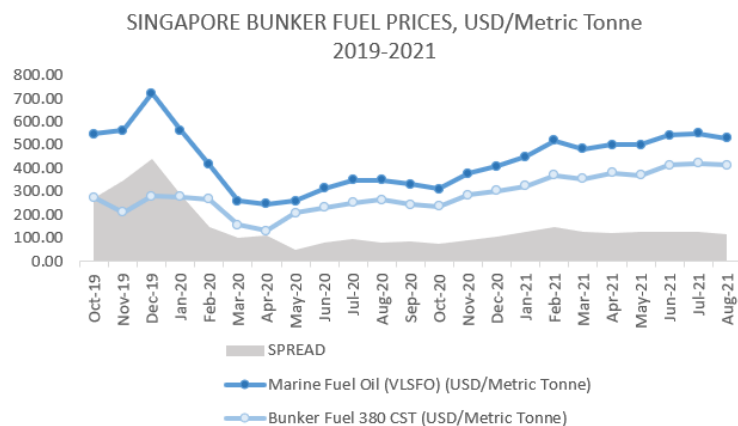
With the implementation of IMO2020 sulphur regulations, the choice of bunker fuel come more and more important. The shipping companies had to choose between switching their bunker fuel to VLSFO (Very-Low Sulphur Fuel Oil), also known as IMO2020 grade bunkers, which contains a max 0.5% sulphur fuel, or installing scrubbers on their vessels to be able to continue utilizing HSFO (High Sulphur Fuel Oil), which contains a max of 3.5% sulphur fuel.

Through lower voyage costs, by using HSFO instead of VLSFO, scrubber investments generated higher earnings for ship owners. Thus, scrubber’s investments represent a smooth decision, as the HSFO-VLSFO USD spread per metric tonne is enough to cover the initial costs as well running costs of the scrubber in a quite short period, indicating shorter payback time for the scrubber installments.

During 2020, due to COVID-19 lockdowns and mobility restrictions around the world, demand for certain oil products were low, which helped lower the price of VLSFO. However, as demand for products such as jet fuel starts to recover, the HSFO-VLSFO cost spread increased as well, solidifying the economic case for scrubbers. In August 2021, at Singapore, world’s largest bunkering hub, the VLSFO cost per metric tonne was 116.69 USD more expensive than HSFO (Figure 18) (Appendix 13).

With the economic recovery around the world and increasing demand for fuel, the bunker prices are expecting to increase, with HSFO-VLSFO metric tonne spread cost also expected to increase, which will result in more operating costs for companies that didn’t decide to install scrubbers on their vessels.

**Figure 18:** Singapore bunkering hub, VLSFO & HSFO prices.



**Source:** Bloomberg data (31 August 2021) & Author Analysis

## Supply Drivers

### World Fleet

According to IHS Global Limited, Bloomberg Intelligence, in August 2021 the total fleet stood at 26719 vessels (Appendix 14) with DWT (in thousands) ≥ 5,000, accounting for 1.89 billion dwt of capacity (Figure 19).

Bulk Carriers and Oil Tankers maintained the largest market share of vessels in the world fleet (dwt), at 46.39% and 32.12% respectively, followed by containerships with 15.15% (Figure 20).

Carrying capacity grew 3.58% at 2020 compared with 2019-year end. In the first half of 2021, the global carrying capacity grew already 1.39% compared to the end of 2020. (Appendix 15).

In 2020, the average age of the global merchant fleet was 21.29 years in terms of number of ships, and 10.76 years in terms of carrying capacity in dwt (Review of Maritime Transport 2020 & Appendix 16).

Ships below 10 years represent a high proportion of the carrying capacity of bulk carriers (62%), followed by container ships (36%) and oil tankers (33%). On the other hand, only 17% of the carrying capacity of general cargo ships and 29% of “other types” of vessels correspond to ships below 10 years, suggesting that these two segments are not undergoing fleet renewal, with more than half of the vessels presenting 15 or more years old (Figure 21).

### Fleet Productivity

The Fleet utilization & Fleet’s age; Speed of Global Fleet; and Port Congestion & Inefficiencies are the most important aspects that influence the fleet productivity and consequently the supply of ships for global trading.

**Fleet Utilization:** Unfortunately, ships are not available for trading every day. Periodically, during its lifetime, a ship needs to drydock for costly maintenance, inspections, repairs, and surveys in order to keep its classification to be able to operate. For ships older than 15y, inspections and surveys are required every 2.5y while for younger vessels only every 5y.

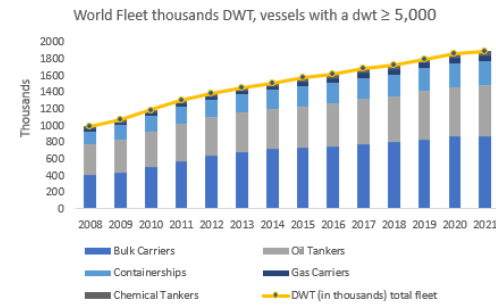
Can be concluded that review fleet’s age can be helpful to increase fleet utilization and consequently improve fleet productivity.

**Speed of Global Fleet:** The speed of global fleet will naturally influence the fleet efficiency. The ship operators define the vessel speed based on two variables, bunker price, and current freight rates. With higher bunker prices, the shipowners will usually decrease the vessel speed in order to save fuel and reduce costs. For instance, in times when freight rates are relatively high or bunker costs are low, vessels will increase the speed. On the other hand, when freight rates are relatively low or bunker costs are high, vessels will reduce their speed to reduce costs, therefore the number of days it will take to complete a voyage increase.

**Port Congestion & Inefficiencies:** Currently the industry grapples with the enormous strain brought by COVID-19 and exceptional consumer behavior, registering historical ongoing port congestions all over the world.

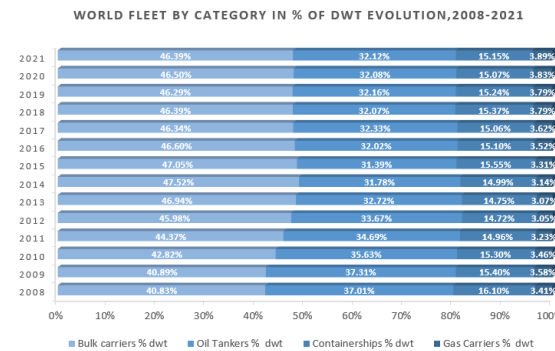
Since January 2020, COVID-19 pandemic restrictions and lockdowns registered all over the world, created severe inefficiencies related to the crewing of vessels, and also port congestions, including difficulties related to change the staff on board vessels, as many ports didn’t allow crews to enter or travel through the respective

**Figure 19: World Fleet DWT capacity, 2009-2021**



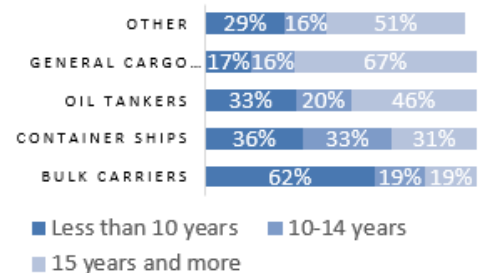
**Source: Bloomberg data (31 August 2021) & Author Analysis**

**Figure 20: World Fleet by Category in % of DWT Evolution, 2008-2021**



**Source: Bloomberg data (August 2021) & Author Analysis**

**Figure 21: Age Distribution of world merchant fleet by vessel type 2020**



**Source: Review of Maritime Transport 2020**

country, while others required mandatory quarantines for seafarers. As a consequence of these inefficiencies, the supply chain of ships is being severely affected, which is causing freight rates soaring to historical high levels mainly on Containers and Dry Bulk segments, due to lowering of supply in relation to a growing demand.

For instance, the queues lines of dry bulk vessels anchored off Chinese Ports have grown explosively during the first half of August 2021, due to logistics port congestion and new COVID-19 restrictions, reaching highest level in seven years. Moreover, the Suez Canal blockage in March 2021, consequently resulted in strong congestions. Many ships held up waiting for weeks to pass the canal after the historical traffic jam caused by the stuck of Ever Given ship.

### Newbuilding

The amount of newbuilding's will affect the supply of vessels and can be measured on the number of vessels in the orderbook. The orderbook is based on the developments in the future ship demand. There exists a lag effect of about 1 to 4 years from the time a ship is order to the time of delivery. Thus, in times when future demand is predicted to increase, the orderbook tends to increase as well, with the additional anticipation of growth in freight rates. Moreover, if the future demand turns out to decrease, there is likely to be an oversupply of vessels in the next 1 to 4 years, hence lower utilization of the fleet.

In addition to the above-mentioned factors, there are also several undisclosed aspects regarding future ship design and technology of vessels that will be necessary, to comply with the requirements from IMO 2020. As a result, more shipowners have become reluctant to order new ships, as this is likely to include a high upfront payment, as these ships are anticipated to live for at least 20y, decision makers must make sure that this high investment is worth the price, thus they await the investment decision (Figures 22-25) (Appendices 17-19).

### Scrapping

The demolition market is the market for scrapping ships. The amount of scrapped vessels is dependent on many variables, with the two primary ones being the freight rates, both current and outlook, and scrap values.

With high freight rates, few vessels will be scrapped due to the earning ability of having ships on the water, which currently can be seen through the reduction of % of container liners being demolished per age segment, due to the historical high freight rates (Figure 26). In times of higher earnings also elder vessels will be able to achieve higher freight rates.

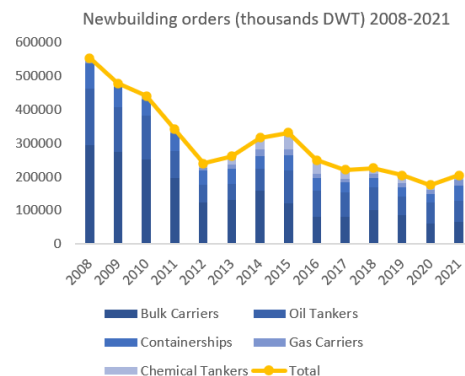
It's the other way around in weak market, where new and modern tonnage will be preferred by charterers instead of elder vessels. To get freight rates up and regain market equilibrium, shipowners will start to scrap elder and inefficient tonnage. This situation can currently be seen in Tanker segment, which was severely affected by the COVID-19 Pandemic, with lowering in the demand for fuels, as Jetfuel, which lowered the freight rates (Figure 27).

On the Dry Bulk segment, the demolition % per age segment has been stable in the last years (Figure 28).

The second most important factor that affects scrapping is the scrap price the shipowners receive (Figure 29).

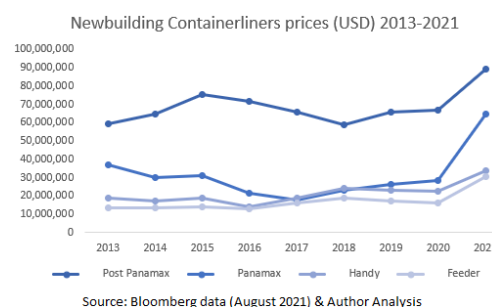
The ships will usually get demolished at beaches in Pakistan, India, Turkey, and Bangladesh and the price the scrap yards will get for the ships are dependent on the

**Figure 22: Newbuilding thousands DWT orders by category of vessels, 2008-2021**



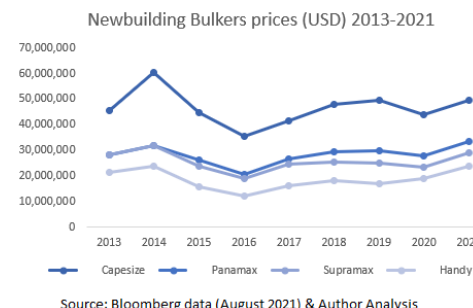
**Source: Bloomberg (August 2021) & Author Analysis**

**Figure 23: Newbuilding container liners prices.**



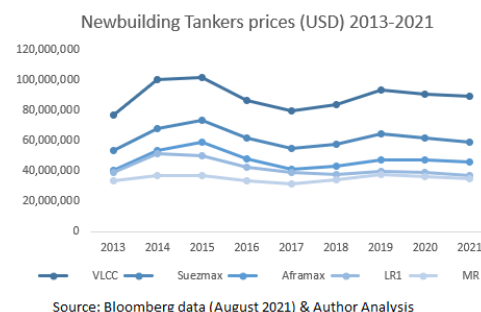
**Source: Bloomberg data (August 2021) & Author Analysis**

**Figure 24: Newbuilding Bulkers prices.**



**Source: Bloomberg data (August 2021) & Author Analysis**

**Figure 25: Newbuilding Tankers prices**



**Source: Bloomberg data (August 2021) & Author Analysis**

steel prices. The scrap price is measured in Light Weight Tons (LTD), which are the actual weight of the ship (compared to DWT which are the weight it can carry).

According to Clarksons Research, the lifetime of a ship may vary between vessel segments but are typically within the range of 20-25 years, with the demolitions % being usually above 60% for vessels with 15y and higher than 90% for 20y old vessels.

The future supply of vessels, however, will always depend on whatever new deliveries will offset the scrapping of older ships or vice-versa (Net Fleet Growth).

### Freight Rates

The freight rates are the main variable that impacts supply, affecting the supply of ships in the same way as transportation costs influences the demand for shipping services.

According to Stopford 2009, freight revenues affect companies' investments decisions in the long run, either in terms of ordering new ships or deciding to sell and/or scrap older ones, as freight rates prompt companies to adjust their fleet to correspond with the market conditions. For instance, when market conditions are good and freight rates are high, companies tend to invest in new vessels. When the opposite, companies will be more reluctant to invest, and sell or scrap vessels.

According to Danish Ship Finance, Market Review (May 2021), seaborne trade volumes are expected to grow more strongly than the fleet from 2022, which combined with older less efficient vessels being scrapped, should improve freight rates and secondhand prices.

Dry Bulk and Containers are currently experiencing strong growth in freight rates, while Tanker markets are struggling with low rates. Freight rates at tanker markets have weakened, although is expected some degree of improvement as economy activity and consume of fuel is increasing worldwide with the vaccination rollout.

**Dry Bulk Market** is currently being shaped by strong demand and slowing growth in the active fleet – the right conditions for rising freight rates. Freight Rates have been risen, being strongest in the mid-sized and small vessels segments, although Capesize rates are up by 40% compared to the end of 2020. A rise in industrial activity has resulted in increased employment of Dry Bulk vessels (Figure 30).

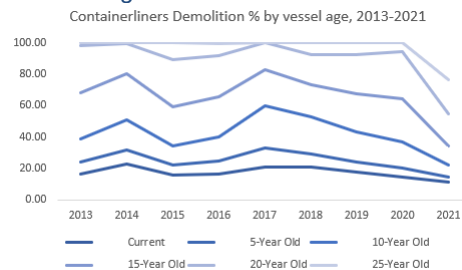
**Product Tanker Market** is facing low oil demand, by reason of COVID-19 Pandemic. The short-term recovery has begun; however, the progress is slow, being somewhat dependent on the vaccination rollout, which differs greatly between regions.

Freight Rates are slowly recovering as positive sentiment spread in the wake of the vaccine rollout and consumption of fuel products are starting to increase, even though way below pre pandemic levels. Freight rates are still challenged, but ship prices have moved close to median in a historical perspective. The one-year Timecharter rate is now 5% higher than in November (Figure 31).

**Container Ships Market** driving by the pandemic and stimulus, induced consumer spending on retail goods through E-Business online shopping. Since the start of COVID-19 pandemic, we have seen a massive shift in consumer spending. Consumers have not stopped spending; rather they have redirected their spending to Container-intensive physical goods, instead of leisure activities as vacations abroad, shopping in physical malls, due to social distancing and more time spend at home.

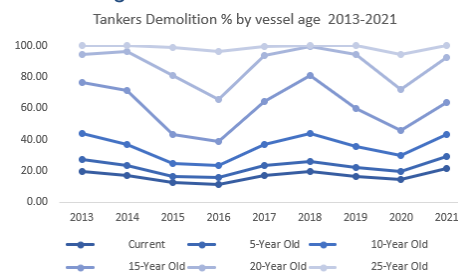
Currently facing strong demand, with historical high volumes being shipped, historical containership demand in conjunction with low supply capacity and a

**Figure 26: Container liners demolition % by vessel age.**



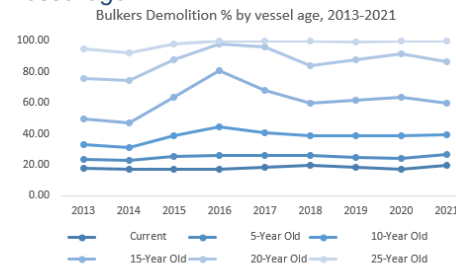
Source: Bloomberg data (August 2021) & Author Analysis

**Figure 27: Tanker's demolition % by vessel age.**



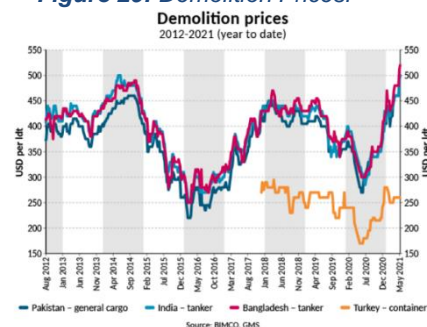
Source: Bloomberg data (August 2021) & Author Analysis

**Figure 28: Bulker's demolition % by vessel age.**



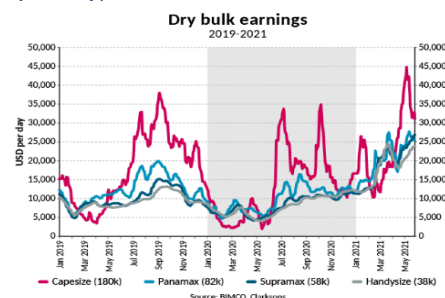
Source: Bloomberg data (August 2021) & Author Analysis

**Figure 29: Demolition Prices.**



Source: BIMCO, Clarksons

**Figure 30: Dry Bulk Earnings (USD per day)**



Source: BIMCO, Clarksons

“broken” supply chain, is resulting in soaring historical high spot freight rates, that most than duplicated in few months (Figure 32).

## Competitive Positioning

### Group of Peer Companies

According to the Sea Transportation Industry classification provided by Refinitiv, Reuters Business Classification (RBC), the definition of peer, is a group of companies that present the same type of characteristics.

The Sea Transportation Industry is divided in two main segments, Cargo Transport and Passengers Transport; with the first one embracing the following subsegments: Containers, Dry Bulk, Crude Tanker, Product Tanker, LPG Carriers and Offshore Supply vessels.

As relevant Norden Peers, where considered companies operating worldwide on the segments of Dry Bulk cargo or Product Tanker. As irrelevant, companies from these two segments that do not operate worldwide, and companies from the other segments of Cargo Transport, previously mentioned and Passengers Transport.

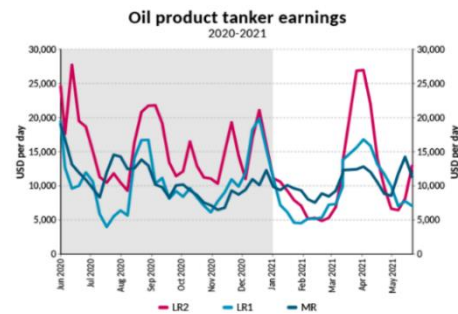
In order to define, the peer group of companies, that provides shipping transport of Dry Bulk Cargo or Product Tanker, it was considered the market capitalization and similarity of activities and type of products transported, which 16 of them were considered as relevant peers, **8 Dry Cargo Peers** and **8 Product Tanker Peers** (Table 6), since none of its peers operates on both segments.

## SWOT Analysis – Table 7

Strength	Weaknesses
Global operator, shipping commodities around the world on voyages without fixed routes Strong History: 150-Year Heritage Operates on two segments: Dry Bulk & Product Tanker Agile Asset-light Business model Adaptability and Resilience, which enables NORDEN to thrive aimed volatility Young Modern Fleet Ship days covered in the dry cargo market Asset Management unit, which manages long-term exposure, handling all Norden owned and chartered vessels, including ships from both dry cargo and product tanker segments Fully-owned Norient Product Pool (NPP), which is one of the largest operators of medium range product tankers in the world. Strong Chartering Activitiy, which enables strong capacity to adapt to market demand Strong market share on Dry Bulk segment Strong human competencies. Highly skilled and industry expertise directors Payout-policy of delivering at least 50% of the adjusted result to the shareholders Financial Strenght Stability	Hedging of ship days in the tanker market Highly exposed to operational risks, and disruptive events Low freight rates on Tanker segment Covid 19 Pandemic effects to lowering demand of fuel products Highly dependent on freight rates Highly dependence on human competencies
Opportunities	Threats
Increasingly Digitalisation Decarbonisation Sulfure requirements can increase demand in the tanker market High economy: Historical higher soaring Dry Bulk Earnings ( freight rates & TCE) Increasing demand in Asia. India and China in particular Population development and Urbanization Trade agreements Rising demand for clean fuels and renewable energy	A Changing China Story: Chinese economy becoming less comodity intensive over time. Iron ore imports face headwinds from maturing Chinese steel demand and increased steel recycling. COVID 19 Pandemic, delta variant & other possible new variants Piracy Attacks ( Increasing activity in Golf of Guiné) The intensity of competition Trade wars ( mainly between USA and China) Legal and Environmental requirements The price of bunker oil prices (since it's the most operational cost) Cyber Attacks ( cyber security risks) Cyclically sensitive industry Costs for compliance with sulfur requirements and installation of treatment plant New competitors without exposure to tough years High exposure to large oil companies Customer bargaining power (which is critical) High degree of rivalry in both dry cargo and product tank Developments in the world fleet, overcapacity Expectation of continued difficult conditions in the product tanker market

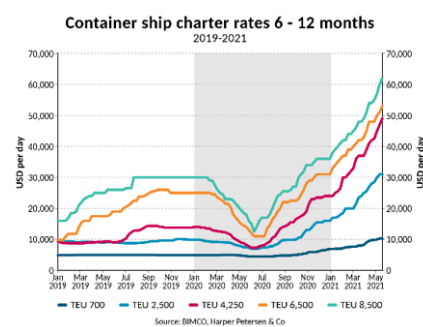
Source: Author Analysis

Figure 31: Tanker earnings (USD per day)



Source: BIMCO, Clarksons

Figure 32: Container rates (USD per day)



Source: BIMCO, Harper Petersen & Co

Table 6: Peer Companies, ranked by Market Cap

Ranking	Company Name	Market Cap (Millions USD)	Sector
1	Pacific Basin Shipping Ltd	2627.01	Dry Bulk
2	Star Bulk Carriers Corp	2440.46	Dry Bulk
3	Golden Ocean Group Ltd	2421.02	Dry Bulk
4	Scorpio Tankers Inc	918.15	Product Tanker
5	Genco Shipping & Trading Ltd	847.98	Dry Bulk
6	Eagle Bulk Shipping Inc	685.38	Dry Bulk
7	Torm PLC	629.75	Product Tanker
8	Safe Bulkers Inc	498.27	Dry Bulk
9	Diana Shipping Inc	473.24	Dry Bulk
10	Diamond S Shipping Inc	393.54	Product Tanker
11	Teekay Tankers Ltd	379.34	Product Tanker
12	D'Amico International Shipping SA	144.77	Product Tanker
13	Ardmore Shipping Corp	119.59	Product Tanker
14	Navios Maritime Holdings Inc	85.05	Dry Bulk
15	Navios Maritime Acquisition Corp	61.27	Product Tanker
16	Concordia Maritime AB	33.41	Product Tanker

Source: Refinitiv Reuters (as of 31 August 2021)

## Porter's 5 Forces

Considering the Porter's 5 forces framework, the highest threat in this industry is the **Customers Bargaining Power** (Figure 33).

