Master's Thesis

Copenhagen Business School | MSc. Finance and Strategic Management

A Strategic Financial Analysis of the Salmon Farming Industry

- A Fundamental Valuation of SalMar ASA

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Executive Summary

During the last decade, the value of Oslo Seafood Index has increased ten-fold. From being a part-time sub-industry in the early 1970s, Norwegian salmon farming has undergone a tremendous transformation. The development of salmon farming has gone from being fragmented to a consolidated industry driven by a series of M&As. In this respect, the objective of this thesis has been to determine the fair value of SalMar ASA, one of the world's largest producers of Atlantic salmon. For this purpose, various valuation techniques have been applied, including the present value approach and relative valuation.

The industry's profits and cash flow are directly and indirectly influenced by the spot price of salmon. Meanwhile, the spot price of salmon is mainly determined by the interaction between supply and demand. A comprehensive analysis of the industry and the environment revealed that the prices of salmon are expected to increase. This is mainly due to favorable macroeconomic factors that is expected to contribute to increased demand for salmon in the future. On the other hand, supply growth is expected to stagnate due to natural, biological and governmental constrains.

The fundamental analysis yielded a theoretical share price of NOK 630 as of April 26th 2021. Compared to the market price of 582.8, the valuation of the underlying asset indicates a discount of 8.1%. This suggests a potential upside for investors, which is unrelated to the general performance of the company.

Finally, a special thanks to our supervisor, Andreas Zarp-Karsholt, who has helped us overcome the obstacles associated with this thesis. Additionally, we would like to thank Kontali Analyse for providing in-depth analysis' and up to date industry data.

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1.0 Introduction

1.1 Context and motivation

The Norwegian environment and extensive coastline yield ideal conditions for salmon farming. From being a part-time sub-industry in the early 1970s, Norwegian salmon farming has undergone a tremendous transformation. Particularly the years after 2005 has been characterized by significant changes in regulations, technological improvements, and industry composition. Today, salmon farming companies makes up around 12% of the Oslo stock exchange benchmark index and represent one of Norway's largest export products (NOU, 2019).

After the IPO in 2007, SalMar has grown to be the 15th largest company overall, and the 3rd largest of the salmon farming companies on OSEBX. SalMar is currently the second largest producer of Atlantic salmon in the world with operations in Norway, Scotland, and Iceland. SalMar has historically been associated as a cost-efficient and shareholder friendly company, achieving high rates of return. In 2014, they changed their vision to "Passion for Salmon". Instead of purely focus on results, they are now striving to achieve economic growth through excellent sustainable, environmental, and societal performance.

Recent biological difficulties have resulted in significant investments in new technology and development of innovative solutions to farm salmon. SalMar leads the way in developing solutions for offshore farming. Good biological results have increased their focus towards farming in the open ocean.

Salmon farming has grown to be a dominant industry in Norway and is expected to play an even greater part in the future. SalMar has proved the ability to outgrow its competitors in an increasingly consolidated industry. Furthermore, SalMar's prominent results in utilizing new technology leads the industry into a possible new aera. The motivation for the thesis is rooted in the increasing importance of aquaculture for the Norwegian economy. SalMar (henceforth Salmar) is chosen as they display innovative and strong features which appears highly interesting.

1.2 Problem statement

Fundamental share price valuation is a complex procedure, much due to the fast changes that occur in the macroenvironment, industries, and within a specific firm. Thus, the availability of comprehensive and up-to-date valuation studies are crucial to an investor's financial success. The purpose of this thesis is to determine the fair value of Salmar's share price by conducting a fundamental analysis and applying various valuation techniques. An accurate estimation of the fundamental value reveals whether the market has mispriced the share. If the fair value deviates from the stock market, this thesis will provide valuable insight that can benefit investors when managing their portfolio.

The following problem statement has been formulated:

> *What is the fundamental share price of Salmar as of April 26th 2021, and how should an investor act based on this?*

To offer a full response to the above problem statement, a series of sub-questions is required. The following paragraphs present a set of questions for each chapter that will be addressed. This is to ensure that readers have a sufficient grasp of Salmar as a company and the many elements impacting the share price valuation.

Introduction to Salmar and the salmon farming industry

To perform accurate valuation, it is necessary to have a solid understanding of Salmar and the industry. This implies an understanding of the composition of the industry and how the company is positioned. Moreover, this entails knowledge about the value chain, the market's major players, the evolution of the industry and other market features.

- What are the characteristics of Salmar?
- How is the salmon farming industry structured, and how is Salmar positioned?
- How has the industry evolved over time?
- What determines the salmon price?

Strategic Analysis

In order to provide a trustworthy forecast of Salmar's future earnings, a thorough understanding of the non-financial value drivers in the salmon farming industry is needed. Hence, this section will examine both external and internal factors impacting Salmar's ability to generate value.

- What are the main macro-factors affecting Salmar?
- How does the competitive landscape in the industry affect the future earnings prospects?
- Does Salmar hold resources and capabilities that can be categorized as competitive advantages, and are they likely to be sustainable?

Financial analysis

In order to enable a reliable financial analysis, the financial statements will be adjusted in order to make them better suited for valuation purposes. The financial statements will be restated by separating the items either belonging to 'operations' or 'financing'. The intention of this adjustment is to provide a more solid foundation for understanding Salmar's primary sources of value creation. Moreover, to get a thorough understanding of Salmar's financial situation, a profitability- and liquidity analysis will be conducted. By benchmarking Salmar's past performance to identified peers, it is possible to get a better idea of the company's future profitability.

- How has the financial situation of Salmar developed historically, and what does it indicate about the financial performance going forward?
- How are relevant peers priced on multiples compared to Salmar?