### Threat from Substitutes Low (2)

For the shipping industry, substitution includes other ways of transporting commodities rather than sea, such as airplanes, rails, pipelines, or trucks. As most of the shipping items are extracted or produced far away from its destination, this requires constant demand for transportation between different regions by sea. Due to the biggest carrying capacity of vessels, as well as much lower costs per TKM(Tonne-Kilometre), compared to the previously mentioned alternatives, makes them not competitive in price, and consequently not a real threat for sea transportation.

A plausible threat in the future is probably shifting demand from LNG and Product Tanker vessels to pipelines, which could be done by increasing the number of refineries throughout the world, however this scenario seems unlikely to happen because vessels are least costly and much more flexible compared to building more pipelines and constructing more refineries.

Moreover, actually already exists a direct train route from China to Europe, which reduces the voyage from 45 days to 17 days (Hunan-Kiev route) compared to sea transportation. However, the vessels can transport much more tons of cargo, reason why the threat is low.

The shift to renewable energies presents a real threat for the industry of product tanker components, however, wasn't taken in account in this analysis since isn't a way of transportation, although Norden can be somehow affected in the case that the main customers shift they're activity from fuel fossils to renewables.

Overall, none other method of transportation than shipping presents a real **threat**, **reason why the threat from substitutes can be considered as Low (2)** in the shipping industry.

### Suppliers Bargaining Power Low (2)

The primary suppliers to the shipping industry are the shipyards. The market for building vessels is highly fragmented, since none of them have a significant market share, reason why the bargaining power is low.

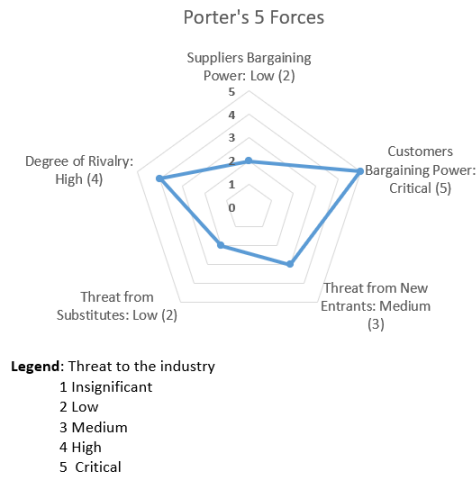
In the Sea Transportation Industry, suppliers will have little or no power. The type of services this companies provide can easily be changed or brought into the company. Only the port operators can have some type of bargaining power, but that only happens if the market is very niche or if it's a big hub. **The overall power of suppliers is Low (2)**: The number of suppliers is high; the price factor high and the switching costs for the suppliers are high.

### Customers Bargaining Power Critical (5)

In this type of industry, the client is king, almost all the main clients are importers, exporters, forwarders, and manufacturers and all these clients possess lots of information and comparability power to bring down prices. The main differentiation that the company can provide is the quality of the service or most importantly in price.

**The overall power of customers is Critical (5)**: The number of customers is high, the service provided is almost homogeneous, it's hard to differentiate their product on other factors than price, the customers switching costs are low and the customers are well informed and thus benefit from the market competition.

Figure 33: Porter's 5 Forces



Source: Michael Porter framework & Author Analysis

### **Degree of Rivalry High (4)**

Since the industry growth is high, the chance of exiting the market is low. Product differentiation can be achieved via service, relationship, reputation, innovation, product, and price.

The main problem the industry suffers is that provides almost similar products to their customers, which has little to no differentiation.

Cost leadership is high, since new entrants and other minor players can't compete with the low cost the market leader has. High number of suppliers leads to low switching costs. Competitors are less able to move to new customers due to non-awareness of their profile.

Lastly, there is low customer loyalty since there are many players in the market. All in all, we can say the **rivalry among existing competitors is High (4)**.

### **Threat of New Entrants Medium (3)**

In the shipping industry there are no legal entry barriers such as patents, copyrights or licensing regulation, preventing new competitors entering the market. The main barrier for entering in the shipping industry are the large amounts of capital required, which potential entrants must face when acquiring vessels, driving down the number of potential new entrants.

The potential **threat of new entrants in the shipping industry can thus be assessed as Medium (3)**, as you do not necessarily need to have a certain scale in order to set up activity in this industry, and there are no legal entry barriers, however the high profit margins in line with the high entrance capital requirements to buy vessels, even the secondhand market, offsets an easy entrance.

## 5. Investment Summary

Norden has a **Buy recommendation** with a **2022YE PT of 209.96 DKK/share**, meaning an **upside potential of 28.8%**, against the closing price of 163.00 DKK at August 31st 2021, by applying a **Dividend Discount Model (DDM)** however with **High Risk** (Table 8).

The current undervaluation of Norden shares is mainly explained due to **1) Volatility of Freight Rates**: Negative phase at Product Tanker segment, freight rates still very low, due to lowering of demand and consumption of fuel oils, resultant of COVID-19 pandemic lockdowns and lowering of travel activities, however demand and consumption are expected to return to pre-pandemic levels during 2022H2. Other factors, as expected continuing soaring historical high freight rates on the dry bulk segment until late 2022, caused by a booming demand and actual lower supply chain capacity to face this situation, is contributing to a rise on the revenues and earnings of the dry bulk shipping companies, which is driving share prices to grow at a fast pace since 2020H2. **2) Expected Decrease of vessel operating costs** %, since the introduction of IMO2020 guidelines, and shift to cleaner fuels, and less consumption of fuels with the installment of scrubbers on most vessels.

Regarding Norden, its agile asset-light business model, ensures a natural hedging against the increasing exposure to volatility and uncertainty that shipping industry is facing, plus the cyclical exposure to Dry Cargo and Product Tanker markets. This strategy permits Norden to continuously assess risk and adapt fast to market circumstances through the specialized Asset Management Business Unit, which allows Norden to deal better with challenging market conditions, compared to its peers.

Moreover, Norden is committed with its shareholders through, a shareholder return policy of paying out minimum 50% of the adjusted result in shareholder dividends, with a stable predicted payout of 55% of the adjusted result until 2025YE, as well a buyback shares program delivering 69\$ Million over 2020-2022F period.

### Valuation Methods

We have estimated 2022YE PT through several different absolute methods, and also relative methods, through the estimate of enterprise value multiples as well as equity value multiples (Figure 34). The absolute methods used were the **WACC method (FCFF); Flow to Equity (FCFE); Dividend Discount Model (DDM)** since the company pays dividends and finally Adjusted Present Value (APV), however the last one was not considered for the valuation, only included in the Appendix 36, since the PT is distorted in relation to the other methods PT. Furthermore, **EV/EBIT** and **P/B** market multiples were also considered in the valuation, while EV/Revenues; EV/ EBITDA and P/E were excluded due to the same reason as APV method (Appendix 37).

### Risks to Price Target

Investors must be aware that Norden business activity is subject to a wide range of different types of risks, some can be directly controlled by the company, while others can be minimized through mitigation measures. Investors must be aware of the volatility of the industry, especially regarding revenues, which are dependent on the market segments freight-rates, which consequently are directly determined by the supply and demand key drivers' relations. The volatility of Bunker Fuel prices also must be taken in account.

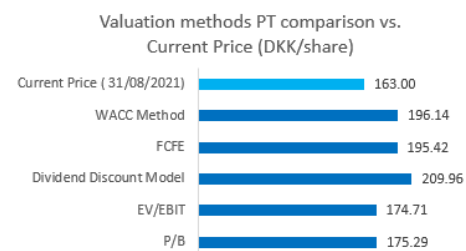
Table 8: Norden 2022YE PT (DKK/share)

Dividend discount model (DDM) Price Target 2022	
Equity Value	1201.8
# of Shares outstanding	36.1
Price Target (\$)	33.30
USD/DKK (31/08/2021)	6.304
<b>Price Target DKK 31/12/22</b>	<b>209.96</b>
Closing Price August 31rd (DKK)	163.00
<b>Upside Potential</b>	<b>28.8%</b>

Units: Millions of \$

Source: Author Estimates

Figure 34: Valuation methods PT comparison vs. current price (DKK/share)



Source: Author Analysis

## 6. Valuation

This section has the aim to explain the main assumptions used to forecast the key items influencing Norden operational activity and financial statements, and consequently its valuation and Price Target.

Before anything else, important to mention, the forecast of the financial statements comprises the period from 2021 until 2025. Regarding the valuation period (2021F-2025F), was posteriorly estimated the PT for 2022YE, through several methods.

### Segments Revenues Growth – Figure 35

In order to estimate Norden future revenues, the forecast was split by business units. For the **Asset Management Unit** (established at 2020), was taken in account the increasing shift from owned to chartered vessels, and consequently subleasing activity. Since we only had historical data regarding 2020FY, as well as the strong Norden investment on this unit, through the use of advanced analytics tools and also a strong risk management department, it was estimated that the unit revenues will register a YoY % increase by 5.0%, 3.3%, 2.6%, 1.6%, 0.8% respectively, consisting of 2.6% CAGR for 2021F-2025F period. (Appendix 29).

For the forecast of Dry Operator and Product Tanker segments, was taken in account each segment demand and supply growth, before estimating the segment revenue growth.

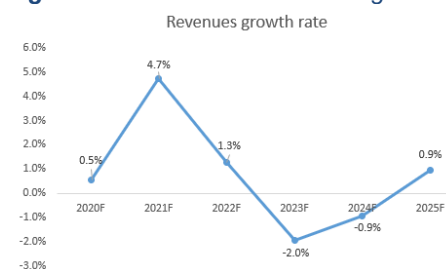
**Dry Operator:** Demand YoY growth source was the Shipping Market Review May 2021, from Danish Ship Finance, data from 2017-2022F, while for 2023F-2025F was estimated as the average of global trade volume YoY growth and world GDP real YoY growth forecasts. For the Supply YoY growth, the Shipping Market Review May 2021 data was used for the period 2017-2023F; while for 2024 and 2025 was estimated a YoY decrease of 0.50%, taking in account that the segment cycle is currently on historical high pick, expecting from 2023 onwards a decrease in freight rates and consequently on revenues. Since 2018 until 2022 supply will grow much more than demand, reason why is predicted a decrease on supply at the subsequent years, due to reduction in newbuilding and an increase in scrapping of old vessels.

Taking this in account, was subsequently estimated the segment YoY revenues growth. 2021F: sum of supply and demand growth rates, due to historical high freight rates and increase in average haul. 2022F revenues growth in the same way as demand, 2023,2024 and 2025 are expecting decreases in freight rates due to the economic cycle of Dry Cargo segment, which is currently on the top levels and expect decreases is freight rates from 2023 onwards. Decrease of 3% at 2023, followed by decrease of 1.5% at 2024 and 1% at 2025, since historical economic cycles at the shipping industry have a duration between 8 and 10y on average (Appendix 29).

**Tanker Operator:** Demand YoY growth source was Shipping Market Review May 2021, Danish Ship Finance, data from 2017-2022F. Following the economic recovery, consumption and population travels increased since COVID-19 Pandemic thus, for the following years is expected an increase of demand for Product Tanker transported products, however with a smaller growth rhythm compared to 2021 and 2022 years, which are predicted to represent a retake to pre-pandemic levels of demand. 2023: 2% decrease in growth rhythm, followed by 1% and 0.5%.

Supply YoY growth: Shipping Market Review May 2021, Danish Ship Finance data from 2017-2023F. Due to the excess of supply compared to demand growth

Figure 35: Norden revenues YoY growth



Source: Author Estimations

registered at 2017-2020, the segment currently faces low freight rates since is on a bad phase of the economic cycle, with recovery only being expected from 2023 onwards in terms of freight rates and consequently revenues. Due to this factor, it's predicted a decrease on the supply growth in 2022 and 2023, since the average age of tanker vessels is increasing, it's expected an increase in scrapping activities in the next years, resulting in a consequent negative fleet growth expected in 2024 and 2025, which is assumed to be of -0.5% in 2024 and -1% in 2025.

Taking these elements in account, it was estimated the segment YoY revenues growth. The negative phase that the segment is facing, expected to reach its pick during 2022, due to excess of supply compared to demand until 2021, will result in low freight rates in 2021 and 2022, with recovery predicted to start only at 2023. 2021 will register a revenue decrease of 5%, while 2022 will register a decrease of half of the demand growth, while on 2023F-2025F revenue growth is expected to follow demand growth, since demand will grow faster than supply, which will consequently push freight rates up and increase Norden revenues (Appendix 29).

### Vessels Operating Costs (% of revenues) – Figure 36

Norden operating expenses mainly reflect the consumption of bunker fuel and canal fees. Due to Suez Canal blockage during March 2021, the company is expected to decrease canal fees expenses during 2021. Norden is facing historical high freight rates on Dry Bulk operator segment, which make revenues higher than average haul, by this reason it's expected that vessel operating costs in % of revenues would be 1,5% lower in 2021 than 2020, and will grow 1.5% at 2022, following the expected increase in bunker fuel prices and canal fees expenses.

Since 2018, with the introduction of more economic vessels and the decrease of fuel costs consumption, as well the installment of scrubbers on most of the vessels, following the new IMO2020 guidelines, is expected in the future a decrease of the operating costs observed since 2020. Furthermore, during December 2020, the company announced the success of the tests with the use of a new Biofuel, that will permit in the future a reduction on the consumption of bunker fuel, however not all the actual vessels have ability to use this new Biofuel, reason why we only assumed for the period 2023F-2025F the average of the three previous years with an additional decay of 150 BP per year.

### Asset-Light Strategy: Increase of lease liabilities & reduction of loans – Appendix 30

Norden Debt comprises, loans and lease liabilities. Following the stable financial situation and the asset-light business model, the company aims in the following years to increase the leasing activity and reduce the amount of loans, in order to maintain a low YoY growth on the total amount of Debt (Figure 37).

Regarding lease liabilities, the company registered at 2020 YoY growth of 7.5%. Since the company expects to considerably increase the amount of lease liabilities, following a decrease in Capex, due to asset-light business model, lease liabilities will grow 7.0% at 2022, while on the following years will register a YoY growth of 5% per year. On the other hand, the loans will register an YoY decrease of more than 3.5% per year. Current loans will register an YoY increase of 5%, while non-current will decrease 5% YoY.

### Stable Dividend Policy – Figure 38

During 2021, Norden is paying a dividend of DKK 9 per share to its shareholders relative to 2020FY (56.1 million USD, payout ratio 53.1%), according to the dividend payment policy adopted by the company since 2018, of paying out minimum 50% of

Figure 36: Norden vessels Operating costs (% of revenues)

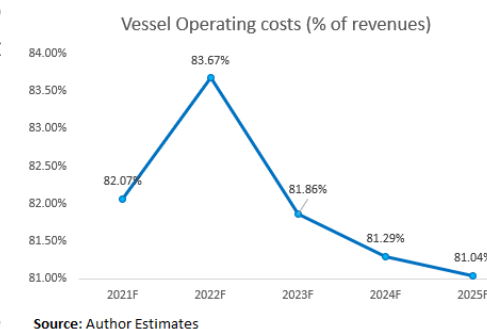


Figure 37: Norden Debt Schedule (Loans vs Lease Liabilities) \$ Million

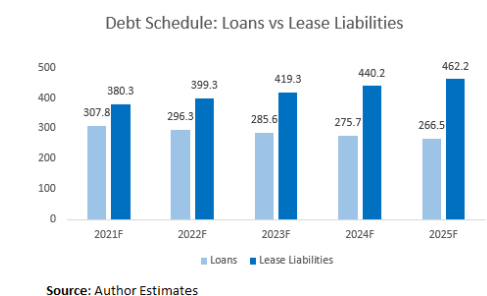
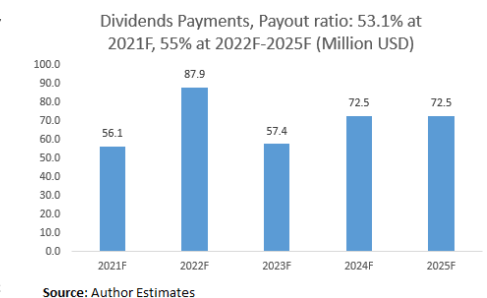


Figure 38: Norden Dividend Payments \$ Million



adjusted result in shareholder dividends. For the following years, 2022F-2025F, Norden will pay 55% of the adjusted result of the previous year to its shareholders.

### WACC Rate Assumptions – Appendix 31

The **Cost of equity (Ke)**, **6.80%** was estimate through the **CAPM Model**. Regarding the model components, were estimated the **RFR (0.70%)** and **MRP (5.80%)**, from Denmark, which were retrieved from the Pablo Fernandez survey “Market Risk Premium and Risk-Free Rate used for 88 countries in 2021”. The **Beta Levered (1.05)** was estimated through Hamada equation, where the **Beta Unlevered (0.65)** represents the Unlevered Beta from Shipbuilding & Marine Industry classification given from the source Damodaran Global data. The **Cost of Debt (Kd)**, **7.25%** was considered as (RFR+ levered Beta\*(MRP)), being the after-tax cost of debt equal to 6.67%.

Thus, considering the estimated value for the Ke and Kd, as well as the Equity weight, Debt weight and effective tax rate, the **WACC** was finally estimated as **6.75%** for the valuation period, and 6.59% for the terminal value (Table 10).

### Growth Rate: Terminal Value and Long-run Growth Rate

Three different models were performed (Appendix 32), two **stable growth** models, one of them **regarding dividends**, while the other based on the reinvestment rate \*ROE (used “g” on FCFF, FCFE and APV models), and finally the **PRAT Model (Dividend Sustainable Growth Rate)**, which “g” was considered as a long-term dividend growth on DDM valuation 2022YE PT.

### WACC Method: FCFF – Appendix 33

The first method used to evaluate Norden was the WACC method, by estimating the FCFF after calculating the sustainable growth rate for the terminal period.

Consequently, was estimated the Enterprise value of Norden for 2022, 1502.8 \$ Millions, to which was subtracted the amount of Debt and added the amount of cash, giving the **Equity Value of 1122.7 \$ Millions**. Considering the 36.1 million shares outstanding, and the USD/DKK exchange rate at 31/08/2021, the PT for 2022EY for the WACC method is 196.14 DKK per share, upside potential of 20.3% (Table 10).

### Flow to Equity: FCFE – Appendix 34

This method evaluates the company by how much cash is available for the shareholders, after considering all expenses. Flow to equity method assumes that the company follows a stable capital structure

Through this method, we reached for 2022YE a PT of 195.42 DKK/share, which represents an upside potential of 19.9% (Table 11). As we can see on Figure 39 Norden doesn't follow a stable capital structure, since Debt decreases and remain lower than the historical years, reason why is not the best method to evaluate Norden.

### Total Payout Model – Appendix 35

Norden is strongly committed with their shareholders, delivering them at least 50% of the previous year adjusted result, through an appropriate payout-ratio established in 2018. To support it, it was estimated a **2022YE PT of 209.96 DKK/Share**, which represents an **upside potential of 28.8%**, through a two-stages model (Table 12).

The first phase considers the amount of cashflow delivered to stakeholders, which comprises dividends payments and share repurchases (Figure 40). The second stage is based on Gordon Growth Model, achieved through a H-Model with 1) initial short-term dividend growth rate aligned with the TV of World GDP growth and 2) a long-term dividend growth computed through PRAT Model (Appendix 32).

Table 9: Ke; Kd and WACC

Period:	Valuation	TV
Ke	6.80%	6.54%
Kd	7.25%	7.25%
After-Tax Kd	6.67%	6.67%
After-Tax WACC	6.75%	6.59%

Source: Author Estimates

Table 10: WACC (FCFF) Method Results

WACC (FCFF) Method Price Target 2022	
Enterprise Value	1502.8
Debt of D/S Norden	695.6
Cash	315.5
Net Debt	380.2
<b>Equity Value</b>	<b>1122.7</b>
# of shares outstanding	36.1
<b>Price Target (\$)</b>	<b>31.11</b>
USD/DKK (31/08/2021)	6.304
<b>Price Target DKK 31/12/22</b>	<b>196.14</b>
Closing Price August 31rd (DKK)	163.00
<b>Upside Potential</b>	<b>20.3%</b>

Units: Millions of \$

Source: Author Estimates

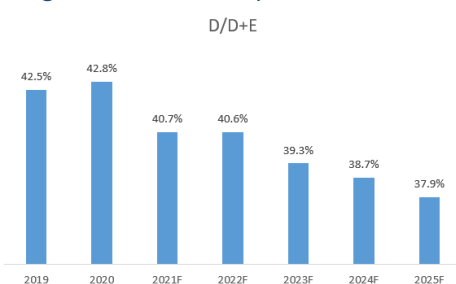
Table 11: FTE (FCFE) Method Results

Flow-to-Equity (FCFE) Method Price Target 2022	
<b>Equity Value</b>	<b>743.9</b>
# of Shares outstanding	36.1
Price Target (\$)	31.00
USD/DKK (31/08/2021)	6.304
<b>Price Target DKK 31/12/22</b>	<b>195.42</b>
Closing Price August 31rd (DKK)	163.00
<b>Upside Potential</b>	<b>19.9%</b>

Units: Millions of \$

Source: Author Estimates

Figure 39: Norden Capital Structure



Source: Author Analysis

Table 12: Dividend Discount Model (DDM) Method Results

Dividend discount model (DDM) Price Target 2022	
<b>Equity Value</b>	<b>1201.8</b>
# of Shares outstanding	36.1
Price Target (\$)	33.30
USD/DKK (31/08/2021)	6.304
<b>Price Target DKK 31/12/22</b>	<b>209.96</b>
Closing Price August 31rd (DKK)	163.00
<b>Upside Potential</b>	<b>28.8%</b>

Units: Millions of \$

Source: Author Estimates

## Market-Based Valuation – Appendix 37

Following the absolute models, previously presented, it was also performed a Relative Valuation, through the peers, 8 Dry Bulk players and 8 Product Tankers, comparison of market multiples.

- **EV/EBIT** resulting in Norden equity value of 1000.0 \$ Million, resulting on 2022YE PT of 174.71 DKK/Share, which represents an upside potential of 7.2% (Table 13).
- **P/B ratio** resulting in Norden equity value of 1003.4 \$ Million, resulting on 2022YE PT of 175.29 DKK/Share, which represents an upside potential of 7.5% (Table 14).

## 7. Financial Analysis

### Operational Performance

Since Norden and other shipping players can't control the industry key driver of profitability, freight-rates, the company focus more on margins and reduction of operating costs %. With the Asset Management Business Unit, the company focus on managing the vessels portfolio, in relation to the current and future outlook of the Dry Bulk and Product Tanker segments, by buying, selling and charter vessels on both segments, in order to adapt fast to the market conditions, hedging against the industry volatility, with the aim of generating the higher possible revenues, with lower operating costs, and consequently higher margins.

Regarding the revenues, they are linked with the segments market conditions, freight-rates, reason why 2021F and 2022F will register historical high revenues for Norden, mainly due to the historical high freight-rates that Dry Bulk segment is facing, which are predicted to decrease from 2023F onwards. However, during the forecasted period, the Gross Profit Margin will increase (Figure 41).

Furthermore, the EBITDA Margin, EBIT Margin and Net Profit Margin will also increase during the forecasted period (Figure 42).

### Profitability Ratios

Norden have been profitable every year since 2017, with 2020 being the most profitable year in the last years. The profitable trend is expected to hit its maximum value at 2021F, taking in account the soaring booming historical high freight rates, that Dry Bulk and Containers segments are facing (last one the company doesn't operate), driving shipping companies on these segments to historical high profits at 2021F. For 2022F, it was estimated a decrease in the profitability, taking in account the expected increase in operating costs, following the increase on bunker fuel prices.

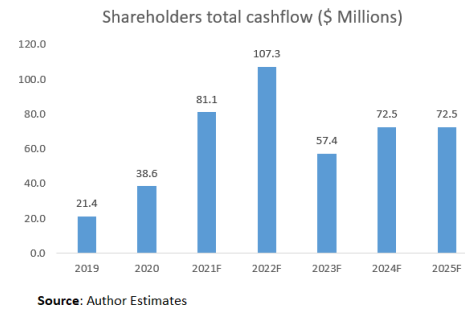
From 2023F onwards, slightly increase on the profitability ratios, due to lowering of cost of revenues, and expected recover of Product Tanker freight-rates (Figure 43).

### Liquidity and Solvency Ratios

Looking for the Liquidity Ratios (Figure 44), we can notice than Norden ratios presents a good level of liquidity, with good availability of cash to meet the short-term requirements as they mature, during all the years.

We can observe that at 2022F, was registered a slightly decrease on the liquidity ratios, caused by a reduction of cash and cash equivalents, which consequently decreased the amount of current assets on that year.

**Figure 40: Norden Shareholders total cashflow**



**Table 13: EV/EBIT Method Results**

Estimated Value of Equity based on EV	Min	Max
<b>EV of Norden (Based on EV/EBIT)</b>	705.1	2055
Debt of D/S Norden	695.6	695.6
Cash	315.5	315.5
Net Debt	380.2	380.2
Equity value	324.9	1675.1
<b>Average Equity Value</b>	<b>1000.0</b>	
# of shares outstanding	36.1	
<b>Price Target (\$)</b>	<b>27.71</b>	
USD/DKK (31/08/2021)	6.304	
<b>Price Target DKK 31/12/22</b>	<b>174.71</b>	
Closing Price August 31rd (DKK)	163.00	
<b>Upside Potential</b>	<b>7.2%</b>	

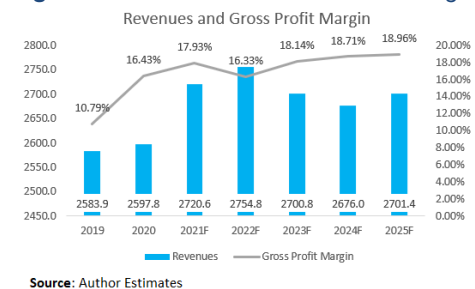
Units: Millions of \$  
Source: Author Estimates

**Table 14: P/B Ratio Method Results**

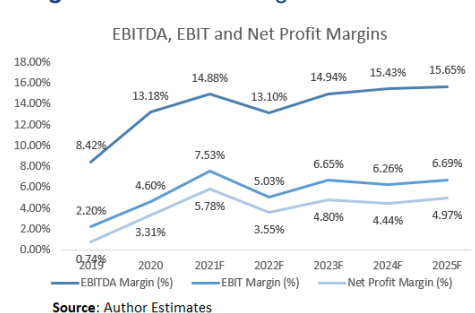
Equity Value Multiples	Min	Max
<b>P/B</b>	18.6	53.2
Peers Average	35.87	
DS NORDEN Book value per share	27.98	
<b>DS NORDEN Equity Value</b>	<b>1003.4</b>	
# of shares outstanding	36.1	
<b>Price Target (\$)</b>	<b>27.80</b>	
USD/DKK (31/08/2021)	6.304	
<b>Price Target DKK 31/12/22</b>	<b>175.29</b>	
Closing Price August 31rd (DKK)	163.00	
<b>Upside Potential</b>	<b>7.5%</b>	

Units: Millions of \$  
Source: Author Estimates

**Figure 41: Revenues & Gross Profit Margin**



**Figure 42: Norden Margins**



Regarding the Solvency Ratios, we can assess that the firm have the ability to pay all commitments in the long term.

The ratios presented on Figure 45, portray the firm constant slightly improvement on solvency, with equity being in the forecasted period always above half of the total assets, while non-current/assets ratio and total debt ratio are both decreasing every year, which permit us to conclude that the company has a good solvency level.

## 8. Investment Risks

### Investment Risks Description – Table 15

Norden faces both internal and external risks, that could have impact in their business. Considering external risks, it is possible to include natural, market and financial risks. Among the internal risks, it is important to mention the operational risks.

### Natural Risks

#### Environmental Risks (NT01)

The shipping industry is very exposed to environmental risks, which affects the different market segments.

Norden is everyday exposed to environmental risks at their global operating activities. Events such natural disasters and adverse weather conditions, oblige, in many situations, shipping companies to divert their routes, which may expose the company to significant additional operating costs, more voyage days and consequent losses of revenues due to less availability of vessels to carry new goods.

### Market and Financial Risks

#### Exchange Rates Risk (MF01)

Operating worldwide, Norden is subject to payments and receivables in different foreign currencies, mainly DKK, USD, GBP, JPY, CNY, and KRW.

Norden uses USD as functional currency, being the most relevant currency exposure against DKK, since administrative expenses and dividends are mainly paid in DKK. The company uses Foreign Exchange (FX) contracts to hedge future administrative expenses in DKK, as well as planned dividend payments as these are made in DKK; USD/DKK SPOT prices (Figure 46).

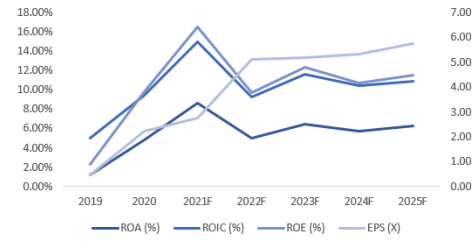
In connection with the conclusion of a cargo contract (COA) in GBP, cross currency swaps were simultaneously entered into to fix expected freight income in USD. Norden has also entered an FX contract to hedge expected freight income from a COA that was concluded in GBP; USD/GBP spot price (Figure 47).

In connection with newbuilding payments, typically in JPY, CNY or KRW, there may also be a currency risk. This is hedged by forward contracts in connection with newbuilding orders. At the end of 2020, all newbuilding payments were, however in USD. **Any exposure on other currencies than DKK currencies and GBP is insignificant.**

#### Interest Rate Risk (MF02)

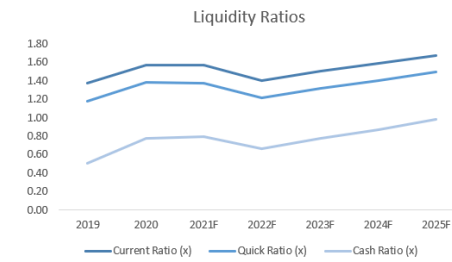
Besides currency risk, shipping industry is also exposed to interest rate risk, since the companies finance part of their operations with loans, that can be at fixed or floating interest rate. Moreover, due to their volatility, some companies hedge the

Figure 43: Norden Profitability Ratios



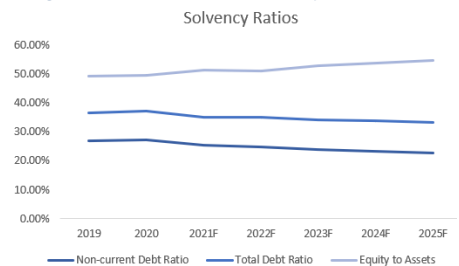
Source: Author Estimates

Figure 44: Norden Liquidity Ratios



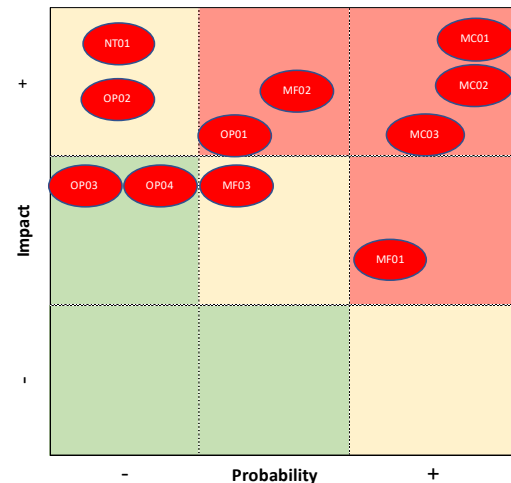
Source: Author Estimates

Figure 45: Norden Solvency Ratios



Source: Author Estimates

Table 15: Norden Risk Matrix



Legend:

**Impact-** Economic-financial impact of potential risk on organizational efficiency, market share, revenues, growth, operational costs.

**Probability-** Degree of likelihood of occurrence

Source: Author Analysis

interest rate risk by a duration range, which it is primarily obtained with interest rate swaps.

Most of Norden loan obligations are paying interest on the basis of 1,3, or 6-months USD Libor. Most of the group's considerable cash balance is placed on short term bank deposits thus netting out the loan's libor exposure. The group's net interest rate exposure does not have a significant effect on the results of the Group.

### Credit Risks (MF03)

Norden is exposed to credit risk related to trade receivables from its counterparties, its prepayments to shipyards and ship owners, its cash deposits with financial institutions and potential initial margins and intraday volatility market values in relation to derivative instruments.

## Material Commercial Risks

Risks actively Taken: Freight Rate Risks, Vessel Value Risks.

Other risk factors: Bunker Price Risk; Counterparty Risks (Credit Risk and Sanctions Risk); Vessel related accidents (Oil spill and total loss); Piracy; IT & Cyber Security.

### Freight Rate Risk (MC01)

Purchasing and chartering vessels, and cargo contracts, imply a risk as the group assumes financial liability in expectation of generating earnings which are dependent on the freight market.

The group uses Forward Freight Agreements (FFAs) to hedge cashflow risk related to highly probable freight expenses and revenues.

Chartering vessels in and out, and booking cargoes carry risks as the group assumes financial liability in expectation of generating earnings which are dependent on the freight market.

Norden actively manages its freight exposure to optimize its risk-adjusted return using charter contracts, cargo contracts and freight derivatives. Actions are guided by extensive market research and controlled through specific limits set per business unit.

### Vessel value Risks (MC02)

Norden is extremely exposed to vessel value changes, as these changes have impact on the value of the company, both directly on the owned fleet and indirectly through the value of purchase options.

To mitigate this risk, Norden is actively engaged in buying and selling vessels, through an agile asset-light business model conducted by Asset Management unit, in order to optimize the risk-adjusted return on owned vessels both by benefiting from market changes and improving the earnings potential of its own vessel portfolio.

### Bunker Price Risks (MC03)

Norden largest variable expenses are related with the bunker prices, which impacts the company financial result. When entering cargo contracts at a fixed price, earnings from such contracts are very dependent on changes in the bunker price.

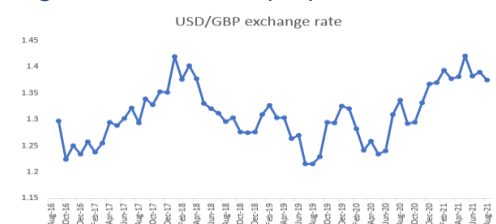
Furthermore, in connection with charter in and out agreements, the company has a bunker price risk in relation to the quantity of bunkers onboard and the quantity the vessel must be redelivered with. For vessels where a scrubber has been installed,

Figure 46: USD/DKK Spot prices.



Source: Bloomberg data (31 August 2021) & Author Analysis

Figure 47: USD/GBP Spot prices.



Source: Bloomberg data (31 August 2021) & Author Analysis

Norden has a bunker price risk towards the spread between High Sulphur Fuel Oil (HSFO) and a combination of Very Low Sulphur Fuel Oil (VLSFO) (Figure 23).

Norden uses bunker swaps to hedge the bunker price risk, as the available hedging tools are not very liquid, only partly of the price spread risk in relation to scrubbers is hedged.

## Operational Risks

### **Canal and Ports congestions (OP01)**

The company is extremely exposed to potential canal and ports incidents, which can affect partially the normal traffic flow, or in extreme cases, the global sea transportation flow.

In March 2021, the blocking of the Suez Canal, critical for East-West trade shipping route, by one of the largest container ships, Ever Given, caused long weeks delays for hundreds of vessels waiting to transit the canal, while other vessels decided to divert their route, through the Cape of Good Hope, which had a significant impact on their operational costs. The alternative navigation route, while the Suez Canal was blocked, consisted in additional 10 voyage days and approximately more 3000 nautical miles for Rotterdam-Taiwan line.

The blockage was estimated to have affected an estimated \$ 9.6 bn of merchandise each day, around 12% of total world trade.

Moreover, the queues lines of dry bulk vessels anchored off Chinese Ports have grown explosively during August 2021, due to logistics port congestion and new covid19 restrictions, reaching highest level in seven years.

### **Vessel related accidents (Oil spill and total loss) (OP02)**

When operating vessels, there is a risk of accidents which can be costly both in direct financial terms and for the environment. The most material risk events in this respect are oil spills and total loss (lost value of owned vessels, purchase options and charter parties).

In order to avoid and mitigate this risk, Norden seeks to minimize accidents by operating a well-maintained fleet and by investing in crew education and good safety procedures. Financial risks are controlled by taking out insurances with recognized international insurance companies.

### **Piracy (OP03)**

In various places around the world, especially West Africa, the crew and vessels are at risk of pirate attacks aiming at theft and/or kidnapping.

In 2021H1, the Gulf of Guinea accounted for nearly half of all reported piracy incidents, which frequency and violence is increasing since 2020, with crimes such as kidnapping of seafarers and robbery of vessels.

Norden mitigates piracy through crew education, good safety practices and various protective installations on owned vessels. Furthermore, Norden has in place a company security function that assesses security risks on an ongoing basis in conjunction with risk intelligence providers and military organizations.

### **IT& Cyber Security (OP04)**

Norden's operations are very dependent on stable IT systems. This implies a risk related to unavailability of systems and data either due to technical malfunctions or external interferences such as hacking. Norden mitigates cyber security risks

through strong procedures for back-ups, security upgrades etc. and ongoing awareness campaigns for employees.

### Price Target Sensitivity

In this section, taking in account the risks previously presented, several sensitivity analyses with combined effects were performed to assess the possible effect on Price target, 209.96 DKK/per share based on DDM valuation method. The close price of 163.00 DKK, 31/08/2021, was taken in account to estimate the level of recommendation for this high-risk stock (Table 16).

**Table 16: Investment recommendation system- High Risk Stocks**

Recommendation system for High Risk stocks		
<b>Sell</b>	≤ 0%	≤ 163.00
<b>Reduce</b>	> 0% & ≤ 10%	> 163.00 & ≤ 179.30
<b>Hold/Neutral</b>	> 10% & ≤ 20%	> 179.30 & ≤ 195.60
<b>Buy</b>	> 20% & ≤ 45%	> 195.60 & ≤ 236.35
<b>Strong Buy</b>	> 45%	> 236.35

Currency: DKK

Source: Author Estimates

### Cost of Capital (Equity) vs. Long-run sustainable growth rate

When applying DDM, these are the two variables that have the major impact on the Price Target. By this reason, we are analyzing how the PT will be affected with changes on the long-run sustainable growth rate (g) and on cost of capital (equity). Through Table 17, we can see that a slightly increase on the cost of capital will have a negative on the Price Target, while a slightly increase on the "g" will lead to a Price Target increase.

**Table 17: Sensitivity analysis on "g" vs Cost of Equity**

Cost of Capital (Equity)	Long-run sustainable growth rate (g)										
	3.70%	3.90%	4.10%	4.30%	4.50%	4.7%	4.90%	5.10%	5.30%	5.50%	5.70%
5.80%	216.00	222.95	230.45	238.58	247.42	257.06	267.61	279.23	292.06	306.32	322.26
6.00%	208.48	214.90	221.81	229.27	237.35	246.14	255.73	266.23	277.77	290.54	304.72
6.20%	201.48	207.42	213.80	220.67	228.09	236.13	244.87	254.41	264.85	276.33	289.03
6.40%	194.94	200.46	206.37	212.71	219.55	226.93	234.92	243.61	253.09	263.48	274.90
6.60%	188.83	193.96	199.44	205.32	211.63	218.43	225.77	233.72	242.36	251.79	262.12
6.80%	183.09	187.88	192.98	198.43	204.28	209.96	217.31	224.62	232.52	241.12	250.50
7.00%	177.71	182.18	186.93	192.01	197.43	203.24	209.49	216.21	223.47	231.34	239.89
7.20%	172.64	176.82	181.26	186.00	191.04	196.44	202.22	208.43	215.12	222.34	230.16
7.40%	167.85	171.78	175.94	180.36	185.07	190.09	195.45	201.20	207.38	214.03	221.21
7.60%	163.34	167.02	170.93	175.06	179.46	184.14	189.13	194.47	200.19	206.33	212.95
7.80%	159.07	162.53	166.20	170.08	174.20	178.57	183.22	188.19	193.50	199.19	205.30

Source: Author Analysis

### Revenues Growth Rate vs. Operating Costs (% of revenues)

In this valuation, the base revenue growth rate for 2022 in relation to the base year (2020) is 6.04%. On this analysis is estimated that the revenue growth rate will range from 4.04% until 8.04%.

The base case for operating costs, mainly bunker fuel costs, defined as % of revenues is set as 83.67%. Since Bunker fuel prices are volatile, it was estimated an increase (decrease) of 2% in relation to the base case.

As we can observe, on Table 18, an increase on the revenues growth rate will naturally result on an increase of the Price Target, while an increase in the operating costs will led to a decrease of the Price Target.

**Table 18: Revenue's growth rate vs Operating Costs (% of revenues).**

Operating Costs (% revenues)	Revenues- Growth rate for 2022F (year 0)										
	4.04%	4.44%	4.84%	5.24%	5.64%	6.04%	6.44%	6.84%	7.24%	7.64%	8.04%
81.67%	264.97	265.27	265.63	265.96	266.28	266.61	266.94	267.27	267.59	267.92	268.25
82.07%	252.94	253.22	253.56	253.86	254.17	254.48	254.79	255.09	255.40	255.71	256.02
82.47%	241.34	241.60	241.92	242.20	242.49	242.78	243.07	243.36	243.65	243.94	244.22
82.87%	230.14	230.39	230.68	230.96	231.23	231.50	231.77	232.04	232.31	232.58	232.85
83.27%	219.34	219.57	219.84	220.10	220.35	220.61	220.86	221.11	221.37	221.62	221.87
83.67%	208.90	209.12	209.38	209.61	209.85	209.96	210.33	210.57	210.80	211.04	211.28
84.07%	198.82	199.02	199.27	199.49	199.71	199.93	200.16	200.38	200.60	200.83	201.05
84.47%	189.08	189.27	189.50	189.70	189.91	190.12	190.33	190.54	190.75	190.96	191.16
84.87%	179.66	179.84	180.05	180.25	180.44	180.64	180.83	181.03	181.22	181.42	181.61
85.27%	170.55	170.72	170.92	171.10	171.28	171.46	171.65	171.83	172.01	172.19	172.38
85.67%	161.74	161.89	162.08	162.25	162.42	162.59	162.76	162.93	163.10	163.27	163.44

Source: Author Analysis

Finally, was also performed a sensitivity analysis in relation to changes in the Payout Ratio vs changes in the cost of capital, however the impact on the Price Target was smaller compared with Figures 64 and 65 analyses, reason why the output is only presented at Appendix 38.