Forecasting

By relying on the identified key value drivers from the strategic- and financial analysis, this section seeks to provide credible projections for Salmar's future revenues and profitability.

- How is the outlook of the environment, industry and firm-specific factors expected to affect the key financial value drivers, and what does this imply for the forecasted free cash flow?

Valuation

Financial theory offers numerous methods to valuate a company and using more than one approach helps to improve the reliability of the results. Hence, the company will be valued using a combination of fundamental analysis and relative valuation approach.

- What is a reasonable estimate for the company's weighted average cost of capital (WACC)?
- What is the intrinsic value of Salmar's share based on present value models?

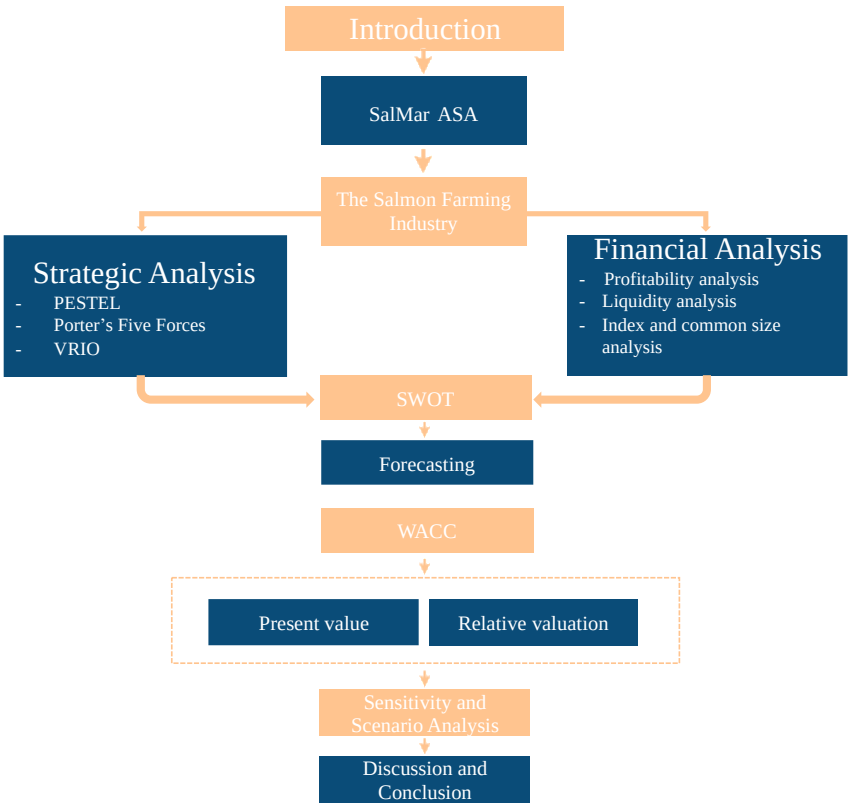
Sensitivity analysis

Given that the estimated value of equity is dependent of various variables and assumptions, it is necessary to study the uncertainty in the model. Conducting a sensitivity analysis helps reveal the degree of dependence on certain variables which will further enable readers to apply their own assumptions.

- How robust is the estimated share price to changes in key value drivers and assumptions?

It is necessary to address all of the sub-questions in order to completely answer the problem statement. Furthermore, the sub-questions naturally form the structure of the thesis:

Figure 1: The structure of the thesis and the relationship between the sections.



Source: The authors own compilation.

1.3 Methodology

The objective of this thesis is to estimate the intrinsic value of Salmar ASA. Different theories and models have been utilized in the valuation, supplemented with various data sources. All collected information is, to the best of the authors extent, considered objectively in order to make rational decisions. However, the authors acknowledge that subjective interpretations will have an impact on the estimations. Furthermore, although figure 1 provides a brief overview of the relevant frameworks and models, a more detailed presentation will be provided sequentially as they are used throughout the thesis. Additionally, if necessary, a rationale for the choice of model will be given. The reason for not presenting the relevant literature in a separated section is to facilitate a better flow for the reader. Moreover, it is generally assumed that the reader is familiar with basic financial- and economic terminology.

1.3.1 Data collection and evaluation of sources

As the thesis is taking the investor perspective, only publicly available information is going to be used in relation to the valuation. While analyzing quantitative data, it is vital to maintain a critical eye on the data collection process. It is therefore important to consider whether the sources have incentives to promote themselves or connected parties. Thus, the authors have strived to maintain critical in the collection of quantitative and qualitative data.

To ensure reliability and validity in the thesis, the primary sources of data have been well-known books, such as Koller et al (2010; 2015), Asche & Bjørndal (2011), Damodaran (2012) and Plenborg & Kinserdal (2021). However, Denmark was among the first European countries to introduce lockdown measures, which led to the lockdown of the library at Copenhagen Business School. This resulted in limited access to the most up-to-date literature. Moreover, another consequence from the regulations was that the authors had to primarily rely on online communication, instead of meeting up in person. Hence, some books have been updated and re-published, which explains why some sources have been cited in multiple editions.

Financial company data is collected from annual- and quarterly reports, published by Salmar and the relevant peers. These may include biases, particularly in the calculation of fair value related to certain accounting items. According to Plenborg & Kinserdal (2021), however, financial statements from the annual report is considered to be among the most reliable sources of information. This is because the financial statements are audited by an independent party and must be seen in compliance with accounting standards. Moreover, the Director's report in the annual- and quarterly reports are also

considered to be reliable, since they are issued by the board, and in most cases review by an auditor (Plenborg & Kinserdal, 2021).