# Appendices

## Appendix 1: Norden Business Model

### TRADING-ORIENTED BUSINESS MODEL



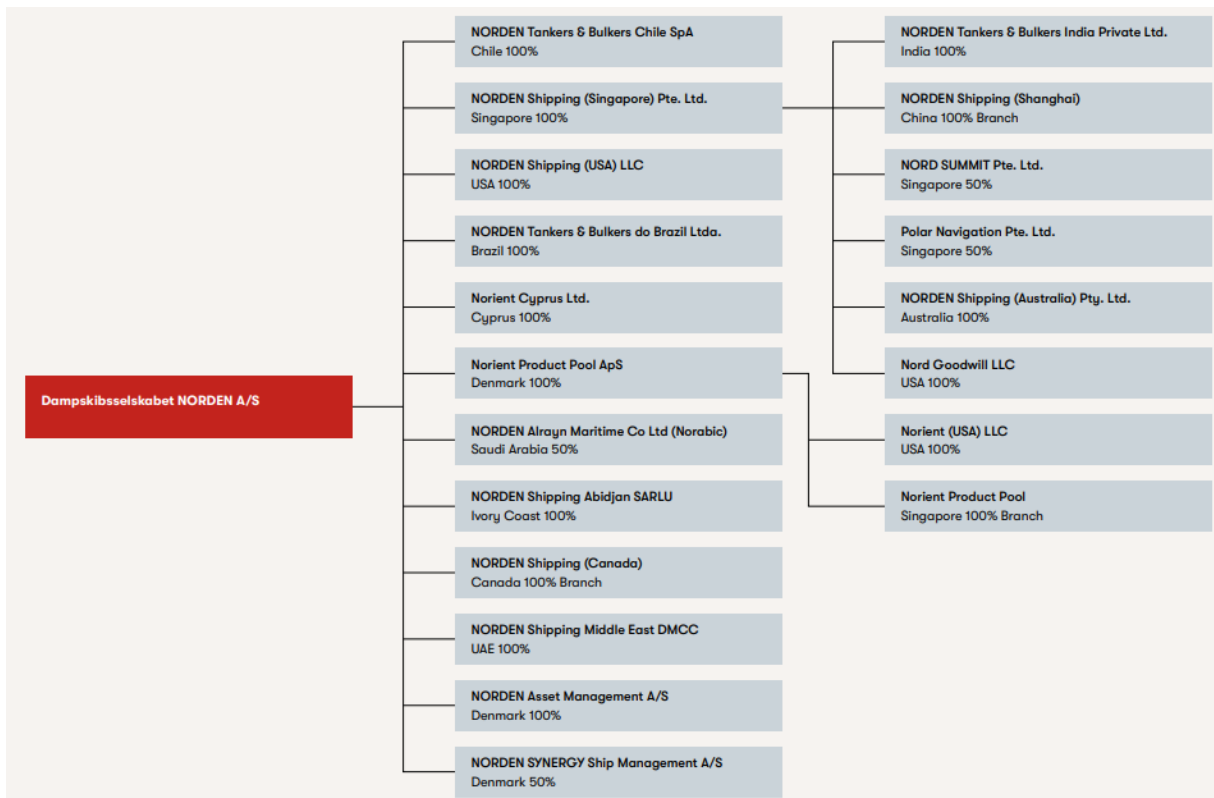
Source: Norden 2020 annual report

## Appendix 2: Norden Global Presence, office's locations



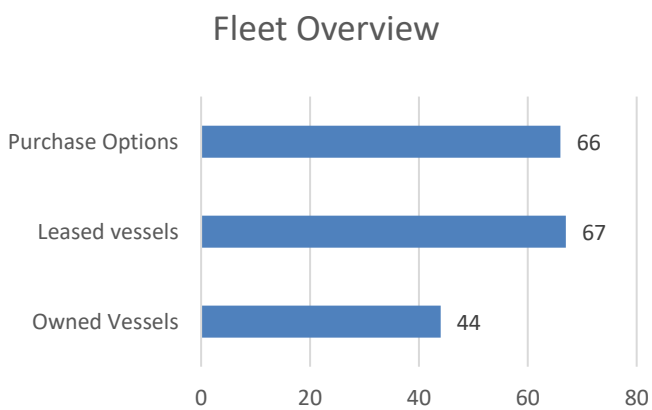
Source: Norden 2020 annual report

### Appendix 3: Norden's Group Structure



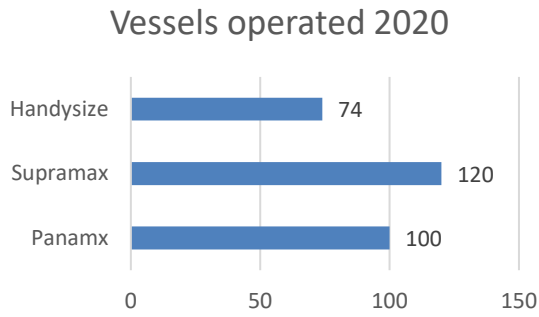
Source: Norden 2020 annual report

### Appendix 4: Asset Management Fleet Overview



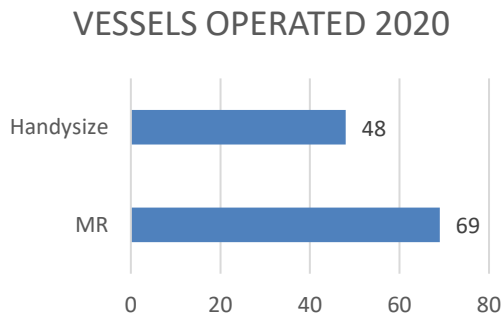
Source: Norden 2020 annual report

## Appendix 5: Dry Operator Fleet Overview



Source: Norden 2020 annual report

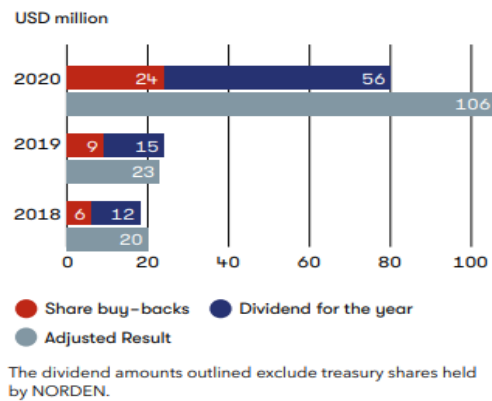
## Appendix 6: Product Tanker Operator Fleet Overview



Source: Norden 2020 annual report

## Appendix 7: Shareholders Returns 2018-2020

### Shareholder returns 2018-2020



Source: Norden 2020 annual report

## Appendix 8: Board Committees

### BOARD COMMITTEES

The 4 subcommittees have been established to ensure dedicated focus on recurring topics deemed of high importance for the governance of the Company.

#### Audit Committee

The Audit Committee consists of:

- Karsten Knudsen (committee chairman)
- Klaus Nyborg
- Helle Østergaard Kristiansen

The committee supervises financial reporting, transactions with closely related parties, auditing, etc. The terms of reference are published on NORDEN's website, where a statement of control and risk management in connection with financial reporting can also be found (in accordance with section 107b of the Danish Financial Statements Act). During the year, the committee held 5 meetings with 100% attendance.

#### Risk Committee

The Risk Committee consists of:

- Tom Intrator (committee chairman)
- Karsten Knudsen
- Stephen John Kunzer

The purpose of the committee is to assist the Board of Directors in its oversight of the Group's overall risk-taking tolerance and management of market, credit and liquidity risks. The committee's terms of reference are available on NORDEN's website. During the year, the committee held 5 meetings with 100% attendance.

#### Remuneration Committee

The Remuneration Committee consists of:

- Klaus Nyborg (committee chairman)
- Karsten Knudsen
- Tom Intrator
- Stephen John Kunzer

The committee is responsible for supervising the implementation of the Group's remuneration policy, which specifies the remuneration of the Board of Directors and Executive management. The Remuneration policy as well as the committee's terms of reference are available on NORDEN's website. In 2020, the committee held 2 meetings with 100% attendance.

#### Nomination Committee

The Nomination Committee consists of:

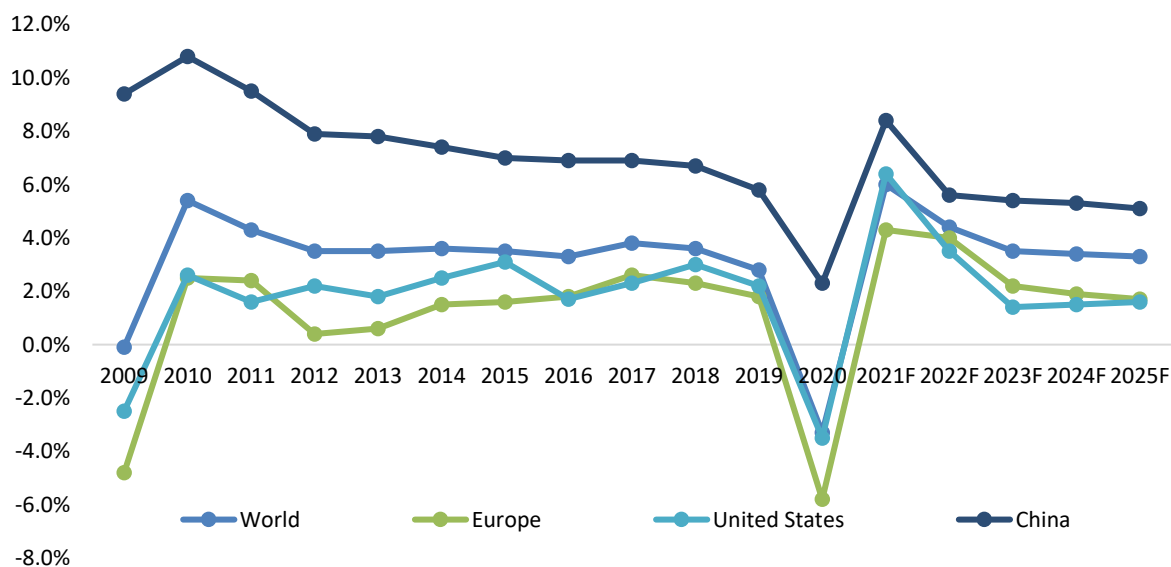
- Klaus Nyborg (committee chairman)
- Johanne Riegels Østergård

The committee is responsible for describing the qualifications required in the Board of Directors and the Executive Management. The committee is also in charge of an annual assessment of the competences, knowledge and experience present in the 2 management bodies. The committee's terms of reference are available on NORDEN's website. In 2020, the committee held 2 meetings with 100% attendance.

Source: Norden 2020 annual report

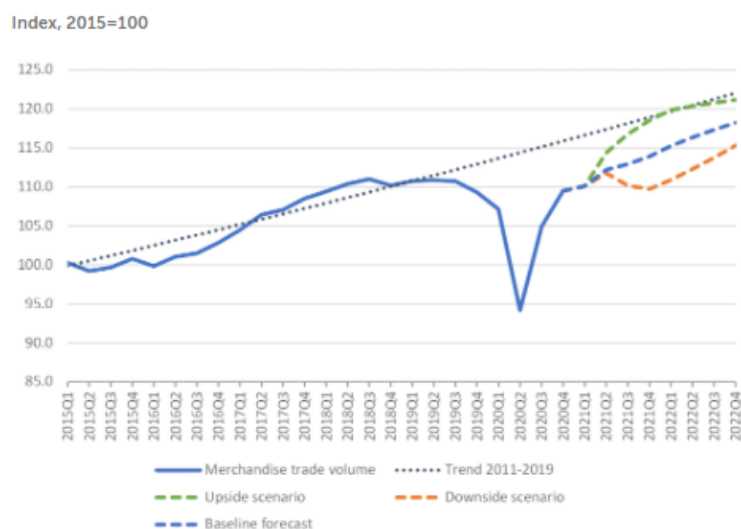
## Appendix 9: Real GDP Growth (2009-2025F)

### Real GDP growth (2009-2025F)



Source: IMF (2021) & Author Analysis

## Appendix 10: World Merchandise Trade Volume: 2015Q1-2022Q4



Sources: WTO and UNCTAD for trade volume data; WTO for forecasts.

Source: WTO and UNCTAD for trade volume data; WTO for forecasts.

## Appendix 11: Quarterly World Merchandise Trade Volume Growth

	Quarter-over-quarter growth, %, seasonally adjusted													
	Exports							Imports						
	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1
<b>World</b>	0.40%	-0.80%	-2.80%	-12.80%	13.80%	4.30%	2.30%	0.20%	-1.40%	-2.50%	-11.10%	10.30%	5.40%	2.20%
<b>North America</b>	0.40%	-0.40%	-1.50%	-24.50%	22.40%	5.50%	0.10%	0.30%	-2.40%	-2.20%	-14.10%	16.20%	5.40%	2.30%
<b>Europe</b>	0.20%	0.60%	-4.30%	-17.90%	18.80%	4.90%	-0.30%	-0.30%	-1.70%	-2.90%	-15.40%	16.00%	4.50%	-1.60%
<b>Asia</b>	1.40%	-2.20%	-1.70%	-4.00%	10.40%	4.50%	7.80%	0.20%	-0.90%	-0.70%	-4.40%	3.30%	5.40%	6.20%

Source: WTO-UNCTAD data

## Appendix 12: Alternative Route for while Suez Canal was blocked

### Alternative route for shipping while Suez Canal blocked

<span style="color: orange;">—</span> Using Suez Canal	<span style="color: purple;">—</span> Around Cape of Good Hope
10,000 nautical miles (18,520km)	13,500 nautical miles (25,002km)
<b>25.5 days*</b>	<b>34 days*</b>

\*Based on ship's average speed of 16.43 knots



Source: Vessels Value

BBC

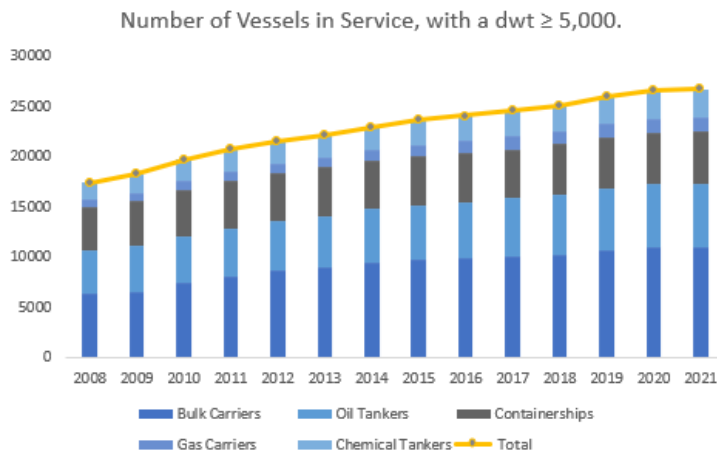
Source: BBC & Vessels Value

## Appendix 13: Singapore Bunkering Hub, HSFO-VLSFO spread (USD/metric tonne), 2019-2021

Singapore Bunker Fuel Prices	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21
Marine Fuel Oil (VLSFO) (USD/Metric Tonne)	547.00	562.50	721.00	563.00	417.00	261.00	246.00	259.00	314.00	349.00	350.00	331.00	311.00	378.00	410.00	450.00	518.00	483.00	501.00	500.00	541.00	550.00	530.00
Bunker Fuel 380 CST (USD/Metric Tonne)	275.99	212.02	280.57	277.52	266.50	157.78	131.39	207.75	230.87	252.63	266.11	245.16	236.06	285.88	302.56	322.93	370.19	355.19	379.41	371.46	414.93	421.54	413.31
SPREAD	271.02	350.48	440.43	285.48	150.50	103.22	114.61	51.25	83.13	96.37	83.89	85.84	74.94	92.12	107.44	127.07	147.82	127.81	121.59	128.54	126.07	128.47	116.69

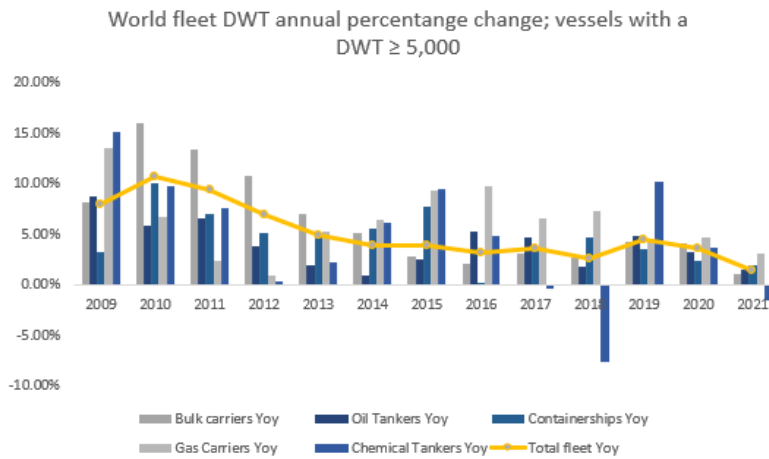
Source: Bloomberg data (31 August 2021) & Author Analysis

## Appendix 14: Number of Vessels in Service, 2009-2021



Source: Bloomberg data (31 August 2021) & Author Analysis

## Appendix 15: World Fleet DWT carrying capacity, annual percentage change per category of vessels, 2009-2021



Source: Bloomberg data (31 August 2021) & Author Analysis

## Appendix 16: Age Distribution of world merchant fleet by vessel type, 2019-2020 (percentage and Dead-Weight Tonnage)

Age Distribution of world merchant fleet by vessel type, 2019-2020 (percentage and dead-weight tonnage)		Years					Average Age	
		0-4 years	5-9 years	10-14 years	15-19 years	More than 20	2019	2020
Bulk Carriers	Percentage of total ships	20.22%	42.17%	18.70%	8.99%	9.93%	10.18	9.69
	Percentage of Dead-Weight Tonnage	23.30%	44.86%	16.73%	8.22%	6.89%	9.28	8.87
	Average vessel size (dead-weight tonnage)	84714	78169	65767	67246	50973		
Container Ships	Percentage of total ships	15.60%	20.39%	32.79%	14.67%	16.55%	12.72	12.29
	Percentage of Dead-Weight Tonnage	24.41%	29.14%	28.19%	11.74%	6.53%	9.91	9.43
	Average vessel size (dead-weight tonnage)	80070	73137	43993	40934	20186		
General Cargo Ships	Percentage of total ships	4.64%	12.34%	15.67%	7.99%	59.36%	26.93	26.3
	Percentage of Dead-Weight Tonnage	8.52%	23.16%	19.76%	9.88%	38.69%	19.46	18.89
	Average vessel size (dead-weight tonnage)	79.33	8029	5455	5902	2772		
Oil Tankers	Percentage of total ships	14.45%	18.95%	20.19%	11.11%	35.32%	19.12	18.77
	Percentage of Dead-Weight Tonnage	24.73%	24.99%	26.57%	17.52%	6.20%	10.38	10.11
	Average vessel size (dead-weight tonnage)	93311	72952	71391	86251	9924		
Other	Percentage of total ships	11.21%	18.05%	15.53%	8.28%	46.93%	23.18	22.7
	Percentage of Dead-Weight Tonnage	21.56%	16.94%	22.22%	10.57%	28.71%	15.59	15.42
	Average vessel size (dead-weight tonnage)	11613	6267	8682	8034	4304		
All Ships	Percentage of total ships	11.64%	20.11%	17.42%	8.98%	41.85%	21.29	20.83
	Percentage of Dead-Weight Tonnage	23.14%	33.04%	21.85%	11.72%	10.25%	10.76	10.43
	Average vessel size (dead-weight tonnage)	47901	40986	30290	32742	6661		

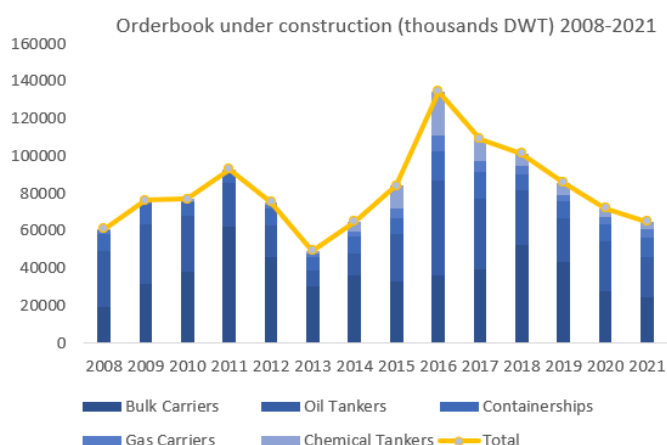
Source: Review of Maritime Transport 2020 & Author Analysis

## Appendix 17: Newbuilding Thousands DWT orders by category of vessels, 2008-2021

Newbuilding Orders (thousands DWT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Bulk Carriers	295023	273745	251142	195277	123933	132162	158932	121979	81712	81121	101193	85280	61644	65496
Bulk Carriers Yoy		-7.21%	-8.26%	-22.24%	-36.54%	6.64%	20.26%	-23.25%	-33.01%	-0.72%	24.74%	-15.73%	-27.72%	6.25%
Oil Tankers	166455	132655	129961	80212	52933	47823	64416	96928	76762	73723	67914	56421	62173	62031
Oil Tankers Yoy		-20.31%	-2.03%	-38.28%	-34.01%	-9.65%	34.70%	50.47%	-20.80%	-3.96%	-7.88%	-16.92%	10.20%	-0.23%
Containerships	74756	60144	47523	52860	42009	43660	37436	44461	36674	29735	28507	27125	23966	45047
Containerships Yoy		-19.55%	-20.98%	11.23%	-20.53%	3.93%	-14.26%	18.77%	-17.51%	-18.92%	-4.13%	-4.85%	-11.65%	87.96%
Gas Carriers	10720	5537	3917	5279	7912	13330	19518	19124	13257	10474	11975	12303	13822	18528
Gas Carriers Yoy		-48.35%	-29.26%	34.79%	49.87%	68.48%	46.42%	-2.02%	-30.68%	-21.00%	14.33%	2.74%	12.35%	34.05%
Chemical Tankers	5480	5493	7503	7740	12407	24294	36260	48607	41256	25898	16134	23668	13830	13756
Chemical Tankers Yoy		0.24%	36.58%	3.16%	60.31%	95.80%	49.25%	34.05%	-15.12%	-37.23%	-37.70%	46.70%	-41.57%	-0.54%
Total	552433	477574	440045	341367	239194	261268	316562	331099	249662	220951	225722	204797	175435	204858
TOTAL DWT IN orderbook	55.75%	44.64%	37.14%	26.32%	17.25%	17.97%	20.96%	21.11%	15.44%	13.18%	13.12%	11.39%	9.42%	10.85%
TOTAL YOY DWT NEWBUILDING ORDERS		-13.55%	-7.86%	-22.42%	-29.93%	9.23%	21.16%	4.59%	-24.60%	-11.50%	2.16%	-9.27%	-14.34%	16.77%

Source: Bloomberg data (August 2021) & Author Analysis

## Appendix 18: Orderbook under construction (thousands DWT) 2008-2021



Source: Bloomberg data (August 2021) & Author Analysis

## Appendix 19: Orderbook Under Construction (Thousands DWT) 2008-2021

Orderbook under construction (thousands DWT)	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>Bulk Carriers</b>	19487	31514	37903	62386	45769	30616	36309	33151	35985	39117	52119	43044	27906	24673
<i>Bulk Carriers Yoy</i>		61.72%	20.27%	64.59%	-26.64%	-33.11%	18.59%	-8.70%	8.55%	8.70%	33.24%	-17.41%	-35.17%	-11.59%
<b>Oil Tankers</b>	29673	31884	30177	23069	17397	7962	11891	25471	50775	38332	29772	23573	26227	21022
<i>Oil Tankers Yoy</i>		7.45%	-5.35%	-23.55%	-24.59%	-54.23%	49.35%	114.20%	99.34%	-24.51%	-22.33%	-20.82%	11.26%	-19.84%
<b>Containerships</b>	9129	10847	7180	5904	8849	7666	8819	8190	15678	14107	8577	9014	9109	10454
<i>Containerships Yoy</i>		18.82%	-33.81%	-17.78%	49.89%	-13.36%	15.04%	-7.13%	91.42%	-10.02%	-39.20%	5.10%	1.05%	14.77%
<b>Gas Carriers</b>	2090	1113	725	825	1699	1529	2639	5076	8761	5814	4175	3774	4348	4614
<i>Gas Carriers Yoy</i>		-46.76%	-34.87%	13.77%	106.00%	-9.98%	72.59%	92.34%	72.58%	-33.63%	-28.20%	-9.59%	15.20%	6.12%
<b>Chemical Tankers</b>	673	874	1023	911	1677	1675	5357	12410	23319	11823	6766	6312	4610	4127
<i>Chemical Tankers Yoy</i>		29.85%	17.07%	-11.00%	84.14%	-0.07%	219.71%	131.69%	87.90%	-49.30%	-42.78%	-6.71%	-26.96%	-10.48%
<b>Total</b>	61052	76231	77008	93094	75390	49449	65015	84299	134517	109193	101408	85717	72199	64889
<i>TOTAL ordered under construction</i>	11.05%	15.96%	17.50%	27.27%	31.52%	18.93%	20.54%	25.46%	53.88%	49.42%	44.93%	41.85%	41.15%	31.68%
<i>TOTAL YOY DWT ordered under construction</i>		24.86%	1.02%	20.89%	-19.02%	-34.41%	31.48%	29.66%	59.57%	-18.83%	-7.13%	-15.47%	-15.77%	-10.13%

Source: Bloomberg data (August 2021) & Author Analysis

## Appendix 20: Income Statement

Income Statement	2017									CAGR	
	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	Historical Period	Forecasted Period
<b>Amounts in USD Millions</b>											
<b>Revenue</b>	1,808.6	2,451.4	2,583.9	2,597.8	2,720.6	2,754.8	2,700.8	2,676.0	2,701.4	1.95%	0.78%
Other operating income	11.1	3.1	16.3	8.7	8.3	8.1	8.4	8.5	8.6	-7.72%	0.86%
Vessel operating costs	-1,702.9	-2,322.2	-2,305.2	-2,170.9	-2,232.7	-2,305.1	-2,210.8	-2,175.4	-2,189.2	8.43%	-0.49%
<i>% Vessel Operating Costs</i>	94.16%	94.73%	89.21%	83.57%	82.07%	83.67%	81.86%	81.29%	81.04%	55.08%	1.21%
<b>Contribution Margin</b>	116.8	132.3	295.0	435.6	496.2	457.9	498.4	509.0	520.7		
<i>% Growth</i>	6.46%	5.40%	11.42%	16.77%	18.24%	16.62%	18.45%	19.02%	19.28%		
Other external costs	-13.2										
Staff costs, onshore employees	-35.5										
<b>Overhead and administration costs (12+13)</b>	-48.7	-59.8	-77.5	-93.1	-91.3	-96.9	-94.7	-96.1	-98.0	24.12%	1.79%
<i>% of revenues</i>	2.69%	2.44%	3.00%	3.58%	3.35%	3.52%	3.51%	3.59%	3.63%	71.34%	1.08%
<b>Earnings before depreciation, etc. (EBITDA)</b>	68.1	72.5	217.5	342.5	404.9	361.0	403.6	413.0	422.8		
<i>EBITDA Margin (%)</i>	3.77%	2.96%	8.42%	13.18%	14.88%	13.10%	14.94%	15.43%	15.65%		
Profits and loss from the sale of vessels, etc.	0.9	8.8	-3.6	-18.2	-2.4	-6.5	-2.1	-12.9	-3.4	-172.75%	8.7%
Depreciation, amortisation and impairment losses	-42.2	-44.3	-156.9	-201.9	-196.6	-215.3	-220.7	-231.2	-237.7	68.46%	4.9%
Income/ Loss from Investments in joint ventures	-3.4	2.4	-0.2	-3.0	-1.1	-0.5	-1.2	-1.4	-1.0	-4.49%	-0.6%
<b>Profit from operations before write-downs</b>	23.3	39.4	56.8	119.4	204.8	138.7	179.7	167.4	180.7	72.37%	-3.09%
Write-downs on vessels and newbuildings	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
<b>Profit/Loss from operations (EBIT)</b>	23.3	39.4	56.8	119.4	204.8	138.7	179.7	167.4	180.7	72.37%	-3.09%
Fair value adjustment of certain hedging instruments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Financial income	14.0	9.0	5.1	3.5	2.2	1.4	0.9	0.6	0.4	-36.95%	-36.2%
Financial expenses (Interest expense)	-14.9	-15.9	-37.8	-30.2	-34.0	-32.1	-33.1	-32.6	-32.8	26.60%	-0.9%
<b>Profit/Loss before Tax</b>	22.4	32.5	24.1	92.7	173.0	108.0	147.5	135.4	148.2	60.56%	-3.80%
Tax for the year	2.2	-3.7	-4.9	-6.7	-15.7	-10.1	-17.8	-16.5	-14.0	-45.68%	-2.8%
<b>Profit/Loss For the Year (Net Earnings)</b>	24.6	28.8	19.2	86.0	157.3	97.9	129.7	118.9	134.2	51.84%	-3.90%
Attributable to:											
<b>Shareholders of NORDEN</b>	24.6	28.8	19.2	86.0	157.3	97.9	129.7	118.9	134.2	51.84%	-3.90%
<b>Earnings per share (EPS), USD</b>											
Basic earnings per share	0.6	0.7	0.5	2.22	2.7	5.1	5.2	5.3	5.7	53.82%	20.16%
Diluted earnings per share	0.6	0.7	0.5	2.22	2.75	5.09	5.19	5.30	5.73	53.82%	20.16%
<b>Adjusted result for the year</b>	28.4	20.0	22.8	105.7	159.8	104.4	131.8	131.8	137.6	54.97%	-3.67%

Units: Millions of \$

Source: Company annual reports data & Author Estimates

Source: Company Annual Reports data & Author Estimates

## Appendix 21: Balance Sheet

Balance sheet	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	CAGR		
										Historical Period	Forecast Period	
<b>Amounts in USD Millions</b>												
<b>ASSETS</b>												
Vessels	691.7	795.6	803.4	767.4	828.8	882.7	900.3	886.8	877.9		3.52%	1.5%
Right-of-use assets	0.0	0.0	271.0	298.7	319.6	335.6	352.4	370.0	388.5			
Property and Equipment	49.6	49.5	49.0	48.6	48.0	47.4	47.0	46.5	46.0		-0.66%	-1.1%
Prepayments on vessels and newbuildings	33.9	24.9	16.1	15.5	15.3	21.3	11.1	9.6	10.2		-22.97%	-9.8%
<b>Tangible Assets</b>	<b>775.2</b>	<b>870.0</b>	<b>1,139.5</b>	<b>1,130.2</b>	<b>1,211.7</b>	<b>1,286.9</b>	<b>1,310.8</b>	<b>1,312.8</b>	<b>1,322.6</b>		<b>13.39%</b>	<b>2.2%</b>
Investments in Joint Ventures	11.3	11.8	11.9	11.5	11.6	11.5	11.4	11.3	11.2		0.58%	-0.7%
Receivables from subleasing	0.0	0.0	19.2	13	18.0	18.9	19.8	20.8	21.9			
<b>Total Financial Assets</b>	<b>11.3</b>	<b>11.8</b>	<b>31.1</b>	<b>24.5</b>	<b>29.6</b>	<b>30.4</b>	<b>31.2</b>	<b>32.1</b>	<b>33.1</b>		<b>29.42%</b>	<b>2.9%</b>
<b>Non- current Assets</b>	<b>786.5</b>	<b>881.8</b>	<b>1,170.6</b>	<b>1,154.7</b>	<b>1,241.3</b>	<b>1,317.3</b>	<b>1,342.0</b>	<b>1,345.0</b>	<b>1,355.7</b>		<b>13.66%</b>	<b>2.2%</b>
Inventories	67.7	87.2	80.5	65.8	89.6	90.7	89.0	88.1	89.0		-0.93%	-0.2%
Receivables from subleasing	0.0	0.0	11.3	13.7	13.8	14.5	15.3	16.0	16.8			
Freight Receivables	124.0	172.6	164.0	144.5	151.3	153.2	150.2	148.8	150.3		5.23%	-0.2%
Receivables from joint ventures	0.0	12.4	5.8	9.5	9.2	9.2	9.3	9.3	9.3			
Tax Receivables	0.0	0.0	0.9	0	0	0	0	0	0			
Other receivables	33.9	28.4	31.6	17.7	18.5	18.8	18.4	18.2	18.4		-19.48%	0%
Prepayments	79.0	93.4	68.4	70.2	70.2	69.2	64.8	63.9	62.5		-3.87%	-2.9%
Marketable Securities	8.1	4.2	0.0	0.0	0	0	0	0	0			
<b>Cash and cash Equivalents</b>	<b>211.4</b>	<b>184.4</b>	<b>209.3</b>	<b>331.6</b>	<b>368.3</b>	<b>315.5</b>	<b>371.3</b>	<b>423.8</b>	<b>488.0</b>		<b>16.19%</b>	<b>7%</b>
Tangible assets (vessels) held for sale	524.1	582.6	571.8	653.0	721.1	671.2	718.3	768.2	834.2		7.61%	3.7%
	15.9	0.0	0.0	17.1	0	0	0	0	0		2.41%	
<b>Total Current Assets</b>	<b>540.0</b>	<b>582.6</b>	<b>571.8</b>	<b>670.1</b>	<b>721.1</b>	<b>671.2</b>	<b>718.3</b>	<b>768.2</b>	<b>834.2</b>		<b>7.46%</b>	<b>3.7%</b>
<b>Total Assets</b>	<b>1,326.5</b>	<b>1,464.4</b>	<b>1,742.4</b>	<b>1,824.8</b>	<b>1,962.4</b>	<b>1,988.5</b>	<b>2,060.2</b>	<b>2,113.2</b>	<b>2,189.9</b>		<b>11.22%</b>	<b>2.8%</b>
<b>Equity and Liabilities</b>												
Share capital	6.7	6.7	6.7	6.5	31.5	51.0	51.0	51.0	51.0		-1.03%	12.8%
Reserves for hedges	7.0	-24.5	8.9	4.1	4.9	6.2	6.0	5.3	5.6		-16.16%	3.6%
Retained Earnings	820.7	844.6	843.4	891.9	968.1	958.7	1031.0	1077.4	1139.1		2.81%	4.1%
<b>EQUITY</b>	<b>834.4</b>	<b>826.8</b>	<b>859.0</b>	<b>902.5</b>	<b>1,004.5</b>	<b>1,015.8</b>	<b>1,087.9</b>	<b>1,133.6</b>	<b>1,195.6</b>		<b>2.65%</b>	<b>4.5%</b>
Loans	195.4	206.5	268.4	282.4	268.3	254.9	242.1	230.0	218.5		13.05%	-5.0%
Lease Liabilities	0.0	0.0	198.7	213.3	228.2	239.6	251.6	264.2	277.4			
Provisions	42.5	21.3	0.0	0.0	0	0	0	0	0			
Prepayments received on vessels for resale	0.0	0.0	0.0	0.0	0	0	0	0	0			
<b>Non- current liabilities</b>	<b>238.0</b>	<b>227.8</b>	<b>467.1</b>	<b>495.7</b>	<b>496.5</b>	<b>494.5</b>	<b>493.7</b>	<b>494.2</b>	<b>495.9</b>		<b>27.71%</b>	<b>0.0%</b>
Loans	26.3	125.5	34.9	37.6	39.5	41.5	43.5	45.7	48.0		12.64%	5.0%
Lease Liabilities	0.0	0.0	131.8	142.1	152.0	159.6	167.6	176.0	184.8			
Provisions	36.1	19.0	0.0	0.0	0	0.0	0.0	0.0	0			
Trade Payables (Accounts Payable)	62.6	118.8	117.6	131.2	134.9	139.3	133.6	131.5	132.3		28.00%	-0.5%
Debt to Joint Ventures	1.9	0.0	0.0	0.0	0	0.0	0.0	0.0	0			
Current Tax Liabilities	0.0	2.7	0.0	1.4	1.4	1.4	1.4	1.4	1.4			
Other payables	74.6	54.9	58.5	56.8	58.4	60.3	57.8	56.9	57.3		-8.67%	-0.5%
Deferred income	51.4	88.9	73.5	57.5	75.1	76.0	74.5	73.8	74.5		3.84%	-0.2%
Liabilities relating to tangible assets held for sale	252.7	409.8	416.3	426.6	461.4	478.2	478.5	485.4	498.3		19.06%	1.9%
	1.3	0.0	0.0	0.0	0	0	0	0	0			
<b>Current liabilities</b>	<b>254.1</b>	<b>409.8</b>	<b>416.3</b>	<b>426.6</b>	<b>461.4</b>	<b>478.2</b>	<b>478.5</b>	<b>485.4</b>	<b>498.3</b>		<b>18.85%</b>	<b>1.9%</b>
<b>Total Liabilities</b>	<b>492.1</b>	<b>637.6</b>	<b>883.4</b>	<b>922.3</b>	<b>957.9</b>	<b>972.7</b>	<b>972.3</b>	<b>979.6</b>	<b>994.3</b>		<b>23.30%</b>	<b>0.9%</b>
<b>Equity and Liabilities</b>	<b>1,326.5</b>	<b>1,464.4</b>	<b>1,742.4</b>	<b>1,824.8</b>	<b>1,962.4</b>	<b>1,988.5</b>	<b>2,060.2</b>	<b>2,113.2</b>	<b>2,189.9</b>		<b>11.22%</b>	<b>2.8%</b>

Source: Company annual reports data & Author Estimates

Source: Company Annual Reports data & Author Estimates

## Appendix 22: Cash Flow Statement

Cash Flow Statement										CAGR	
	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	Historical Period	Forecasted Period
Amounts in USD Millions											
<b>Operating Activities</b>											
<b>Profit/Loss for the year</b>	<b>24.6</b>	<b>28.8</b>	<b>19.2</b>	<b>86.0</b>	<b>157.3</b>	<b>97.9</b>	<b>129.7</b>	<b>118.9</b>	<b>134.2</b>	<b>36.79%</b>	<b>-3.13%</b>
Reversal of items from the income statement	-36.3	16.9	206.7	259.7	243.5	263.7	267.3	288.5	285.6	-92.69%	3.2%
Change in Net working capital	25.0	-61.2	50.5	37.3	-9.8	9.0	8.2	7.9	8.7	10.52%	-197.6%
Instalments on subleased receivables	0.0	0.0	11.7	17.4	-5.1	-10.3	-9.4	-9.8	-9.5		
Company tax paid for the year (Income tax, paid)	0.0	-0.3	-7.6	-4.4	-15.7	-10.1	-17.8	-16.5	-14.0	144.78%	-2.2%
<b>Cash Flows from operating activities (1)</b>	<b>6.3</b>	<b>-15.8</b>	<b>280.5</b>	<b>396.0</b>	<b>370.3</b>	<b>350.2</b>	<b>378.0</b>	<b>389.1</b>	<b>405.0</b>	<b>181.95%</b>	<b>1.8%</b>
<b>Investing Activities</b>											
Investments in vessels, vessels held for sale and other tangible assets	-93.0	-202.7	-102.7	-27.1	-54.0	-63.0	-28.0	-28.2	-28.4	-26.52%	-12.1%
Investments in joint ventures	0.0	-1.1	-1.0	0	0	-1	-1	0	0		
Prepayments on newbuildings	-13.6	-1.3	-43.2	-71.9	-57.6	-64.7	-61.1	-62.9	-62.0	51.76%	1.5%
Proceeds from the sale of vessels and newbuildings	47.8	88.4	98.3	52.0	75.2	63.6	69.4	66.5	67.9	2.12%	-2.0%
Sale of securities	14.0	4.0	4.9	0.0	0	0	0	0	0		
Change in cash and cash equivalents with rate agreements of	48.7	26.6	-47.2	1.9	7.5	-2.8	-10.1	-0.9	-1.6	-55.57%	-173.2%
<b>Cash Flows from Investing Activities (2)</b>	<b>-0.2</b>	<b>-78.4</b>	<b>-90.9</b>	<b>-45.1</b>	<b>-28.9</b>	<b>-67.9</b>	<b>-30.9</b>	<b>-25.5</b>	<b>-24.1</b>	<b>303.58%</b>	<b>-3.6%</b>
<b>Financing Activities</b>											
Dividend paid to shareholders	0.0	0.0	-12.0	-14.6	-56.1	-87.9	-57.4	-72.5	-72.5		
Acquisition of treasury shares	0.0	-5.9	-9.4	-24	-25	-19.5	0.0	0.0	0.0		
Sale of treasury shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Net distribution to shareholders	0.0	-5.9	-21.4	-38.6	-81.1	-107.3	-57.4	-72.5	-72.5		
Incurrance of new loans (Proceeds from loans)	30.0	138.7	219.1	132.0	125.4	119.1	113.2	107.5	102.1	44.83%	-4.0%
Instalments on/repayment of loans	-27.0	-28.5	-245.9	-117.1	-140.5	-133.5	-126.8	-120.5	-114.5	44.30%	-4.0%
Loan Financing	3.0	110.2	-26.8	14.9	-15.1	-14.4	-13.6	-13.0	-12.3	49.36%	-4.0%
Instalments on lease liabilities		0.0	-124.8	-175.3	-178.8	-182.4	-188.8	-194.4	-200.3		
Interest Received		6.3	1.5	1.0	2.2	1.4	0.9	0.6	0.4		
Interest Paid		-15.2	-39.7	-30.2	-34.0	-32.1	-33.1	-32.6	-32.8		
<b>Cash Flows from Financing Activities (3)</b>	<b>3.0</b>	<b>95.4</b>	<b>-211.2</b>	<b>-228.2</b>	<b>-306.8</b>	<b>-334.8</b>	<b>-292.0</b>	<b>-311.9</b>	<b>-317.5</b>	<b>-323.99%</b>	<b>0.7%</b>
<b>Change in cash and cash Equivalents for the Year</b>	<b>9.1</b>	<b>1.2</b>	<b>-21.6</b>	<b>122.7</b>	<b>34.5</b>	<b>-52.5</b>	<b>55.1</b>	<b>51.7</b>	<b>63.4</b>	<b>91.68%</b>	<b>12.9%</b>
<b>Liquidity at 1 January</b>	<b>100.7</b>	<b>115.6</b>	<b>115.2</b>	<b>92.9</b>	<b>217.1</b>	<b>252.9</b>	<b>200.5</b>	<b>256.1</b>	<b>308.7</b>	<b>-1.99%</b>	<b>7.3%</b>
Exchange rate adjustments	5.8	-1.6	-0.7	1.5	1.3	0.1	0.5	0.9	0.7	-28.83%	-11.3%
Change in liquidity for the year	9.1	1.2	-21.6	122.7	34.5	-52.5	55.1	51.7	63.4	91.68%	12.9%
<b>Liquidity at 31 December</b>	<b>115.6</b>	<b>115.2</b>	<b>92.9</b>	<b>217.1</b>	<b>252.9</b>	<b>200.5</b>	<b>256.1</b>	<b>308.7</b>	<b>372.8</b>	<b>17.07%</b>	<b>8.1%</b>
Change in cash and cash equivalents with rate agreements of	95.8	69.2	116.4	114.5	115.5	115.0	115.2	115.1	115.2	4.55%	-0.05%
<b>Cash and cash equivalents at 31 December according to the</b>	<b>211.4</b>	<b>184.4</b>	<b>209.3</b>	<b>331.6</b>	<b>368.3</b>	<b>315.5</b>	<b>371.3</b>	<b>423.8</b>	<b>488.0</b>	<b>11.91%</b>	<b>5.79%</b>

Source: Company annual reports data & Author Estimates

Source: Company Annual Reports data & Author Estimates

## Appendix 23: Common-Size Income Statement

Income Statement									
	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F
Amounts in USD Millions									
<b>Revenue</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%
Other operating income	0.61%	0.13%	0.63%	0.33%	0.31%	0.30%	0.31%	0.32%	0.32%
Vessel operating costs	94.16%	94.73%	89.21%	83.57%	82.07%	83.67%	81.86%	81.29%	81.04%
<b>Contribution Margin</b>	<b>6.46%</b>	<b>5.40%</b>	<b>11.42%</b>	<b>16.77%</b>	<b>18.24%</b>	<b>16.62%</b>	<b>18.45%</b>	<b>19.02%</b>	<b>19.28%</b>
Other external costs	0.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Staff costs, onshore employees	1.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Overhead and administration costs (9+10)</b>	<b>2.69%</b>	<b>2.44%</b>	<b>3.00%</b>	<b>3.58%</b>	<b>3.35%</b>	<b>3.52%</b>	<b>3.51%</b>	<b>3.59%</b>	<b>3.63%</b>
<b>Earnings before depreciation, etc. (EBITDA)</b>	<b>3.77%</b>	<b>2.96%</b>	<b>8.42%</b>	<b>13.18%</b>	<b>14.88%</b>	<b>13.10%</b>	<b>14.94%</b>	<b>15.43%</b>	<b>15.65%</b>
Profits and loss from the sale of vessels, etc.	0.05%	0.36%	-0.14%	-0.70%	-0.09%	-0.24%	-0.08%	-0.48%	-0.13%
Depreciation, amortisation and impairment losses	-2.34%	-1.81%	-6.07%	-7.77%	-7.23%	-7.82%	-8.17%	-8.64%	-8.80%
Income/ Loss from Investments in joint ventures	-0.19%	0.10%	-0.01%	-0.12%	-0.04%	-0.02%	-0.04%	-0.05%	-0.04%
<b>Profit from operations before write-downs</b>	<b>1.29%</b>	<b>1.61%</b>	<b>2.20%</b>	<b>4.60%</b>	<b>7.53%</b>	<b>5.03%</b>	<b>6.65%</b>	<b>6.26%</b>	<b>6.69%</b>
Write-downs on vessels and newbuildings	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Profit/Loss from operations (EBIT)</b>	<b>1.29%</b>	<b>1.61%</b>	<b>2.20%</b>	<b>4.60%</b>	<b>7.53%</b>	<b>5.03%</b>	<b>6.65%</b>	<b>6.26%</b>	<b>6.69%</b>
Fair value adjustment of certain hedging instruments	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Financial income	0.77%	0.37%	0.20%	0.13%	0.08%	0.05%	0.03%	0.02%	0.01%
Financial expenses	-0.82%	-0.65%	-1.46%	-1.16%	-1.25%	-1.17%	-1.22%	-1.22%	-1.21%
<b>Profit/Loss before Tax</b>	<b>1.24%</b>	<b>1.33%</b>	<b>0.93%</b>	<b>3.57%</b>	<b>6.36%</b>	<b>3.92%</b>	<b>5.46%</b>	<b>5.06%</b>	<b>5.49%</b>
Tax for the year	0.12%	-0.15%	-0.19%	-0.26%	-0.58%	-0.37%	-0.66%	-0.62%	-0.52%
<b>Profit/Loss For the Year (Net Earnings)</b>	<b>1.36%</b>	<b>1.17%</b>	<b>0.74%</b>	<b>3.31%</b>	<b>5.78%</b>	<b>3.55%</b>	<b>4.80%</b>	<b>4.44%</b>	<b>4.97%</b>
Attributable to:									
<b>Shareholders of NORDEN</b>	<b>1.36%</b>	<b>1.17%</b>	<b>0.74%</b>	<b>3.31%</b>	<b>5.78%</b>	<b>3.55%</b>	<b>4.80%</b>	<b>4.44%</b>	<b>4.97%</b>
<b>Adjusted result for the year</b>	<b>1.57%</b>	<b>0.82%</b>	<b>0.88%</b>	<b>4.07%</b>	<b>5.87%</b>	<b>3.79%</b>	<b>4.88%</b>	<b>4.93%</b>	<b>5.09%</b>