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Analyst reports, reports from professional external experts, consulting firms, and other peer reviewed material has been used to supplement discussions and to analyze historical performance as well as future prospects. Such reports are often considered to be reliable as they tend to be more objective (Plenborg & Kinserdal, 2021). Thus, reports from Kontali Analyse, PwC, KPMG, The Norwegian Central Bank, The World Bank, FOA, IPCC, and IMF have been used for data collection and discussion. However, one should be aware that these experts might have incentives to provide biased information. Nevertheless, empirical evidence has been peer-reviewed studies, and when available, several sources of evidence have been provided to support the results.

1.4 Delimitation and Assumptions

- Since the thesis is written from an external investors point of view, only publicly available information, such as annual- and quarterly reports, industry reports, articles, newspapers, books, etc., will be included.
- Salmar released its annual report on Friday April 23rd, 2021. However, since Oslo stock Exchange is closed during weekends, April 26th was the first trading day after the annual report was released. Hence, the ladder date has been set as the cut-off date for information used in this thesis, and also the date of valuation.
- This thesis does not emphasize a through explanation of financial literature, since it is assumed that the reader has a general understanding of financial- and economic terminology.
- The time-series forecast of the salmon price is considered as a univariate time series. This implies that the forecast consists of a single observation recorded sequentially over equal time increments. There are, however, a large number of variables affecting the salmon price, but establishing a benchmark forecast model is out of the scope of this thesis.

- The spot price of salmon in Norway is extracted from Fish Pool. This price is used as a global price, although prices can slightly differ across regions.
- When estimating the future spot price of salmon, only the key observable variables are considered. Factors such as seawater temperature, exchange rates, new regulations (e.g., trade barriers) is thus not included.
- In 2019, a set of new IFRS accounting standards were introduced. This means that annual reports prior to the new standards required additional adjustments. In addition, assumptions have been made where adjustments where required despite lack of information in the company reports. The authors acknowledge that there might be differences in specific accounting policies and hence basis of some reported number.
- This thesis focusses exclusively on Atlantic salmon, unless otherwise is stated.
- The thesis primarily focuses on the Norwegian market, as the country accounts for the majority production of Atlantic salmon. However, information related to salmon farming in other regions is needed to get a better understanding of the industry. Hence, some additional information related to other salmon-producing regions is included.

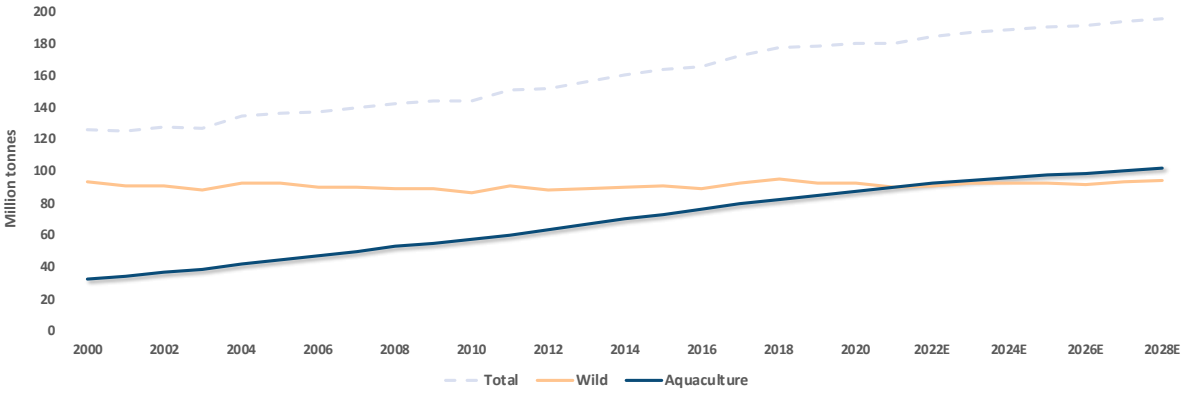
2.0 The Aquaculture Industry

2.1 Seafood and Aquaculture

The global seafood market is massive. Global production of seafood – both wild and farmed – has nearly doubled in the last three decades, rising from 98 million tonnes in 1990 to about 180 million tonnes in 2020 (Figure 2). According to FAO[1] (2020), the total value of seafood produced for human consumption at the point of first sale is around USD 400 billion, with aquaculture accounting for 88 million tonnes with a value of more than USD 250 billion. Since the late 1980s, the long-term trend in overall wild-caught fisheries has been relatively stable, with annual catches typically fluctuating between 86 million and 93 million tonnes (FOA, 2020). During the same period, an aquaculture technology revolution occurred, resulting in a significant increase in production. Between 1961 and 2017, global fish consumption grew at an estimated annual rate of 3.1 percent, almost double the rate of yearly world population growth (1.6 percent) over the same timeframe, and far higher than all other animal protein foods (FOA, 2020). Aquaculture is currently the fastest-growing food-producing sector in the world.

[1] The Food and Agriculture Organization of the United Nations

Figure 2: World capture fisheries and aquaculture production (1990-2028E)



Source: Authors own construction based on data from (OECD/FAO, 2020)

2.2 Salmon aquaculture

Salmon is one of the leading species in modern industrial aquaculture. The term 'salmon' refers to many species of fish in the family Salmonidae (for instance, Atlantic salmon and Coho salmon), while other family members are referred to as trout (e.g., brown trout, rainbow trout). Salmon are found in the Atlantic and Pacific Oceans, as well as other landlocked lakes around the world. The markets for farmed Coho salmon, rainbow trout, and wild salmon species from Pacific fisheries have all experienced growth, but it is Atlantic salmon that account for the majority proportion of export revenue (FOA, 2020). Although some of these fish are available both wild and farmed, most Atlantic salmon sold commercially is farmed. In 2020, Atlantic salmon accounted for around 60% of the overall (both wild-caught and farmed) salmon supply (Kontali, 2021).