Source: Company annual reports data & Author Estimates

Source: Company Annual Reports data & Author Estimates

## Appendix 24: Common-Size Balance Sheet

Common-Size Balance sheet	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F
<b>Amounts in USD Millions</b>									
<b>ASSETS</b>									
Vessels	52.15%	54.33%	46.11%	42.05%	42.23%	44.39%	43.70%	41.97%	40.09%
Right-of-use assets	0.00%	0.00%	15.55%	16.37%	16.29%	16.88%	17.10%	17.51%	17.74%
Property and Equipment	3.74%	3.38%	2.81%	2.66%	2.44%	2.38%	2.28%	2.20%	2.10%
Prepayments on vessels and newbuildings	2.56%	1.70%	0.92%	0.85%	0.78%	1.07%	0.54%	0.45%	0.46%
<b>Tangible Assets</b>	<b>58.44%</b>	<b>59.41%</b>	<b>65.40%</b>	<b>61.94%</b>	<b>61.75%</b>	<b>64.72%</b>	<b>63.62%</b>	<b>62.13%</b>	<b>60.39%</b>
Investments in Joint Ventures	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Receivables from subleasing	0.85%	0.81%	0.68%	0.63%	0.59%	0.58%	0.55%	0.54%	0.51%
Receivables from subleasing	0.00%	0.00%	1.10%	0.71%	0.92%	0.95%	0.96%	0.99%	1.00%
<b>Total Financial assets</b>	<b>0.85%</b>	<b>0.81%</b>	<b>1.78%</b>	<b>1.34%</b>	<b>1.51%</b>	<b>1.53%</b>	<b>1.51%</b>	<b>1.52%</b>	<b>1.51%</b>
<b>Non- current Assets</b>	<b>59.29%</b>	<b>60.22%</b>	<b>67.18%</b>	<b>63.28%</b>	<b>63.25%</b>	<b>66.25%</b>	<b>65.14%</b>	<b>63.65%</b>	<b>61.91%</b>
Inventories	5.10%	5.95%	4.62%	3.61%	4.57%	4.56%	4.32%	4.17%	4.06%
Receivables from subleasing	0.00%	0.00%	0.65%	0.75%	0.71%	0.73%	0.74%	0.76%	0.77%
Freight Receivables	9.35%	11.79%	9.41%	7.92%	7.71%	7.71%	7.29%	7.04%	6.86%
Receivables from joint ventures	0.00%	0.85%	0.33%	0.52%	0.47%	0.46%	0.45%	0.44%	0.42%
Tax Receivables	0.00%	0.00%	0.05%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Other receivables	2.56%	1.94%	1.81%	0.97%	0.94%	0.94%	0.89%	0.86%	0.84%
Prepayments	5.96%	6.38%	3.93%	3.85%	3.58%	3.48%	3.14%	3.03%	2.85%
Marketable Securities	0.61%	0.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Cash and cash Equivalents</b>	<b>15.94%</b>	<b>12.59%</b>	<b>12.01%</b>	<b>18.17%</b>	<b>18.77%</b>	<b>15.86%</b>	<b>18.02%</b>	<b>20.05%</b>	<b>22.28%</b>
Tangible assets (vessels) held for sale	39.51%	39.78%	32.82%	35.78%	36.75%	33.75%	34.86%	36.35%	38.09%
Tangible assets (vessels) held for sale	1.20%	0.00%	0.00%	0.94%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total Current Assets</b>	<b>40.71%</b>	<b>39.78%</b>	<b>32.82%</b>	<b>36.72%</b>	<b>36.75%</b>	<b>33.75%</b>	<b>34.86%</b>	<b>36.35%</b>	<b>38.09%</b>
<b>Total Assets</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>Equity and Liabilities</b>									
Share capital	0.51%	0.46%	0.38%	0.36%	1.61%	2.56%	2.47%	2.41%	2.33%
Reserves	0.52%	-1.67%	0.51%	0.22%	0.25%	0.31%	0.29%	0.25%	0.26%
Retained Earnings	61.87%	57.68%	48.40%	48.88%	49.33%	48.21%	50.04%	50.98%	52.02%
<b>EQUITY</b>	<b>62.90%</b>	<b>56.46%</b>	<b>49.30%</b>	<b>49.46%</b>	<b>51.19%</b>	<b>51.09%</b>	<b>52.81%</b>	<b>53.65%</b>	<b>54.60%</b>
Loans	14.73%	14.10%	15.40%	15.48%	13.67%	12.82%	11.75%	10.88%	9.98%
Lease Liabilities	0.00%	0.00%	11.40%	11.69%	11.63%	12.05%	12.21%	12.50%	12.67%
Provisions	3.21%	1.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Prepayments received on vessels for resale	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Non- current liabilities</b>	<b>17.94%</b>	<b>15.55%</b>	<b>26.81%</b>	<b>27.16%</b>	<b>25.30%</b>	<b>24.87%</b>	<b>23.97%</b>	<b>23.39%</b>	<b>22.65%</b>
Loans	1.98%	8.57%	2.00%	2.06%	2.01%	2.08%	2.11%	2.16%	2.19%
Lease Liabilities	0.00%	0.00%	7.56%	7.79%	7.75%	8.03%	8.14%	8.33%	8.44%
Provisions	2.72%	1.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Trade Payables (Accounts Payable)	4.72%	8.11%	6.75%	7.19%	6.88%	7.01%	6.49%	6.22%	6.04%
Debt to Join Ventures	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Current Tax Liabilities	0.00%	0.18%	0.00%	0.08%	0.07%	0.07%	0.07%	0.07%	0.06%
Other payables	5.62%	3.75%	3.36%	3.11%	2.98%	3.03%	2.81%	2.69%	2.62%
Deferred income	3.87%	6.07%	4.22%	3.15%	3.83%	3.82%	3.62%	3.49%	3.40%
Liabilities relating to tangible assets held for sale	19.05%	27.98%	23.89%	23.38%	23.51%	24.05%	23.23%	22.97%	22.76%
Liabilities relating to tangible assets held for sale	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Current liabilities</b>	<b>19.15%</b>	<b>27.98%</b>	<b>23.89%</b>	<b>23.38%</b>	<b>23.51%</b>	<b>24.05%</b>	<b>23.23%</b>	<b>22.97%</b>	<b>22.76%</b>
<b>Total Liabilities</b>	<b>37.09%</b>	<b>43.54%</b>	<b>50.70%</b>	<b>50.54%</b>	<b>48.81%</b>	<b>48.92%</b>	<b>47.19%</b>	<b>46.36%</b>	<b>45.40%</b>
<b>Equity and Liabilities</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

Source: Company annual reports data & Author Estimates

**Source:** Company Annual Reports data & Author Estimates

## Appendix 25: Key Financial Ratios

Key Financial Ratios	Units	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F
<b>Liquidity Ratios</b>										
Current Ratio	X	2.13	1.42	1.37	1.57	1.56	1.40	1.50	1.58	1.67
Quick Ratio	X	1.80	1.21	1.18	1.38	1.37	1.21	1.32	1.40	1.50
Cash Ratio	X	0.86	0.46	0.50	0.78	0.80	0.66	0.78	0.87	0.98
<b>Efficiency Ratios</b>										
Total Assets Turnover	X	1.38	1.76	1.61	1.46	1.44	1.39	1.33	1.28	1.26
Receivables Turnover	X	12.59	13.20	12.10	13.02	14.38	14.17	13.89	13.88	13.96
Collection Period (DSO)	Days	28.99	27.64	30.16	28.03	25.38	25.75	26.29	26.30	26.15
Payables Turnover	X	32.45	25.61	19.50	17.45	17.02	16.81	16.20	16.41	16.60
Payables Period (DPO)	Days	11.25	14.25	18.72	20.92	21.45	21.71	22.53	22.24	21.99
Inventory Turnover	X	30.48	29.99	27.49	29.68	33.93	25.56	24.61	24.57	24.72
Days in Inventory (DIO)	Days	11.98	12.17	13.28	12.30	10.76	14.28	14.83	14.86	14.77
Operating Cycle	Days	40.97	39.81	43.44	40.33	36.14	40.03	41.12	41.15	40.92
Cash Cycle	Days	29.72	25.56	24.72	19.41	14.69	18.32	18.59	18.92	18.93
Capex/Dep		2.20	4.58	0.65	0.13	0.27	0.29	0.13	0.12	0.12
Capex/Revenues		5.14%	8.27%	3.97%	1.04%	1.98%	2.29%	1.04%	1.05%	1.05%
NWC/Revenues		15.81%	7.05%	6.02%	9.37%	9.55%	7.01%	8.88%	10.57%	12.43%
<b>Profitability Ratios</b>										
Gross Profit Margin	%	3.15%	5.27%	10.79%	16.43%	17.93%	16.33%	18.14%	18.71%	18.96%
EBITDA Margin	%	3.77%	2.96%	8.42%	13.18%	14.88%	13.10%	14.94%	15.43%	15.65%
EBIT Margin	%	1.29%	1.61%	2.20%	4.60%	7.53%	5.03%	6.65%	6.26%	6.69%
Net Profit Margin	%	1.36%	1.17%	0.74%	3.31%	5.78%	3.55%	4.80%	4.44%	4.97%
ROA	%	1.87%	2.06%	1.20%	4.82%	8.62%	5.0%	6.4%	5.7%	6.2%
ROIC	%	2.93%	4.36%	5.04%	9.44%	14.91%	9.21%	11.62%	10.43%	10.89%
NOPAT	\$M	25.5	35.7	51.9	112.7	189.1	128.6	161.9	150.9	166.7
Invested Capital	\$M	836.7	970.2	1,283.5	1,246.3	1,501.0	1,510.3	1,581.7	1,627.8	1,691.5
ROE	%	3.00%	3.47%	2.28%	9.76%	16.50%	9.69%	12.33%	10.71%	11.52%
ROE -DuPont Approach	%	2.94%	3.48%	2.24%	9.53%	15.66%	9.64%	11.92%	10.49%	11.23%
NI/S	%	1.36%	1.17%	0.74%	3.31%	5.78%	3.55%	4.80%	4.44%	4.97%
S/A	%	136.34%	167.40%	148.30%	142.36%	138.64%	138.54%	131.09%	126.63%	123.36%
A/E	%	158.97%	177.12%	202.84%	202.19%	195.36%	195.75%	189.37%	186.41%	183.15%
Basic EPS	\$	0.61	0.71	0.48	2.22	2.75	5.09	5.19	5.30	5.73
Diluted EPS	\$	0.61	0.71	0.48	2.22	2.75	5.09	5.19	5.30	5.73
<b>Solvency Ratios</b>										
Total Debt Ratio	%	16.72%	22.67%	36.38%	37.01%	35.06%	34.98%	34.21%	33.88%	33.28%
Non-current Debt Ratio	%	14.73%	14.10%	26.81%	27.16%	25.30%	24.87%	23.97%	23.39%	22.65%
Debt to Equity Ratio	X	0.59	0.77	1.03	1.02	0.95	0.96	0.89	0.86	0.83
Equity Multiplier	X	1.59	1.77	2.03	2.02	1.95	1.96	1.89	1.86	1.83
Debt to EBITDA	X	3.26	4.58	2.91	1.97	1.70	1.93	1.75	1.73	1.72
Net Debt to EBITDA	X	0.15	2.04	1.95	1.00	0.79	1.05	0.83	0.71	0.57
Interest Coverage Ratio	X	1.57	2.48	1.50	3.95	6.02	4.32	5.44	5.14	5.51
Equity to Assets	%	62.90%	56.46%	49.30%	49.46%	51.19%	51.09%	52.81%	53.65%	54.60%
<b>Value Creation and Cash Flow Ratios</b>										
Economic Value Added (EVA)	\$M	25.5	35.7	51.9	112.7	87.8	26.7	56.3	42.8	55.2
Payout Ratio	%	0%	41.7%	60.0%	64.0%	53.1%	55.0%	55.0%	55.0%	55.0%

Source: Company Annual Reports & Author Estimates

*Source: Author Estimates*

## Appendix 26: Forecasting Assumptions Income Statement

Macroeconomic Assumptions	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	Assumptions/Source
<b>Denmark annual inflation rate yoy growth</b>					1.90%	1.40%	2.10%	2.20%	2.20%	IMF, June 2021. Denmark: IMF country Report NO. 21/112 pg 59
Global Trade volume growth	4.6%	2.9%	-0.1%	-5.3%	8.0%	4.0%	3.9%	3.8%	3.6%	WTO ( 31 MARCH 2021)
<b>World GDP real Growth</b>	3.80%	3.60%	2.80%	-3.30%	6.00%	4.40%	3.50%	3.40%	3.30%	IMF 2021
<b>Denmark Real GDP yoy growth</b>					2.60%	3.30%	1.90%	1.80%	1.80%	IMF, June 2021. Denmark: IMF country Report NO. 21/112 pg 159
<b>Global Demand Seaborne Trade Growth</b>	4.09%	2.83%	0.52%	-3.60%	4.70%					UNCTAD data, Danish Ship Finance for 2020 and Clarksons Research forecast 2021 ( Seaborne Trade Monitor,October 2020)
USD/DKK exchange rate	6.20	6.51	6.66	6.09	6.30					Bloomberg Data 31 August 2021
USD/GBP exchange rate	1.35	1.28	1.33	1.37	1.38					Bloomberg Data 31 August 2021
<b>Dry Bulk Market</b>										
<b>Fleet Development ( Million DWT)</b>	3%	3%	4%	5%	4%	2%	0%	-0.5%	-0.5%	Shipping Market Review MAY 2021, Danish Ship Finance
<b>World Seaborne Dry Bulk trade (Million Tonnes)</b>	4%	3%	0%	-2%	3%	2%	1.9%	1.8%	1.7%	Shipping Market Review MAY 2021, Danish Ship Finance
Dry Bulk Demand yoy growth	4%	3%	0%	-2%	3%	2%	1.9%	1.8%	1.7%	Shipping Market Review MAY 2021, Danish Ship Finance
Dry Bulk Supply yoy growth	3.0%	3.0%	4.0%	5.0%	4.0%	2.0%	0.0%	-0.5%	-0.5%	Shipping Market Review MAY 2021, Danish Ship Finance
<b>Product Tanker Market</b>										
<b>Fleet Development ( Million DWT)</b>	4.2%	1.7%	4.8%	2.5%	4.7%	1.1%	0.30%	-0.50%	-1.00%	Shipping Market Review MAY 2021, Danish Ship Finance
<b>World Seaborne Product Tanker trade (Million Tonnes)</b>	1.3%	1.5%	-3.0%	-10.2%	7.1%	5.2%	2.2%	1.2%	0.7%	Shipping Market Review MAY 2021, Danish Ship Finance
Product Tanker Demand yoy growth	1.3%	1.5%	-3.0%	-10.2%	7.1%	5.2%	2.2%	1.2%	0.7%	Shipping Market Review MAY 2021, Danish Ship Finance
Product Tanker Supply yoy growth	4.2%	1.7%	4.8%	2.5%	4.7%	1.1%	0.30%	-0.50%	-1.00%	Shipping Market Review MAY 2021, Danish Ship Finance
<b>Revenues yoy Growth per segment</b>										
<b>Asset Management</b>										
Revenue-services rendered, external YoY					5%	3%	2%	2%	1%	See Revenues Forecast Appendix
Revenue-services rendered, internal YoY					2.14%	5.00%	3.57%	2.78%	1.68%	See Revenues Forecast Appendix
Revenue-sublease financial Income YoY					Constant 1.7 million					See Revenues Forecast Appendix
<b>Dry Operator</b>										
Revenues growth yoy					7.0%	2.0%	-3.0%	-1.5%	1.0%	See Revenues Forecast Appendix
<b>Tanker Operator</b>										
Revenues growth yoy					-5.00%	-2.60%	2.20%	1.20%	0.70%	See Revenues Forecast Appendix
Asset Management % total revenues +			14.9%	16.0%	16.0%	16.3%	17.1%	17.5%	17.5%	See Revenues Forecast Appendix
Eliminations, from asset maangement -			11.6%	11.8%	11.8%	12.1%	12.7%	13.0%	13.0%	See Revenues Forecast Appendix
Dry Operator % total revenues +			79.9%	77.6%	79.2%	79.8%	79.0%	78.5%	78.6%	See Revenues Forecast Appendix
Tanker Operator % total revenues +			16.8%	18.2%	16.5%	15.9%	16.6%	16.9%	16.9%	See Revenues Forecast Appendix

Other items Income Statement	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	Assumptions/Source
<b>Other Operating income YOY growth</b>					-4.50%	-2.10%	2.70%	1.70%	1.20%	YoY income growth, is the same as the tanker operator segment + additional 0.5% growth per year, since NPP pool is one of the hugest in the world, according to company expectations, will be a higher number of vessels allocated to the pool, which will result in a natural gain in market shares.
<i>vessel operating costs (% of revenues)</i>	94.16%	94.73%	89.21%	83.57%	82.07%	83.67%	81.86%	81.29%	81.04%	2021: 1.5% lower than 2020. Other years: Average of the three previous years- 1.5% per year.
<i>Overhead and Administrations costs % of Revenues</i>	2.69%	2.44%	3.00%	3.58%	3.35%	3.52%	3.51%	3.59%	3.63%	Average 2 previous year * Forecasted annual inflation rate Denmark, since the company pays its salaries in DKK
<b>Depreciation, amortisation and Impairments losses:</b>										Check auxillar table below
<i>Depreciation vessels % vessels</i>	5.84%	5.44%	5.55%	6.22%	5.76%	5.74%	5.82%	5.88%	5.80%	Average 4 previous years
<i>Depreciations right use of assets % use of assets</i>			41.14%	51.32%	46.23%	48.78%	47.51%	48.14%	47.82%	Average 2 previous years
<i>Depreciations PPE % Property and equipment</i>	3.76%	2.01%	1.63%	1.85%	2.31%	1.95%	1.94%	2.01%	2.05%	Average 4 previous years
<i>Income/ Loss from Investments in joint ventures</i>	-3.443	2.4	-0.2	-3	-1.1	-0.5	-1.2	-1.4	-1.0	Average 4 previous years
<i>Write-downs on vessels and newbuildings</i>	0	0	0	0	0	0	0	0	0	Non Material: Assumed as 0
<i>Fair value adjustment of certain hedging instruments</i>	0	0	0	0	0	0	0	0	0	Non Material: Assumed as 0
<i>Financial Income yoy growth</i>	95.48%	-35.55%	-43.33%	-31.37%	-36.75%	-37.15%	-35.09%	-36.33%	-36.19%	Average 3 previous years
<i>Financial expenses (Interest Expenses)</i>	-14.9	-15.9	-37.8	-30.2	-34.0	-32.1	-33.1	-32.6	-32.8	Average 2 previous years
<i>Interestes Expenses % of total Debt</i>	6.7%	4.8%	6.0%	4.5%	4.9%	4.6%	4.7%	4.5%	4.5%	
<i>Total Debt</i>	221.7	332.0	633.8	675.4	688.0	695.6	704.9	715.9	728.7	Total Debt = ST Loans + LT Loans + ST Lease Liabilities + LT Liabilities + Bonds + Debentures
<i>Pre-Tax Profit</i>	22.40	23.64	27.70	112.40						Reuters Historical Data
<i>Tax Provision</i>	2.17	3.67	4.90	6.70						Reuters historical data
<i>Tax for the year</i>	9.68%	11.38%	20.33%	7.23%	7.99%	8.65%	7.34%	7.43%	7.28%	Tax % growth yoy * previous year %
<i>Tax % growth yoy</i>	21%	18%	79%	-64%	10.6%	8.2%	-15.2%	1.2%	-1.9%	Average previous years
	9.68%	11.38%	20.33%	7.23%	9.07%	9.34%	12.07%	12.17%	9.45%	Average excluding 2019 (Outlier)

Depreciation	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F
Vessels	-40.4	-43.31	-44.6	-47.7	-47.8	-50.7	-52.4	-52.2	-50.9
Right-of-use assets			-111.5	-153.3	-147.8	-163.7	-167.4	-178.1	-185.8
Property and equipment	-1.9	-1.0	-0.8	-0.9	-1.1	-0.9	-0.9	-0.9	-0.9
<b>Total</b>	<b>-42.2</b>	<b>-44.3</b>	<b>-156.9</b>	<b>-201.9</b>	<b>-196.6</b>	<b>-215.3</b>	<b>-220.7</b>	<b>-231.2</b>	<b>-237.7</b>

Source: Author Estimates

## Appendix 27: Forecasting Assumptions Balance Sheet

	Balance Sheet Assumptions					Assumptions/Source					
	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F		
<b>Total Capex</b>	93.0	202.7	102.7	27.1	54.0	63.0	28.0	28.2	28.4	Bloomberg 2016:2020. 2021,2022: Annual report 2020 and 2021h1 interim report. 2023:2025, Author Estimates	
Newbuilding payments and second-hand purchases					46	57	23	24.2	25.4	2023, half of 2021, since company doesn't plan to acquire newbuilding vessels, 2024 and 2025, 5% increase per year, giving possibility that company may acquire newbuildings vessels.	
Other capex: acquisition and installation of scrubbers					8	6	5	4	3	Following IMO 2020, NORDEN installed scrubbers on their vessels. The value is expected to decrease YoY, reason why, a decrease of 1m per year was considered from 2023 onwards	
<b>Total Capex % of revenues</b>	5.14%	8.27%	3.97%	1.04%	1.98%	2.29%	1.04%	1.05%	1.05%		
<b>PS&amp;E Capex</b>					1.69%	2.07%	0.85%	0.90%	0.94%		
Vessels: yoy growth					8%	6.5%	2.0%	-2%	-1%	Following 1 historical high freight rates on dry bulk, bulk vessels value will follow the development on the industry economic cycle, the same principle applies for the product tanker vessels.	
Right use of Assets yoy growth					7.0%	5.0%	5.0%	5.0%	5.0%	YoY growth equal to YoY growth of lease liabilities. Norden follows an asset light business model, expected increase of leasing vessels, reason why right use of assets is expected to increase.	
Property and Equipment yoy growth	-2.8%	-0.2%	-1.0%	-0.8%	-1.3%	-1.2%	-0.9%	-1.0%	-1.1%	Average previous years	
Prepayments on vessels and newbuildings % of capex	36.5%	12.3%	15.7%	57.2%	28.4%	33.8%	39.8%	34.0%	35.8%	Average 3 previous years	
Prepayments on vessels and newbuildings					15.3	21.3	11.1	9.6	10.2	Capex forecast * prepayments on vessels and newbuildings as % of capex	
Investments in Joint Ventures yoy	-29.0%	4.4%	0.8%	-3.4%	0.6%	-0.6%	-1.1%	-0.4%	-0.7%	Average last 3 yoy growth	
Receivables from subleasing					18.0	18.9	19.8	20.8	21.9	Non-Current Leasing * Average subleasing historical + percentage over non current leasing	
Receivables from subleasing over leasing					7.9%	7.9%	7.9%	7.9%	7.9%	Assumed equal to the average historical percentage over non current leasing	
Inventories	3.74%	3.56%	3.12%	2.53%	3.29%	3.29%	3.29%	3.29%	3.29%	Inventories over Revenue: Assumed equal to the average historical percentage over revenues (2016-2020)	
Receivables from subleasing					11.3	13.7	13.8	14.5	16.0	Current Leasing * Average subleasing historical + percentage over current leasing	
Receivables from subleasing yoy growth					1.08%	5.00%	5.00%	5.00%	5.00%		
Receivables from subleasing					11.3	13.7	13.8	14.5	15.3	16.0	16.8
Receivables subleasing over current leasing					8.57%	9.64%	9.11%	9.11%	9.11%	9.11%	
Freight Receivables					4.7%	1.3%	-2.0%	-0.9%	0.9%	It will grow according to total revenues growth yoy	
Receivables from joint ventures					0	0	0	0	0	Average last 3 years	
Tax Receivables	0.0	0.0	0.9	0	0	0	0	0	0	Non Material: Assumed as 0	
Other receivables					4.7%	1.3%	-2.0%	-0.9%	0.9%	It will grow according to total revenues growth yoy	
Prepayments					70.2	69.2	64.8	63.9	62.5		
Prepayments yoy growth	6.12%	18.18%	-26.77%	2.63%	0.04%	-1.48%	-6.39%	-1.30%	-2.28%	Previous year*(1+average of the growth of the last 4 years)	
Marketable Securities					0	0	0	0	0	Non Material: assumed as 0	
Tangible assets held for sale					0	0	0	0	0	Since it's expected to be sold during 2021, assumed 0 for 2021 and following years, While at the following years I assumed the average of the years were there were tangible assets held for sale	
Share Capital					31.50	50.97	50.97	50.97	50.97	Closing Balance = opening Balance + New Capital Issued- Capital Repurchase. No share issue is expected, therefore equal to 2020 Nominal Value.	
Reserve for hedges	6.958	-24.5	8.9	4.1	4.9	6.2	6.0	5.3	5.6	Average last 4 years, excluding 2018 ( outlier)	
<b>DEBT</b>											
Current Loans	26.3	125.5	34.9	37.6	39.5	41.5	43.5	45.7	48.0	Sheet: Debt Schedule Forecast	
Non Current Loans	195.4	206.5	268.4	282.4	268.3	254.9	242.1	230.0	218.5	Sheet: Debt Schedule Forecast	
Non-Current Lease Liabilities	0.0	0.0	198.7	213.3	228.2	239.6	251.6	264.2	277.4	Sheet: Debt Schedule Forecast	
Current Lease Liabilities	0.0	0.0	131.8	142.1	152.0	159.6	167.6	176.0	184.8	Sheet: Debt Schedule Forecast	
<b>DEBT (LT+ST)</b>	221.7	332.0	633.8	675.4	688.0	695.6	704.9	715.9	728.7		
Debt yoy growth	2.54%	49.71%	90.92%	6.56%	1.87%	1.10%	1.34%	1.57%	1.79%		
D/(D+E)	21.00%	28.65%	42.46%	42.80%	40.65%	40.64%	39.32%	38.71%	37.87%		
<b>Non-Current Liabilities</b>											
Loans	195.4	206.5	268.4	282.4	268.3	254.9	242.1	230.0	218.5	Sheet: Debt Schedule Forecast	
Lease Liabilities					228.2	239.6	251.6	264.2	277.4	Sheet: Debt Schedule Forecast	
Provisions					0	0	0	0	0	Non Material: Assumed as 0	
Prepayments received on vessels for resale					0	0	0	0	0	Non Material: Assumed as 0	
Lease Liabilities					131.8	142.1	152.0	159.6	167.6	176.0	184.8
Provisions					0	0	0	0	0	Non Material: Assumed as 0	
Trade Payables (Accounts Payable)					2.8%	3.2%	-4.1%	-1.6%	0.6%	It will grow according to Cost of revenue growth YoY	
Debt to Joint Ventures	1.9	0	0	0	0	0	0	0	0	Non Material: Assumed as 0	
Current Tax Liabilities					0%	0%	0%	0%	0%	Equal to 2020 Nominal Value	
Other payables					2.8%	3.2%	-4.1%	-1.6%	0.6%	Will grow according to Cost of revenue growth YoY	
Deferred income	2.8%	3.6%	2.8%	2.2%	2.8%	2.8%	2.8%	2.8%	2.8%	Percentage of Revenue: Assumed equal to the average historical percentage over revenues (2016-2020)	
Liabilities relating to tangible assets held for sale					0	0	0	0	0	Non Material: Assumed as 0	

Source: Author Estimates

## Appendix 28: Forecasting Assumptions Cash Flow Statement

Cash Flow Statement Assumptions	2019	2020	2021F	2022F	2023F	2024F	2025F	Assumptions/Source
Dividend paid to shareholders	60.0%	64.0%	53.1%	55%	55%	55%	55%	Payment Ratio: Minimum of 50% of previous year adjusted result. 53.1% for 2021, following annual report 2020 information (9 DKK/share). Following years: 55%
Acquisition of treasury shares	-9.4	-24	-25	-19.5	0	0	0	Company have a similar share buy-back program for 2021 and 2020, according to 2020 annual report. 2022-Average 2 previous years, following years
Sale of treasury shares	0	0	0	0	0	0	0	Non Material. Assumed as 0

Source: Author Estimates

## Appendix 29: Revenues Forecast

Assumptions 2021 Onwards	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	Assumptions/Source
<b>Asset Management</b>										
Revenue-services rendered, external					5.0%	2.5%	2.0%	1.5%	1.0%	5% for 2021, following the high expectations the company have on this business unit, followed by 2.5 % at 2022, decreasing the growth by 0.5 % per each year.
Revenue-services rendered, internal					5.00%	3.57%	2.58%	1.68%	0.73%	5% for 2021. Following years: average growth rate two previous years at the following years -1.5%
Revenue-sublease financial income					1.7	1.7	1.7	1.7	1.7	Constant of 1.7 million
<b>Dry Operator</b>										
Dry Bulk Demand Growth	4%	3%	0%	-2%	3%	2%	1.9%	1.8%	1.7%	Shipping Market Review MAY 2021, Danish Ship Finance, 2017 until 2022. Half of the average of global trade volume growth and world GDP real growth forecasts
Dry Bulk Supply Growth	3%	3%	4%	5%	4%	2%	0%	-0.50%	-0.50%	Shipping Market Review MAY 2021, Danish Ship Finance, data for 2017-2023. Dry cargo cycle is on historical high pick, expected from 2023 onwards a decrease in freight rates and revenues. 2024 and 2025: -0.50%
<b>Revenues growth YoY</b>					7%	2%	-3%	-1.50%	1%	2021: sum of supply and demand growth rates. 2022: revenues grow same way as demand, 2023-2025 expecting decreases in freight rates due to the economic cycle. Decrease of 3% at 2023, decrease of 1.5% at 2024 and 1% at 2025.
<b>Product Tanker Operator</b>										
Product Tanker Demand Growth	1.3%	1.5%	-3.0%	-10.2%	7.1%	5.2%	2.2%	1.2%	0.7%	Shipping Market Review MAY 2021, Danish Ship Finance, data from 2017 -2022. 2023 2.2% decrease in growth rhythm, followed by 1.2% at 2024 and 0.7% at 2025.
Product Tanker Supply Growth	4.2%	1.7%	4.8%	2.5%	4.7%	1.1%	0.30%	-0.50%	-1.00%	Shipping Market Review MAY 2021, Danish Ship Finance data from 2017 and 2023. Expected decrease at 2024 and 2025, which is assumed to be of -0.5% at 2024 and -1% at 2025.
<b>Revenues growth YoY</b>					-5.00%	-2.60%	2.2%	1.2%	0.7%	2021: decrease of 5%. 2022: revenue decrease of half of the demand growth, while on 2023-2025 revenue growth follow demand growth.

Segmentation from 2019 onwards							
US \$ Millions	2019	2020	2021F	2022F	2023F	2024F	2025F
<b>Dry Owner</b>	48.1						
<b>Tanker Owner</b>	37.2						
Revenue-services rendered, external	83.3	108.0	113.4	116.2	118.6	120.3	121.5
Revenue-services rendered, internal	299.3	305.7	321.0	332.4	341.7	347.4	350.0
Revenue-sublease financial Income	2	1.7	1.7	1.7	1.7	1.7	1.7
<b>Asset Management +</b>	<b>384.6</b>	<b>415.4</b>	<b>436.1</b>	<b>450.4</b>	<b>462.0</b>	<b>469.5</b>	<b>473.2</b>
Revenue-services rendered, external	2065.6	2,014.80	2155.836	2198.953	2132.984	2100.989	2121.999
Revenue-services rendered, internal							
Revenue-sublease financial Income							
<b>Dry Operator +</b>	<b>2065.6</b>	<b>2014.8</b>	<b>2155.8</b>	<b>2199.0</b>	<b>2133.0</b>	<b>2101.0</b>	<b>2122.0</b>
Revenue-services rendered, external	433	473.3	449.6	438	447.5793	453.0	456.1
Revenue-services rendered, internal							
Revenue-sublease financial Income							
<b>Tanker Operator +</b>	<b>433.0</b>	<b>473.3</b>	<b>449.6</b>	<b>437.9</b>	<b>447.6</b>	<b>453.0</b>	<b>456.1</b>
<b>Eliminations: Revenues services rendered, internal -</b>	<b>299.3</b>	<b>305.7</b>	<b>321.0</b>	<b>332.4</b>	<b>341.7</b>	<b>347.4</b>	<b>350.0</b>
<b>Total Revenue</b>	<b>2583.9</b>	<b>2597.8</b>	<b>2720.6</b>	<b>2754.8</b>	<b>2700.8</b>	<b>2676.0</b>	<b>2701.4</b>

Source: Author Estimates

### Appendix 30: Debt Schedule

Loans	2016	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	Assumptions
Interest-bearing liabilities include bank debt, which includes the following items:											
<b>Current Portion of non-current debt within 1 year</b>	26.2	26.3	125.5	34.9	37.6	39.5	41.5	43.5	45.7	48.0	5 YoY Growth
<i>% Total Loans</i>	<i>12.10%</i>	<i>11.86%</i>	<i>37.81%</i>	<i>11.51%</i>	<i>11.75%</i>	<i>12.83%</i>	<i>13.99%</i>	<i>15.24%</i>	<i>16.58%</i>	<i>18.01%</i>	
<b>Non-Current Liabilities between 1 and 5 years</b>	106.1	131.5	122.2	141.2	211.9	201.3	191.2	181.7	172.6	164.0	5% YoY Decrease
<i>% Total Loans</i>	<i>49.07%</i>	<i>59.29%</i>	<i>36.81%</i>	<i>46.55%</i>	<i>66.22%</i>	<i>65.41%</i>	<i>64.54%</i>	<i>63.60%</i>	<i>62.60%</i>	<i>61.52%</i>	
<b>Non-Current Liabilities over 5 years</b>	84.0	64.0	84.2	127.2	70.5	67.0	63.6	60.4	57.4	54.6	5% YoY Decrease
<i>% Total Loans</i>	<i>38.83%</i>	<i>28.84%</i>	<i>25.38%</i>	<i>41.94%</i>	<i>22.03%</i>	<i>21.76%</i>	<i>21.47%</i>	<i>21.16%</i>	<i>20.83%</i>	<i>20.47%</i>	
<b>Total</b>	<b>216.3</b>	<b>221.7</b>	<b>332.0</b>	<b>303.3</b>	<b>320.0</b>	<b>307.8</b>	<b>296.3</b>	<b>285.6</b>	<b>275.7</b>	<b>266.5</b>	
<i>Loans yoy growth</i>					5.5%	-3.8%	-3.7%	-3.6%	-3.5%	-3.3%	
Interest-bearing liabilities comprise the carrying amount:											
Fixed-rate loans	25.2	25.2	25.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	Constant
<i>% Total Loans</i>	<i>11.67%</i>	<i>11.38%</i>	<i>7.60%</i>	<i>7.32%</i>	<i>6.94%</i>	<i>7.21%</i>	<i>7.49%</i>	<i>7.77%</i>	<i>8.05%</i>	<i>8.33%</i>	
Floating-rate loans	194.3	198.9	308.5	284.4	300.4	288.2	276.7	266.0	256.3	246.9	
<i>% Total Loans</i>	<i>89.84%</i>	<i>89.71%</i>	<i>92.92%</i>	<i>93.77%</i>	<i>93.88%</i>	<i>93.65%</i>	<i>93.37%</i>	<i>93.13%</i>	<i>92.94%</i>	<i>92.65%</i>	
Borrowing Costs	-3.3	-2.4	-1.7	-3.3	-2.6	-2.7	-2.5	-2.6	-2.7	-2.6	Average
<b>Total</b>	<b>216.3</b>	<b>221.7</b>	<b>332.0</b>	<b>303.3</b>	<b>320.0</b>	<b>307.8</b>	<b>296.3</b>	<b>285.6</b>	<b>275.7</b>	<b>266.5</b>	
Movements in Interest-bearing liabilities:											
Interest-bearing liabilities at 1 January	298.4	216.3	221.7	332.0	303.3	320.0	307.8	296.3	285.6	275.7	
New Loans	0.0	30.0	138.7	219.1	132.0	125.4	119.1	113.2	107.5	102.1	5 % YoY Decrease
<i>New Loans yoy growth</i>						<i>-5.00%</i>	<i>-5.00%</i>	<i>-5.00%</i>	<i>-5.00%</i>	<i>-5.00%</i>	
Instalments	-85.3	-27.0	-28.5	-245.9	-117.1	-140.5	-133.5	-126.8	-120.5	-114.5	2021: 20% growth. 2022-2025: 5% YoY Decrease
<i>Instalments yoy growth</i>						<i>20.00%</i>	<i>-5.00%</i>	<i>-5.00%</i>	<i>-5.00%</i>	<i>-5.00%</i>	
Other adjustments	3.2	2.5	0.0	-1.9	1.8	2.9	2.9	3.0	3.0	3.1	
<b>Interest-bearing liabilities at 31 January</b>	<b>216.3</b>	<b>221.7</b>	<b>332.0</b>	<b>303.3</b>	<b>320.0</b>	<b>307.8</b>	<b>296.3</b>	<b>285.7</b>	<b>275.7</b>	<b>266.5</b>	

Lease Liabilities	2019	2020	2021F	2022F	2023F	2024F	2025F	Assumptions
<b>Non-Current</b>	<b>198.7</b>	<b>213.3</b>	<b>228.2</b>	<b>239.6</b>	<b>251.6</b>	<b>264.2</b>	<b>277.4</b>	2021: 7% Increase. 2022-2025: 5% YoY Growth
<i>Non-Current yoy growth</i>		<i>7.35%</i>	<i>7.00%</i>	<i>5.00%</i>	<i>5.00%</i>	<i>5.00%</i>	<i>5.00%</i>	
<b>Current</b>	<b>131.8</b>	<b>142.1</b>	<b>152.0</b>	<b>159.6</b>	<b>167.6</b>	<b>176.0</b>	<b>184.8</b>	2021: 7% Increase. 2022-2025: 5% YoY Growth
<i>Current yoy growth</i>		<i>7.81%</i>	<i>7.00%</i>	<i>5.00%</i>	<i>5.00%</i>	<i>5.00%</i>	<i>5.00%</i>	
<b>Total</b>	<b>330.5</b>	<b>355.4</b>	<b>380.3</b>	<b>399.3</b>	<b>419.3</b>	<b>440.2</b>	<b>462.2</b>	
<i>Lease Liabilities yoy growth</i>		<i>7.53%</i>	<i>7.00%</i>	<i>5.00%</i>	<i>5.00%</i>	<i>5.00%</i>	<i>5.00%</i>	

Source: Author Estimates

## Appendix 31: WACC Assumptions

WACC Assumptions	2021F	2022F	2023F	2024F	2025F	TV	Assumptions/ Source
Debt Weight	40.65%	40.64%	39.32%	38.71%	37.87%	37.87%	
Equity Weight	59.35%	59.36%	60.68%	61.29%	62.13%	62.13%	
Risk Free Rate	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	Source: Fernandez (2021). Denmark Risk free rate
Beta Unlevered	0.65	0.65	0.65	0.65	0.65	0.65	Damodaran Global Data 2021: Unlevered Beta- Shipbuilding & Marine
Effective Tax Rate	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	Company tax rate 2021F. Based on effective Tax rate reported at 2020 annual report
Beta Levered	1.05	1.05	1.03	1.02	1.01	1.01	Beta Levered = Beta Unlevered* [ 1+(1-t)* D/E]
Market Risk Premium	5.80%	5.80%	5.80%	5.80%	5.80%	5.80%	Damodaran: Global Data 2021. Denmark Market Risk Premium
<b>Cost of Equity: CAPM</b>	<b>6.80%</b>	<b>6.80%</b>	<b>6.67%</b>	<b>6.62%</b>	<b>6.54%</b>	<b>6.54%</b>	Ke= rf+BI(mrp)
Cost of Debt	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%	RF+BI*ERP
<b>After Tax Cost of Debt</b>	<b>6.67%</b>	<b>6.67%</b>	<b>6.67%</b>	<b>6.67%</b>	<b>6.67%</b>	<b>6.67%</b>	
<b>WACC</b>	<b>6.75%</b>	<b>6.75%</b>	<b>6.67%</b>	<b>6.64%</b>	<b>6.59%</b>	<b>6.59%</b>	

Source: Author Estimates

## Appendix 32: The Terminal Growth Rate

### The Terminal Growth Rate: Long-term sustainable growth Rate (g)

GDP Growth	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	TV
World GDP Growth	3.80%	3.60%	2.80%	-3.30%	6.00%	4.40%	3.50%	3.40%	3.30%	3.30%
Global Trade volume growth	4.60%	2.90%	-0.10%	-5.30%	8.00%	4.00%	3.90%	3.79%	3.60%	3.60%

Stable Growth Model	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	TV
Net Income	24.6	28.8	19.2	86.0	157.3	97.9	129.7	118.9	134.2	134.2
Dividends	0.0	0.0	12.0	14.6	56.1	87.9	57.4	72.5	72.5	72.5
<b>(NI-D)/NI</b>	<b>100.0%</b>	<b>100.0%</b>	<b>37.5%</b>	<b>83.0%</b>	<b>64.3%</b>	<b>10.2%</b>	<b>55.7%</b>	<b>39.0%</b>	<b>46.0%</b>	<b>46.0%</b>
<b>ROE</b>	<b>3.0%</b>	<b>3.5%</b>	<b>2.3%</b>	<b>9.8%</b>	<b>16.5%</b>	<b>9.7%</b>	<b>12.3%</b>	<b>10.7%</b>	<b>11.5%</b>	<b>11.5%</b>
<b>g</b>										<b>5.3%</b>

Stable Growth Model: Reinvestment Rate*ROE	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	Total
Capex	93.0	202.7	102.7	27.1	54.0	63.0	28.0	28.2	28.4	627.0
D&A	42.2	44.3	156.9	201.9	196.6	215.3	220.7	231.2	237.7	1546.9
Change NWC	18.9	-91.9	4.0	88.0	16.2	-66.7	46.6	43.2	53.0	111.5
EBIT	23.3	39.4	56.8	119.4	204.8	138.7	179.7	167.4	180.7	1110.2
Tax Rate	10%	11%	20%	7%	8%	8%	8%	8%	8%	8%
Reinvestment Rate	331%	191%	-111%	-78%	-67%	-172%	-88%	-104%	-94%	-79%
ROE	3.0%	3.5%	2.3%	9.8%	16.5%	9.7%	12.3%	10.7%	11.5%	11.5%
<b>g</b>	<b>9.9%</b>	<b>6.6%</b>	<b>-2.5%</b>	<b>-7.7%</b>	<b>-11.1%</b>	<b>-16.6%</b>	<b>-10.9%</b>	<b>-11.1%</b>	<b>-10.8%</b>	<b>-9.12%</b>

Dividend Sustainable growth rate: PRAT Model	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	Total
Net Income (NI)	24.6	28.8	19.2	86.0	157.3	97.9	129.7	118.9	134.2	796.6
Dividends (D)	0.0	0.0	12.0	14.6	56.1	87.9	57.4	72.5	72.5	373.0
Sales (S)	1808.6	2451.4	2583.9	2597.8	2720.6	2754.8	2700.8	2676.0	2701.4	22995.3
Total Assets (A)	1326.5	1464.4	1742.4	1824.8	1962.4	1988.5	2060.2	2113.2	2189.9	16672.2
Shareholder's Equity (E)	834.4	826.8	859.0	902.5	1004.5	1015.8	1087.9	1133.6	1195.6	8860.2
<b>(NI-D)/NI</b>	<b>100.0%</b>	<b>100.0%</b>	<b>37.5%</b>	<b>83.0%</b>	<b>64.3%</b>	<b>10.2%</b>	<b>55.7%</b>	<b>39.0%</b>	<b>46.0%</b>	<b>53.2%</b>
<b>ROE</b>	<b>3.00%</b>	<b>3.47%</b>	<b>2.28%</b>	<b>9.76%</b>	<b>16.50%</b>	<b>9.69%</b>	<b>12.33%</b>	<b>10.71%</b>	<b>11.52%</b>	<b>8.81%</b>
NI/S	1.36%	1.17%	0.74%	3.31%	5.78%	3.55%	4.80%	4.44%	4.97%	3.35%
S/A	96.17%	136.34%	167.40%	148.30%	142.36%	138.64%	138.54%	131.09%	126.63%	136.16%
A/E	162.35%	158.97%	177.12%	202.84%	202.19%	195.36%	195.75%	189.37%	186.41%	185.59%
<b>g</b>										<b>4.7%</b>

Source: Author Estimates

### Appendix 33: WACC Method (FCFF)

WACC Method (FCFF)	2021F	2022F	2023F	2024F	2025F	TV
EBIT	204.8	138.7	179.7	167.4	180.7	
(-) Taxes	15.7	10.1	17.8	16.5	14.0	
(=) EBIT*(1-t) or NOPAT	189.1	128.6	161.9	150.9	166.7	
(+) Non Cash Charges	196.6	215.3	220.7	231.2	237.7	
(=) Operational Cash Flow	385.8	343.9	382.5	382.2	404.3	
(-) Changes in NWC	16.2	-66.7	46.6	43.2	53.0	
(-) Capital Expenditures or CAPEX	54.0	63.0	28.0	28.2	28.4	
<b>(=) FCFF</b>	<b>315.5</b>	<b>347.6</b>	<b>307.9</b>	<b>310.8</b>	<b>323.0</b>	<b>293.5</b>
PV FCFF (DCF)	1818.3	1712.5	1660.4	1756.3	2003.6	1680.7
PV Terminal value (DCF)	1818.3	1502.8	1364.9	1352.5	1445.4	
WACC	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%

Source: Author Estimates

WACC (FCFF) Method Price Target 2022	
Enterprise Value	1502.8
Debt of D/S Norden	695.6
Cash	315.5
Net Debt	380.2
<b>Equity Value</b>	<b>1122.7</b>
# of shares outstanding	36.1
<b>Price Target (\$)</b>	<b>31.11</b>
USD/DKK (31/08/2021)	6.304
<b>Price Target DKK 31/12/22</b>	<b>196.14</b>
Closing Price August 31rd (DKK)	163.00
<b>Upside Potential</b>	<b>20.3%</b>

Units: Millions of \$

Source: Author Estimates

### Appendix 34: Flow to Equity Method (FCFE)

Flow to Equity Method (FCFE)	2021F	2022F	2023F	2024F	2025F	TV
(+) FCFF	315.5	347.6	307.9	310.8	323.0	
Interest	34.0	32.1	33.1	32.6	32.8	
Corporate Tax Rate	8%	8%	8%	8%	8%	
(-) Interest*(1-t)	31.3	29.5	30.4	30.0	30.2	
(+) Net Borrowing	-128.1	-147.9	-142.3	-147.3	-151.2	
<b>(=) FCFE</b>	<b>156.1</b>	<b>170.1</b>	<b>135.2</b>	<b>133.6</b>	<b>141.5</b>	<b>128.6</b>
PV FCFE (DCF)	900.0	848.6	823.5	889.4	1037.6	896.1
PV Terminal value (DCF)	900.0	743.9	678.4	688.3	755.8	
Ke	6.80%	6.80%	6.67%	6.62%	6.54%	6.54%

Source: Author Estimates

Flow-to-Equity (FCFE) Method Price Target 2022	
<b>Equity Value</b>	<b>743.9</b>
# of Shares outstanding	36.1
Price Target (\$)	31.00
USD/DKK (31/08/2021)	6.304
<b>Price Target DKK 31/12/22</b>	<b>195.42</b>
Closing Price August 31rd (DKK)	163.00
<b>Upside Potential</b>	<b>19.9%</b>

Units: Millions of \$

Source: Author Estimates

### Appendix 35: Dividend Discount Model (DDM)

Dividend discount model (DDM)	2021F	2022F	2023F	2024F	2025F	Terminal Period
Shares Outstanding ( in Millions)	36.8	36.1	36.1	36.1	36.1	
(+) Dividends USD	56.1	87.9	57.4	72.5	72.5	
Dividend per share USD	1.52	2.44	1.59	2.01	2.01	
Payout Ratio	53.1%	55.0%	55.0%	55.0%	55.0%	
(+) Shares Buyback USD	25.00	19.47	0	0	0	
<b>(=) Shareholders cashflow</b>	<b>81.13</b>	<b>107.34</b>	<b>57.41</b>	<b>72.50</b>	<b>72.50</b>	<b>75.90</b>
Cost of Capital equity	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%
gS						3.30%
H						5
gL						4.7%
<b>(=) Equity Value</b>	<b>1129.3</b>	<b>1201.8</b>	<b>1215.9</b>	<b>1281.3</b>	<b>1338.2</b>	<b>1256.6</b>

Source: Author Estimates

Dividend discount model (DDM) Price Target 2022	
<b>Equity Value</b>	<b>1201.8</b>
# of Shares outstanding	36.1
Price Target (\$)	33.30
USD/DKK (31/08/2021)	6.304
<b>Price Target DKK 31/12/22</b>	<b>209.96</b>
Closing Price August 31rd (DKK)	163.00
<b>Upside Potential</b>	<b>28.8%</b>

Units: Millions of \$

Source: Author Estimates

## Appendix 36: APV Method

Note: APV Method was not considered for the valuation, Equity Research, report.