In the 1970s, Norway pioneered salmon aquaculture, which became commercially viable in the early 1980s. It later spread to a variety of countries in Europe, the Americas, Asia, and Australia as a consequence of its successful development. The harvest of farmed salmon – Atlantic salmon, Coho salmon, and salmon trout – has risen from a few thousand tonnes in 1980 to about 3.9 million tonnes in 2019 (Asche & Bjørndal, 2011; Kontali, 2021), and salmon is now consumed all over the world. The majority of farmed salmon production occurs in Norway, Chile, Scotland, and Canada, and is primarily conducted in vast nets in sheltered waters such as fjords or bays. There are currently two main producers, Norway and Chile, that accounts for more than 70% of the total production of Atlantic salmon. Norway's salmon farms are located along the country's extensive coastline, which features several fjords, inlets, and islands. These features, combined with generally steady water temperatures (ranging from 4 to 15°C) and a developed infrastructure, provide an ideal climate for salmon farming.

This has resulted in Norway being the world's largest producer of farmed salmon, with an estimated harvest of approximately 1 461 500 tonnes round weight in 2020 (Table 1).

Table 1: Total harvest quantity of all farmed salmonids in 2020 by country

Country	Atlantic salmon	Large trout	Coho	Small trout	Chinook	Total
Norway	1 369 000	92 500				1 461 500
Chile	778 400	83 700	204 300			1 066 400
UK	178 300	5 000		10 000		193 300
Canada	137 500	1 700		10 000	3 000	152 200
USA	20 000			25 000		45 000
Faroe Islands	80 600					80 600
Ireland	15 800	500				16 300
Australia	82 700	5 000				87 700
Iceland	31 200					31 200
Others	18 900	118 700	10 000	589 800	15 300	752 700
Total	2 712 400	307 100	214 300	634 800	18 300	3 886 900

Source: Author's construction based on data from (Kontali, 2021)

2.3 The salmon production process

Salmon are a group of anadromous fish. In the wild, the eggs are hatched in fresh water until the fish eventually migrate to sea. In the meantime, the fry undergoes a complex physical transformation known as smoltification[2]. In salmon aquaculture, on the other hand, this process is carried out in industrial production sites rather than naturally in the wild. Accordingly, the production cycle in salmon aquaculture is a lengthy process that require high degree of control. The cycle can take up to three years until the salmon eventually is ready for harvest. During the first year, the eggs are fertilized, and the fry are raised to smolt in a managed freshwater environment. Hereafter, the fish are transferred for grow-out in seawater cages, until they reach a size suitable for harvest. This grow-out process usually takes one to two years, mainly depending on seawater temperature, which vary throughout the year and across regions.

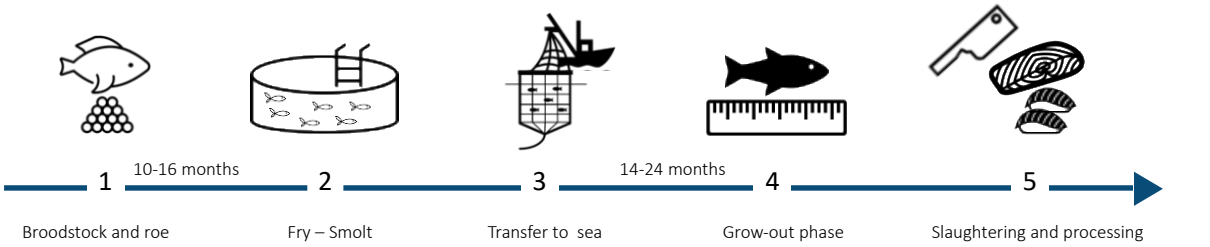
In the aquaculture industry, the salmon production process starts within an incubator. Just like wild salmon, the fertilization of roe (eggs) takes place in fresh water. The roe is kept at a constant temperature of around eight degrees Celsius, and about 60 days later the eggs hatch. The roe is either produced in-house, or from external suppliers. Established suppliers of roe can scale their production by obtaining more or less broodstock[3] during the preceding season. When the eggs hatch, the salmon fry nourishes themselves from a yolk sac that is attached to their stomachs. The fry can further be fed and moved to larger tubs as they grow. After 10 to 16 months, the salmon weigh between 80 to 120 grams as they

[2] Fry refers to recently hatched baby salmon. The fish becomes smolt when they approach the time when they are ready to migrate to sea and adapt to saltwater life.

[3] Broodstock are a group of mature fish used in aquaculture for breeding purposes.

have gone through the smoltification change, which enables the salmon to live in salt water. Finally, the fish is reared in aquafarms with optimal living conditions until it has reached its market-ready weight of 2-5 kilograms, which usually takes place 12-18 months after smoltification. Figure 3 illustrates the steps in the production of Atlantic salmon.

Figure 3: Production cycle based on the biological system of Atlantic salmon

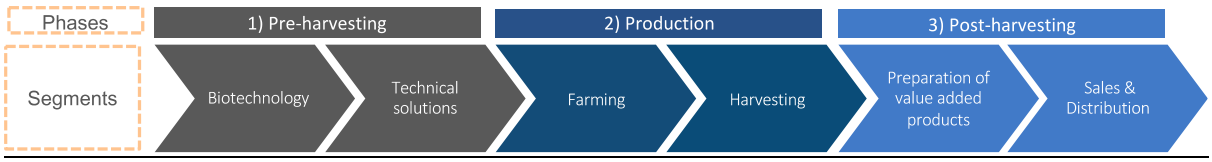


Source: Author's construction based on data from (EY, 2021)

2.4 The Value Chain

There are many steps and players involved in the production of salmon. The value chain includes, among others, production of broodstock and roe, smolt, fish processing, trade and suppliers of products and services. For analytical purposes, the value chain and value creation in salmon aquaculture can be portrayed in a variety of ways. Bearing in mind that some suppliers are needed at every stage of the value chain (e.g., technical solutions), it can be generally broken into three main phases: i) pre-harvesting, ii) production, and iii) post-harvesting. Each of the three phases are then divided into two subsegments, which will be explored in the subsequent sections. The value chain is illustrated below.

Figure 4: The salmon aquaculture value chain (for illustration purposes only)



Source: Author's creation

The pre-harvesting phase encompasses all activities undertaken prior to the farming of salmon. Two crucial segments related to this phase are biotechnology and technical solutions. Services related to the biotechnology segment are, for instance, veterinary services and disease prevention, feed production and environmental management. On the other hand, the technical solutions segment comprises businesses that derive roughly 50% or more of their revenue from the aquaculture industry but are not specifically related to any of the other segments. As a result, the businesses in this segment offer a

diverse range of goods and services. Examples of such businesses are providers of software solutions and new technology, producers of well-boats and vessels, and consulting services.

The production phase is based on the whole life cycle of the fish, from breeding and fertilization of eggs, to smoltification of fry and eventually releasing the fish to sea until it finally is ready for harvest. Hence, this phase is broken into two segments, namely farming and harvesting. In the farming segment, the smolts are transferred to grow-out farms where they are raised to marketable size. This usually takes place in sea pens in areas suitable for salmon farming. However, the need for new areas for salmon farming has pushed the industry to explore offshore farming as well as land-based farming. These alternative approaches to farm salmon will be elaborated on later in this paper. Meanwhile, the second segment in the production phase is harvesting, which in short is the process of gathering the fish from the tanks and preparing them for the third phase.

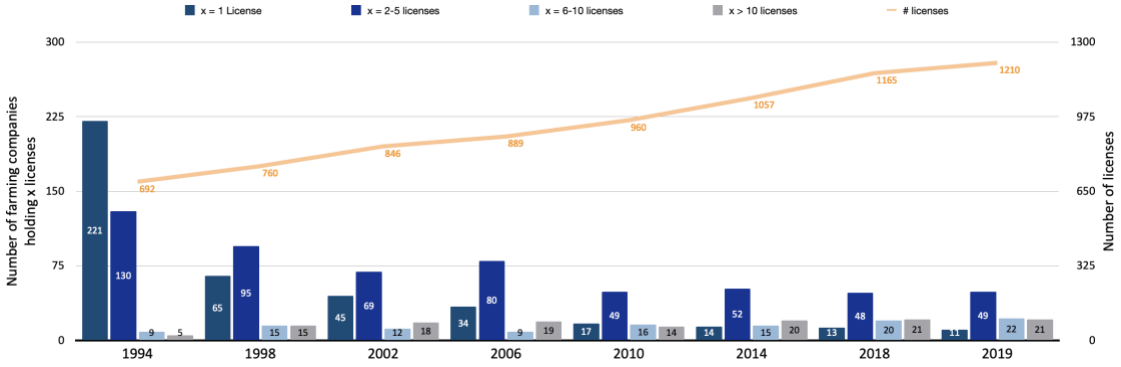
The final phase is post-harvesting and encompasses all services taking place after harvesting that provide added value to the products. This phase is further divided into preparation of value-added products (VAP), in addition to sales and distribution. The VAP segment mainly involves processing of fish. It is important to distinguish between primary and secondary processing. Primary processing consists of the slaughtering and gutting of the fish. The standard price indexes for farmed salmon are determined from primary slaughtered salmon. Secondary processing, however, involves operations like fillet trimming, filleting, portioning, smoking, marinating, or breading. This type of processing represents an added value to the consumer and is hence known as value-added products. Another essential feature is the processing of discards and fish waste from the production, which is crucial to minimize negative externalities. Finally, the sales and distribution segment involve marketing, packaging, transportation, and distribution. This sector allows the goods to reach the final consumer directly, or more commonly, indirectly through supermarket chains, restaurants, and large-scale buyers.

2.5 Industry development

Commercial aquaculture of Atlantic salmon started in Norway with a technological breakthrough in the construction of floating cages. Along with being far more successful, salmon production in floating seawater cages was found to be less costly and to have lower capital and operational costs than previously tested onshore tanks or closed environments. As of 1973, the first set of regulations were introduced, which was a government license required to engage in salmon farming. However, the repeated issuing of new licenses accelerated growth, and the industry was saturated by the late 1980's. The market responded in the early 1990's, as falling prices along with rising interest rates and banks tightening credit practices forced many farmers into bankruptcy (Asche & Bjørndal, 2011).

The licenses were initially used to influence the industry structure. Historically, one company could hold a majority interest (51% or greater equity stake) in a single farm only. However, the legislation was repealed in 1992, when it became clear that small businesses lacked the resources required to remain competitive in an increasingly sophisticated market. The lifting of restrictions on ownership enabled funding from a broader capital market. Moreover, this altered the ownership structure of the industry, and by 2004, the four largest players provided 47% of production (Asche & Bjørndal, 2011). Today, the ten biggest firms account for around 69% of the total Norwegian export of salmon. Hence, the development of salmon farming has gone from being fragmented to a consolidated industry driven by a series of M&As. In 1994, five companies controlled more than ten licenses, totaling 76 licenses. Currently, there are 21 parties in this category, controlling a total of 848 licenses (Kontali, 2021).