APV Method	2021F	2022F	2023F	2024F	2025F	TV
<b>FCFF</b>	315.5	347.6	307.9	310.8	323.0	293.5
Discounted TV	3293.3	3110.1	2885.2	2691.8	2486.8	2163.8
<b>PV</b>	3293.3	2977.8	2762.5	2577.3	2381.0	
Interest Paid	34.0	32.1	33.1	32.6	32.8	219.8
ITS	23.0	22.2	20.5	17.8	14.6	14.8
PV(ITS)	23.0	20.3	19.6	17.8	15.2	11.9
Ru	4.44%	4.44%	4.44%	4.44%	4.44%	4.44%

Adjusted Present Value (APV) Method Price Target 2022	
<b>Intrinsic enterprise value</b>	<b>2998.1</b>
Debt of D/S Norden	695.6
Cash	315.5
Net Debt	380.2
<b>Equity Value</b>	<b>2617.9</b>
# of shares outstanding	36.1
Price Target (\$)	72.55
USD/DKK (31/08/2021)	6.304
<b>Price Target DKK 31/12/22</b>	<b>457.37</b>
Closing Price August 31rd (DKK)	163
<b>Upside Potential</b>	<b>180.6%</b>

Source: Author Estimates

## Appendix 37: Relative Valuation

Appendix: Market Based Valuation			Millions Shares		
Peers data	Market Cap (Millions USD) 31/08/2021	Share Price USD	Outstanding	Net Debt	EV(M)
Pacific Basin Shipping Ltd	2627.01	0.55	4812.7	714.4	3341.5
Star Bulk Carriers Corp	2440.46	23.07	102.2	1376.9	3817.4
Golden Ocean Group Ltd	2421.02	11.48	201.2	892.4	3313.4
Scorpio Tankers Inc	918.15	16.21	58.4	2899.0	3817.2
Genco Shipping & Trading Ltd	847.98	19.49	41.9	295.7	1143.7
Eagle Bulk Shipping Inc	685.38	49.39	13.5	382.2	1067.6
Torm PLC	629.75	7.72	79.7	706.8	1336.6
Safe Bulkers Inc	498.27	4.04	119.5	520.6	1018.8
Diana Shipping Inc	473.24	4.97	91.5	337.4	810.6
Diamond S Shipping Inc	393.54	9.69	40.6	605.8	999.3
Teekay Tankers Ltd	379.34	11.45	29.1	509.9	889.2
D'Amico International Shipping SA	144.77	0.12	1241.1	560.9	705.7
Ardmore Shipping Corp	119.59	3.49	34.4	349.9	469.4
Navios Maritime Holdings Inc	85.05	5.45	15.9	1499.7	1584.8
Navios Maritime Acquisition Corp	61.27	3.67	16.6	1001.8	1063.1
Concordia Maritime AB	33.41	0.77	43.7	203.0	236.4

Dry Bulk Peer  
 Product Tanker Peer

Source: Bloomberg & Refinitiv

Refinitiv estimates for 2021F and 2022F. Data 31/08/2021

Accounting data of comparable firms	Revenues			EBITDA			EBIT			Earnings Per Share			Book Value Per Share		
	2020	2021F	2022F	2020	2021F	2022F	2020	2021F	2022F	2020	2021F	2022F	2020	2021F	2022F
Pacific Basin Shipping Ltd	1470.9	2406.3	2636.1	190.8	423.5	555.2	30.8	402.8	461.4	0.0	0.1	0.1	0.2	0.3	0.4
Star Bulk Carriers Corp	693.2	1140.2	1159.5	229.1	741.8	763.4	86.8	565.6	599.8	0.2	5.4	4.8	15.6	18.4	19.5
Golden Ocean Group Ltd	413.4	821.3	809.0	152.6	521.9	493.6	33.3	339.7	331.4	-0.1	1.8	1.5	9.6	9.3	9.4
Scorpio Tankers Inc	915.9	696.9	919.7	538.0	310.5	528.5	245.3	71.0	283.4	2.0	-0.7	2.2	35.6	35.5	36.2
Genco Shipping & Trading Ltd	355.6	410.4	384.2	71.8	191.2	202.6	7.5	131.2	141.4	-0.4	2.8	2.6	17.8	19.9	11.7
Eagle Bulk Shipping Inc	275.1	429.2	402.3	54.1	212.4	197.4	-4.8	149.2	140.6	-3.4	9.1	8.4	40.3	53.2	61.1
Torm PLC	747.4	485.9	685.6	289.3	160.7	284.5	117.4	29.6	143.0	1.6	-0.2	0.6	13.7	14.3	14.5
Safe Bulkers Inc	198.2	281.9	276.3	64.3	199.9	175.0	10.5	132.1	122.9	-0.2	1.1	0.9	4.4	0.3	0.3
Diana Shipping Inc	156.2	195.9	253.6	35.8	93.8	156.5	-7.2	51.7	127.5	-0.4	0.4	1.4	4.8	5.3	6.0
Diamond S Shipping Inc	595.9	384.2	496.2	197.6	101.2	167.9	90.4	8.7	58.6	2.2	0.2	1.4	5.5	3.8	4.7
Teekay Tankers Ltd	589.2	373.0	507.1	328.2	88.3	178.3	211.0	-20.1	66.6	4.5	-1.0	1.8	32.0	34.7	34.1
D'Amico International Shipping SA	257.8	210.1	242.7	127.3	83.0	111.5	55.5	11.0	47.4	0.0	-0.1	0.2	0.3	0.1	0.1
Ardmore Shipping Corp	138.8	120.2	151.7	57.0	34.4	63.0	20.0	4.6	40.5	0.1	-0.6	0.3	9.3	10.7	10.1
Navios Maritime Holdings Inc	416.7	515.7	477.9	153.4	286.1	249.5	34.3	220.0	183.4	3.6	5.5	3.0	40.9	52.3	54.8
Navios Maritime Acquisition Corp	361.4	333.1	426.2	193.3	163.7	259.1	113.2	93.7	192.0	1.9	1.8	8.6	20.2	25.1	40.5
Concordia Maritime AB	123.1	100.9	118.8	33.3	6.7	31.1	3.9	-28.9	11.9	1.2	1.7	1.1	1.9	1.4	1.4

Source: Author Estimates

Multiples of Comparable Firms	Enterprise Value Multiples									Equity Value Multiples					
	EV/Revenues			EV/EBITDA			EV/EBIT			P/E			P/B		
	2020	2021F	2022F	2020	2021F	2022F	2020	2021F	2022F	2020	2021F	2022F	2020	2021F	2022F
Pacific Basin Shipping Ltd	2.3	1.4	1.3	17.5	7.9	6.0	108.6	8.3	7.2	-12.2	8.0	7.1	2.5	1.7	1.4
Star Bulk Carriers Corp	5.5	3.3	3.3	16.7	5.1	5.0	44.0	6.7	6.4	135.7	4.3	4.8	1.5	1.3	1.2
Golden Ocean Group Ltd	8.0	4.0	4.1	21.7	6.3	6.7	99.5	9.8	10.0	-95.7	6.2	7.5	1.2	1.2	1.2
Scorpio Tankers Inc	4.2	5.5	4.2	7.1	12.3	7.2	15.6	53.8	13.5	8.0	-24.6	7.2	0.5	0.5	0.4
Genco Shipping & Trading Ltd	3.2	2.8	3.0	15.9	6.0	5.6	153.4	8.7	8.1	-55.7	6.9	7.4	1.1	1.0	1.7
Eagle Bulk Shipping Inc	3.9	2.5	2.7	19.7	5.0	5.4	-224.5	7.2	7.6	-14.5	5.4	5.9	1.2	0.9	0.8
Torm PLC	1.8	2.8	1.9	4.6	8.3	4.7	11.4	45.2	9.3	4.7	-37.6	13.7	0.6	0.5	0.5
Safe Bulkers Inc	5.1	3.6	3.7	15.8	5.1	5.8	97.2	7.7	8.3	-16.8	3.8	4.7	0.9	16.2	16.2
Diana Shipping Inc	5.2	4.1	3.2	22.6	8.6	5.2	-112.7	15.7	6.4	-12.7	13.6	3.6	1.0	0.9	0.8
Diamond S Shipping Inc	1.7	2.6	2.0	5.1	9.9	6.0	11.1	115.5	17.1	4.4	45.5	6.7	1.8	2.6	2.1
Teekay Tankers Ltd	1.5	2.4	1.8	2.7	10.1	5.0	4.2	-44.3	13.4	2.5	-10.9	6.4	0.4	0.3	0.3
D'Amico International Shipping SA	2.7	3.4	2.9	5.5	8.5	6.3	12.7	64.0	14.9	9.2	-1.2	0.8	0.4	1.1	0.9
Ardmore Shipping Corp	3.4	3.9	3.1	8.2	13.7	7.5	23.5	102.4	11.6	58.2	-6.2	12.1	0.4	0.3	0.3
Navios Maritime Holdings Inc	3.8	3.1	3.3	10.3	5.5	6.4	46.3	7.2	8.6	1.5	1.0	1.8	0.1	0.1	0.1
Navios Maritime Acquisition Corp	2.9	3.2	2.5	5.5	6.5	4.1	9.4	11.3	5.5	1.9	2.1	0.4	0.2	0.1	0.1
Concordia Maritime AB	1.9	2.3	2.0	7.1	35.1	7.6	60.4	-8.2	19.9	0.7	0.5	0.7	0.4	0.6	0.6
AVERAGE	3.6	3.2	2.8	11.6	9.6	5.9	22.5	25.7	10.5	1.2	1.0	5.7	0.9	1.8	1.8
Median	3.3	3.1	2.9	9.3	8.1	5.9	19.5	9.2	9.0	1.7	2.9	6.1	0.7	0.9	0.8
Maximum	8.0	5.5	4.2	22.6	35.1	7.6	153.4	115.5	19.9	135.7	45.5	13.7	2.5	16.2	16.2
Minimum	1.5	1.4	1.3	2.7	5.0	4.1	-224.5	-44.3	5.5	-95.7	-37.6	0.4	0.1	0.1	0.1

Accounting Data for D/S Norden	Enterprise Value Multiples									Equity Value Multiples					
	Revenues			EBITDA			EBIT			Earnings Per Share			Book Value Per Share		
	2020	2021F	2022F	2020	2021F	2022F	2020	2021F	2022F	2020	2021F	2022F	2020	2021F	2022F
<b>D/S NORDEN</b>	2597.8	2720.6	2754.8	342.5	404.9	361.0	119.4	204.8	138.7	2.2	2.7	5.1	23.9	25.2	28.0
<b>Estimated Equity Value of DS NORDEN based on:</b>															
Pacific Basin Shipping Ltd	5901.3	3777.9	3492.0	5996.9	3195.1	2172.3	12970.0	1699.2	1004.4	-27.1	21.9	35.9	59.1	41.6	39.9
Star Bulk Carriers Corp	14304.9	9108.6	9069.5	5707.5	2083.8	1805.0	5252.2	1382.5	882.6	301.3	11.7	24.4	35.3	31.6	33.0
Golden Ocean Group Ltd	20821.5	10975.7	11282.9	7439.1	2571.0	2422.9	11883.4	1998.1	1386.7	-212.4	17.1	38.2	28.7	31.1	34.0
Scorpio Tankers Inc	10827.4	14901.8	11434.3	2430.1	4978.5	2606.9	1857.8	11017.4	1867.6	17.8	-67.7	36.8	10.9	11.5	12.5
Genco Shipping & Trading Ltd	8356.0	7581.5	8199.9	5457.9	2421.7	2037.2	18317.3	1785.0	1121.7	-123.6	19.0	37.9	26.1	24.7	46.4
Eagle Bulk Shipping Inc	10080.5	6767.9	7311.2	6756.6	2035.8	1951.9	-26808.4	1465.8	1053.3	-32.2	14.9	30.1	29.2	23.4	22.6
Torm PLC	4646.0	7483.1	5370.3	1582.2	3368.7	1695.8	1359.3	9259.3	1296.2	10.4	-103.4	69.8	13.5	13.6	14.9
Safe Bulkers Inc	13356.6	9831.7	10159.7	5422.9	2064.0	2101.3	11609.8	1579.2	1149.4	-37.4	10.4	24.0	22.2	407.1	452.1
Diana Shipping Inc	13481.3	11259.1	8805.7	7756.3	3497.9	1869.9	-13452.5	3209.7	881.6	-28.3	37.3	18.6	24.7	23.5	23.4
Diamond S Shipping Inc	4356.4	7075.5	5547.8	1732.3	3998.1	2148.6	1320.6	23662.5	2364.8	9.7	125.0	34.2	42.1	64.2	57.7
Teekay Tankers Ltd	3920.4	6485.8	4830.6	927.9	4079.8	1799.8	503.1	-9070.3	1852.0	5.6	-30.0	32.5	8.5	8.3	9.4
D'Amico International Shipping SA	7111.5	9139.8	8009.8	1899.1	3441.6	2285.5	1517.5	13110.1	2064.5	20.5	-3.3	4.1	9.6	27.0	25.8
Ardmore Shipping Corp	8785.7	10625.6	8526.6	2821.4	5527.6	2691.2	2806.9	20980.4	1605.5	129.1	-16.9	61.5	9.0	8.2	9.7
Navios Maritime Holdings Inc	9879.5	8361.2	9135.9	3539.2	2243.1	2292.4	5524.1	1475.7	1198.2	3.3	2.7	9.3	3.2	2.6	2.8
Navios Maritime Acquisition Corp	7641.7	8681.5	6872.2	1883.8	2630.2	1481.2	1121.7	2323.6	768.0	4.3	5.7	2.2	4.3	3.7	2.5
Concordia Maritime AB	4989.4	6372.9	5481.9	2428.9	14194.8	2740.3	7215.4	-1674.3	2759.6	1.5	1.3	3.6	9.6	14.3	15.7
<b>Average Bulk Peers * 0.65</b>	7814.7	5497.7	5480.9	3906.2	1634.1	1353.0	2055.3	1185.9	705.1	-12.7	11.0	17.7	18.6	47.6	53.2
<b>Average Product Tanker peers *0.35</b>	2381.6	3164.1	2535.2	706.2	1942.5	787.7	817.1	3017.5	664.1	9.4	0.7	8.7	4.7	6.9	6.7
<b>Peers weighted Average</b>	<b>7814.7</b>	<b>5497.7</b>	<b>5480.9</b>	<b>3906.2</b>	<b>1634.1</b>	<b>1353.0</b>	<b>2055.3</b>	<b>1185.9</b>	<b>705.1</b>	<b>-12.7</b>	<b>11.0</b>	<b>17.7</b>	<b>18.6</b>	<b>47.6</b>	<b>53.2</b>
Weighted Median	9734.7	8506.5	7982.9	4465.9	2929.7	2121.0	6072.0	4613.9	1357.8	-16.2	6.9	29.4	21.2	22.5	26.6
Maximum	20821.5	14901.8	11434.3	7756.3	14194.8	2740.3	18317.3	23662.5	2759.6	301.3	125.0	69.8	59.1	407.1	452.1
Minimum	3920.4	3777.9	3492.0	927.9	2035.8	1481.2	-26808.4	-9070.3	768.0	-212.4	-103.4	2.2	3.2	2.6	2.5

Note: EV/Revenues was not considered for the valuation, Equity Research Report.

Estimated Value of Equity based on EV	Min	Max
<b>EV of Norden ( Based on EV/Revenues)</b>	<b>5480.9</b>	<b>7814.8</b>
Debt of D/S Norden	695.6	695.6
Cash	315.5	315.5
Net Debt	380.2	380.2
Equity value	5100.7	7434.6
<b>Average Equity Value</b>	<b>6267.7</b>	
# of Shares outstanding	36.1	
Price Target (\$)	173.69	
USD/DKK (31/08/2021)	6.30	
<b>Price Target DKK 31/12/22</b>	<b>1095.0</b>	
Closing Price August 31rd (DKK)	163.00	
<b>Upside Potential</b>	<b>572%</b>	

Source: Author Estimates

Note: EV/EBITDA was not considered for the valuation, Equity Research Report.

Estimated Value of Equity based on EV	Min	Max
<b>EV of Norden (Based on EV/EBITDA)</b>	1353.1	3906.2
Debt of D/S Norden	695.6	695.6
Cash	315.5	315.5
Net Debt	380.2	380.2
Equity value	972.9	3526.0
<b>Average Equity Value</b>	<b>2249.5</b>	
# of Shares outstanding	36.1	
Price Target (\$)	62.3	
USD/DKK (31/08/2021)	6.30	
<b>Price Target DKK 31/12/22</b>	<b>393.00</b>	
Closing Price August 31rd (DKK)	163.00	
<b>Upside Potential</b>	<b>141.1%</b>	

Source: Author Estimates

Estimated Value of Equity based on EV	Min	Max
<b>EV of Norden (Based on EV/EBIT)</b>	705.1	2055.3
Debt of D/S Norden	695.6	695.6
Cash	315.5	315.5
Net Debt	380.2	380.2
Equity value	324.9	1675.1
# of Shares outstanding	36.1	
<b>AVERAGE Equity Value</b>	<b>1000.0</b>	
Price Target (\$)	27.7	
USD/DKK (31/08/2021)	6.30	
<b>Price Target DKK 31/12/22</b>	<b>174.71</b>	
Closing Price August 31rd (DKK)	163.00	
<b>Upside Potential</b>	<b>7.2%</b>	

Source: Author Estimates

Equity Value Multiples	Min	Max
<b>P/B</b>	18.6	53.2
Peers Average	35.9	
DS NORDEN Book value per share	27.98	
<b>DS NORDEN Equity Value</b>	<b>1003.36</b>	
# of Shares outstanding	36.1	
Price Target (\$)	27.80	
USD/DKK (31/08/2021)	6.30	
<b>Price Target DKK 31/12/22</b>	<b>175.29</b>	
Closing Price August 31rd (DKK)	163.00	
<b>Upside Potential</b>	<b>7.5%</b>	

Source: Author Estimates

Note: P/E was not considered for the valuation, Equity Research, report.

Equity Value Multiples	Min	Max
<b>P/E</b>	-12.7	17.8
Peers Average	2.5	
DS NORDEN EPS	5.09	
<b>DS NORDEN Equity Value</b>	<b>12.8</b>	
# of Shares outstanding	36.1	
Price Target (\$)	0.4	
USD/DKK (31/08/2021)	6.30	
<b>Price Target DKK 31/12/22</b>	<b>2.24</b>	
Closing Price August 31rd (DKK)	163.00	
<b>Upside Potential</b>	<b>-98.6%</b>	

Source: Author Estimates

## Appendix 38: Sensitivity Analysis: Payout-Ratio vs Cost of Capital (Equity)

		Payout-Ratio 2022F												
		52.50%	53.00%	53.50%	54.00%	54.50%	55.00%	55.50%	56.00%	56.50%	57.00%		57.50%	
Cost of Capital (Equity)	5.80%	257.37	257.14	256.91	256.68	256.45	256.22	255.99	255.76	255.54	255.31	255.09	-1% Base Case +1%	
	6.00%	246.37	246.17	245.97	245.77	245.58	245.38	245.18	244.99	244.79	244.60	244.40		
	6.20%	236.29	236.12	235.95	235.78	235.61	235.44	235.27	235.10	234.93	234.77	234.60		
	6.40%	227.02	226.87	226.72	226.58	226.43	226.29	226.14	226.00	225.86	225.71	225.57		
	6.60%	218.46	218.34	218.21	218.09	217.96	217.84	217.72	217.59	217.47	217.35	217.23		
	6.80%	210.54	210.43	210.33	210.22	210.12	<b>209.96</b>	209.91	209.81	209.70	209.60	209.50		Base Case
	7.00%	203.18	203.10	203.01	202.92	202.83	202.74	202.66	202.57	202.49	202.40	202.32		
	7.20%	196.34	196.26	196.19	196.12	196.05	195.97	195.90	195.83	195.76	195.69	195.62		
	7.40%	189.95	189.89	189.83	189.77	189.71	189.65	189.60	189.54	189.48	189.43	189.37		
	7.60%	183.97	183.92	183.88	183.83	183.79	183.74	183.69	183.65	183.60	183.56	183.52		
7.80%	178.37	178.33	178.30	178.26	178.23	178.19	178.16	178.13	178.09	178.06	178.03			
		← -2.50 %					Base Case	+2.50 % →						

Source: Author Estimates

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## Recommendation System

Level of Risk	SELL	REDUCE	HOLD/NEUTRAL	BUY	STRONG BUY
High Risk	$0\% \leq$	$>0\% \ \& \ \leq 10\%$	$>10\% \ \& \ \leq 20\%$	$>20\% \ \& \ \leq 45\%$	$>45\%$
Medium Risk	$-5\% \leq$	$>-5\% \ \& \ \leq 5\%$	$>5\% \ \& \ \leq 15\%$	$>15\% \ \& \ \leq 30\%$	$>30\%$
Low Risk	$-10\% \leq$	$>-10\% \ \& \ \leq 0\%$	$>0\% \ \& \ \leq 10\%$	$>10\% \ \& \ \leq 20\%$	$>20\%$