Figure 5: Structural development, Norway 1994-2019



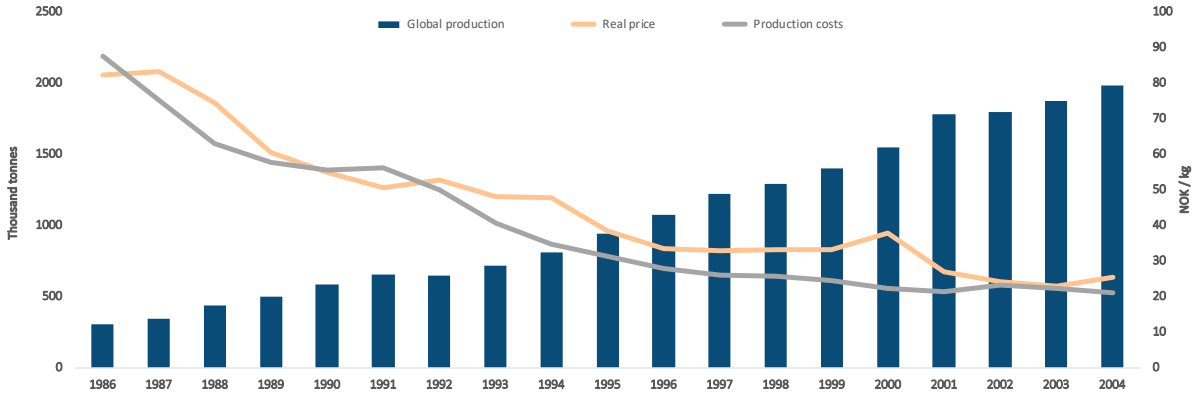
Source: Authors' construction based on data from (Kontali, 2020a)

Between 1990 and 2008, the industry nearly quadrupled its production, growing at an annual rate of 9.6 percent on average (Asche & Bjørndal, 2011). The large increase in production is a strong indicator that the industry has been profitable. Moreover, average production costs per kilogram have declined almost continuously since the late 1980s. This can partly be explained by increased productivity in terms of feeding routines, as well as disease prevention, improved feed conversion ratios, shorter grow-out periods, and lower mortality rates. Hence, the reduction of production costs has allowed prices to decline without lowering margins, which has attracted new customers and increased consumption by current customers.

Aquaculture is differentiated from other forms of marine production by the extent to which it allows for human intervention and control. This control has facilitated technological advancement, leading to increased production volume, decreased production costs, and thereby more affordable products for customers. This development is illustrated in figure 6, where it can be seen that the costs of production

in addition to the price of salmon have declined substantially throughout the years, despite the massive increase in production. This contrasts with wild-caught fisheries, in which fishermen must seek out fish and thus have limited control over the nature of the catch. Additionally, since one has little control over harvest scheduling, it is challenging to design effective logistics systems and to meet the market demand.

Figure 6: Global production of farmed salmon, production cost and real price (1986-2004)

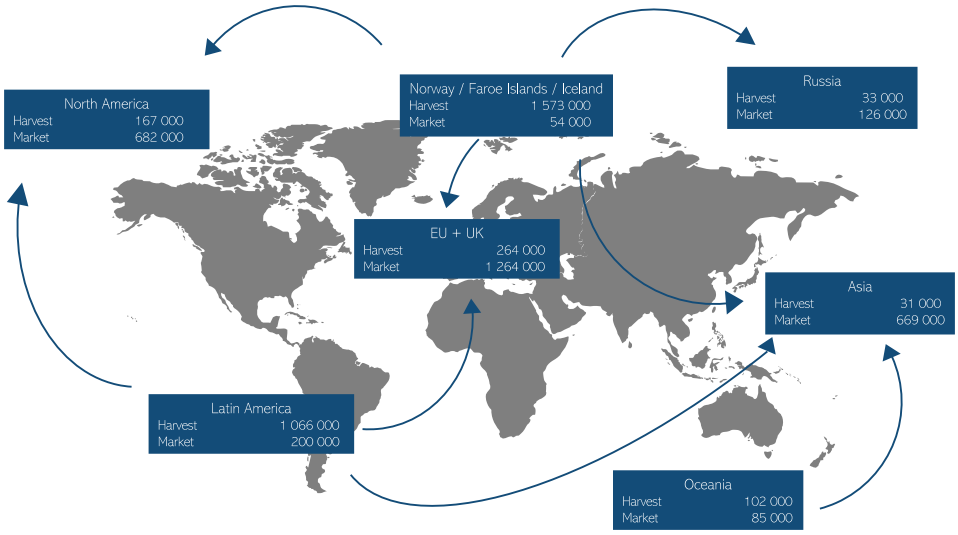


** Prices and costs adjusted for inflation*
Source: Author's construction based on data from FOASTAT & Directorate of Fisheries

2.6 The Market

For the salmon farming industry, global trade and export to distant markets have been fundamental for the growth and value creation the past decades. However, consumption varies widely based on geographic area, culture, and purchasing power. Although the prices of salmon have decreased, it is still considered a high-value species and a relatively expensive product (Asche & Bjørndal, 2011). As a result of their ability to pay, the EU, Japan, and North America are the most relevant markets, and this is where the bulk of the product is consumed. Each of the salmon producing regions have historically focused on developments in the nearby markets (Mowi, 2020). However, improved logistics and a positive reputation has led to consumption of salmon all over the world. Many developing markets, such as Brazil, Eastern Europe, and Southeast Asia, have seen strong growth since 2000, with demand increasing substantially. Figure 7 illustrates the global trade flow of farmed Atlantic salmon.

Figure 7: Global trade of farmed Atlantic salmon 2020E



Source: The authors construction based on data from Kontali (2021)

2.7 Salmon Price

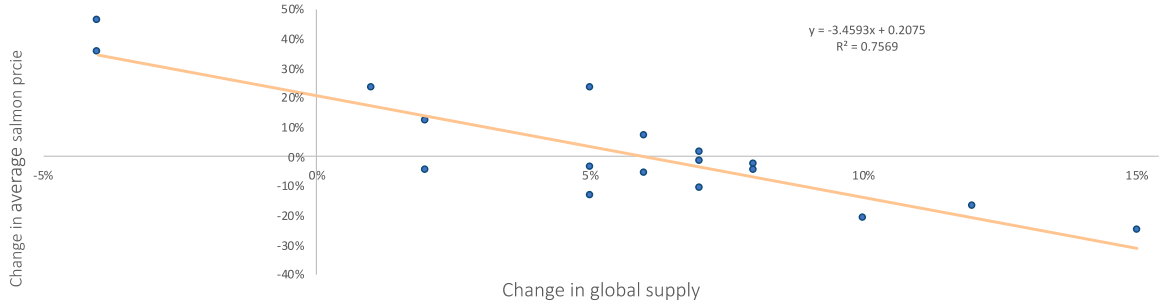
Historically, the price of salmon has been prone to significant fluctuations from period to period and between seasons. The price of salmon is mainly determined by the interaction between supply and demand. The total supply, however, is constrained by several factors, including the available biomass and harvesting capacity, biological, natural and regulatory factors. The term 'biomass' refers to the overall number of fish in the sea pens, and industry regulations limit the maximum allowed biomass (MAB) at each production site. Salmon is harvested throughout the year, while new smolts are transferred to the pens for grow-out to replace the harvested fish. Although harvesting and smolt release takes place in all twelve months of the year in Norway, the majority of smolt release takes place during spring and autumn, while most harvesting takes place the last half of the year due to better sea temperatures for growth (Mowi, 2020). Summer marks the beginning of a new generation of harvesting, and as a result, weight dispersion between large and small harvested salmon is greater than other times of the year (Mowi, 2020).

The achieved price of salmon also depends on the size and quality of the fish at harvest. Accordingly, the harvesting date depends on the fish's biological growth (SalMar, 2021). The primary cause for size variation is the biological mechanism by which individual fish evolve at different rates. The European food processing industry, which is the main customer for Atlantic salmon, purchase mostly fish weighting between 3 and 6 kg, yet specialized markets exist for smaller and larger fish (Mowi, 2020). Small fish are generally discounted, whereas large fish are sold at a premium. Nevertheless, biological factors, such as infectious diseases and parasites is also influencing the total supply and the time of

harvest. When the fish are unable to be cured, or the cost of curing is prohibitively high, the fish must be harvested and sold before reaching optimal size.

While Norwegian salmon is sold both in the spot and forward market, the price is determined by the interaction between supply and demand. Accordingly, the correlation between global supply and average salmon price are very strong. Between 2001 and 2011, linear regression revealed that changes in supply explained 85% of the change in price (Appendix 1). Between 2012 and 2013, however, the demand for salmon significantly overperformed, while supply growth stagnated as a result of tighter regulations. By removing this period from the sample, changes in supply in the period 2001-2020 explains 75% of the changes in price. As illustrated in figure 8, there is a negative correlated relationship between supply growth and salmon prices.

Figure 8: Regression: Change in supply, change in price



Source: Authors own calculations based on data from (Mowi, 2020; Kontali, 2021).

3.0 SalMar ASA

Salmar ASA is a Norwegian-based fish farming and processing company headquartered on Frøya, Central Norway. The company is primarily engaged in the production of farmed salmon and is currently the second largest producer of Atlantic salmon. Salmar is organized into two main business segments: fish farming and sales & industry. Their fish farming segment harvested 173.500 GWT in 2020 through their operations in Norway, Iceland, and Scotland. The sales & industry segment is responsible for placing and selling the entire group's harvested volume. Salmar has a market capitalization of NOK 66bn and employs more than 1.700 as of April 26, 2021.

3.1 History

Salmar was founded in 1991 following an acquisition from a company that had gone into liquidation. Salmar then acquired one license to produce farmed salmon and a white fish harvesting and processing

plant. Following several acquisitions between 1991 and 2006, Salmar was listed on Oslo Stock Exchange May 2007 under the ticker SALM.

In 2009, Salmar initiated the construction of the world's most innovative and efficient harvesting and processing facilities, InnovaMar. After the completion in 2011, the facility has been a flagship representing Salmar's vision to be the most cost-effective producer of salmon in the world. Salmar expanded their operations towards Iceland in 2015 with an indirect ownership in Arnarlax Ehf (currently known as Icelandic Salmon). The following year, Salmar was awarded the first eight development licenses for Ocean Farming AS. Production started just two years later and has shown promising results driving the industry into a new aera. Salmar is today a fully integrated producer of salmon, founded in several acquisitions throughout their history.

3.2 Strategy and vision

Salmar has activities in Norway, Iceland, and Scotland through wholly owned companies, subsidiaries, and associates. Customers from all over the world buy the company's goods, with a special emphasis on Europe, North America, and Asia. Salmar actively seeks out attractive M&A opportunities for further growth (SalMar, 2021).

Salmar's corporate activities are driven by two well-defined strategic goals that serve as the pillars of their strategy. First, on the farming side, the company stive to optimize operating efficiency in order to produce their salmon at the lowest possible cost. Second, on the sales and processing side, Salmar aim to obtain the best possible price for their product and ensure optimal yields. These two strategic objectives have remained unchanged over the years, ensuring Salmar's leading position in the global salmon industry. Although the company remains committed to its specified objective of cost leadership, they are transitioning from a focus on outcome to a focus on performance. In 2014, the company's vision was rebranded 'Passion for Salmon' as a result of their commitment to sustainable growth. After two production cycles with good results from their offshore farming facility, Salmar has increased their strategic focus towards offshore farming. Initiating the design of Ocean Farm 2 and continuing the development of Smart Fish Farm, which is an even larger and more rough facility, is a clear focus area in Salmar's strategy (SalMar, 2021).

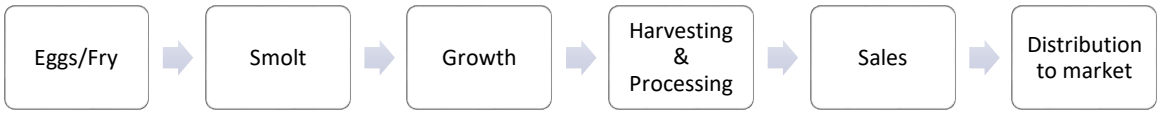
Innovation has always been at the heart of Salmar's strategy. As mentioned earlier, Salmar completed the construction of the world's most innovative and efficient harvesting and processing facility, InnovaMar, in 2011. The facility covers 17.500 m^2 of floor space and has the capacity of processing around 150.000 tones of salmon yearly (SalMar, 2021). Furthermore, Salmar has invested in the

construction of a new harvesting and processing facility in Senja, Northern Norway. The facility is supposed to back up their operations in Northern Norway and make shipment easier and more convenient. This will further enable Salmar to process the salmon with less shipment costs and reduce the time until the product is delivered to consumers (SalMar, 2021).

3.3 Value Chain

Salmar is vertically integrated along the entire value chain within the salmon farming sector. Their operations include eggs and fry, smolt, farming, harvesting and processing, sales and distribution (SalMar, 2021). In addition, Salmar is actively engaging in innovation projects, R&D, and acquisition of other fish farming companies. The value chain of salmon farming, and the aquaculture industry in general, is covered in the previous chapter. The following figure visualizes Salmar's operational activities.

Figure 9: Salmar's value chain



3.4 Share price development

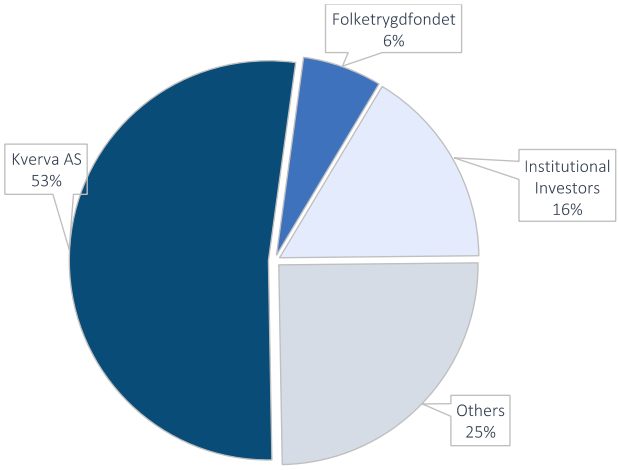
Salmar's share price has increased about 1400% since its initial public offering (IPO) in 2007. This tremendous growth has provided shareholders with a sweeping 21.3% compounded annual rate of return. It was not, however, any severe movements before the climb started in 2013. The share price has since increased steadily until 2021, with some major setbacks during this period. The following section will cover some of the major global economic events that have taken place and some company-specific events which could have caused the variations. For a more detailed overview of Salmar's share price development, including significant historical events, see appendix 2.

3.5 Investor Ownership

Kverva AS is Salmar's majority owner with appx. 53 percent of the shares. Gustaw Witzøe, which is the CEO and former Chairman, owns 93 percent of Kverva AS through his holding company Kvarv AS. The second largest owner is Folketrygdfondet with appx. 6 percent of the shares. Folketrygdfondet's main task is to manage the Government Pension Fund Norway on behalf of the Ministry of Finance. They have a mandate to be responsible and active owners, have a long-term

investment horizon, and achieving high returns over time (Folketrygdfondet, 2021). The bracket of institutional investors contains mostly large investments banks and financial institutions. Lastly, around 25 percent are dispersed among smaller shareholders. Furthermore, an overview of the Group structure, executing management and board of directors, see appendix 3.

Figure 10: Ownership Structure



Source: Own work based on data from (SalMar, 2021)

3.6 Introduction to Peer Group

Mowi ASA

Mowi dates to 1964 and is listed on Oslo Stock Exchange. The company has been through several restructurings and M&As since the start and was known as Marine Harvest Group until 2019. Mowi is the largest salmon produces in the world with an approximately market share of 20%. In 2020, Mowi harvested 440.000 GWT with revenues of EUR 3.8bn. While the firm's primary business areas include feed production, farming, as well as sales and marketing, the firm also maintains complete internal control over its genetics, harvesting, processing, and logistics (Mowi, 2020). Mowi is considered to be a great peer based on its characteristics.

Lerøy Seafood Group

Lerøy Seafood Group (LSG) dates to the 17th century and was a family-owned business until 1997. LSG was listed on Oslo Stock Exchange in 2002 and has since grown to be the 2nd largest producer of salmon. The group is also a whole-integrated provider of whitefish production and have operations within wild-catch fishing. The group harvested 182.900 GWT in 2020 and achieved revenues equal to NOK 20bn, where over 70% is linked to salmon farming. LSG has farming operations in Norway and Scotland

through their 50% ownership in Norskott Havbruk. The group has processing facilities in Europe, Asia, and North America (LSG, 2021). Even with operations in other segments, LSG is considered a good peer.

Grieg Seafood ASA

Grieg Seafood Group (GSF) was established in 1992 and was listed on Oslo Stock Exchange in 2007. GSF is currently ranked as the 6th largest salmon producer in the world with operations in Norway, Canada, and UK. The group harvested 71.000 GWT in 2020 and aims to reach 130.000 GWT in 2025. In 2021, GSF started building their own modern sales and market division and aims to expand their value chain into secondary processing and VAP production within 2025. Furthermore, the group received three out of ten development licenses for their offshore concept "Blue Farm" (GSF, 2021). GSF is a full-scale salmon farming company which makes it a great peer.

Norway Royal Salmon ASA

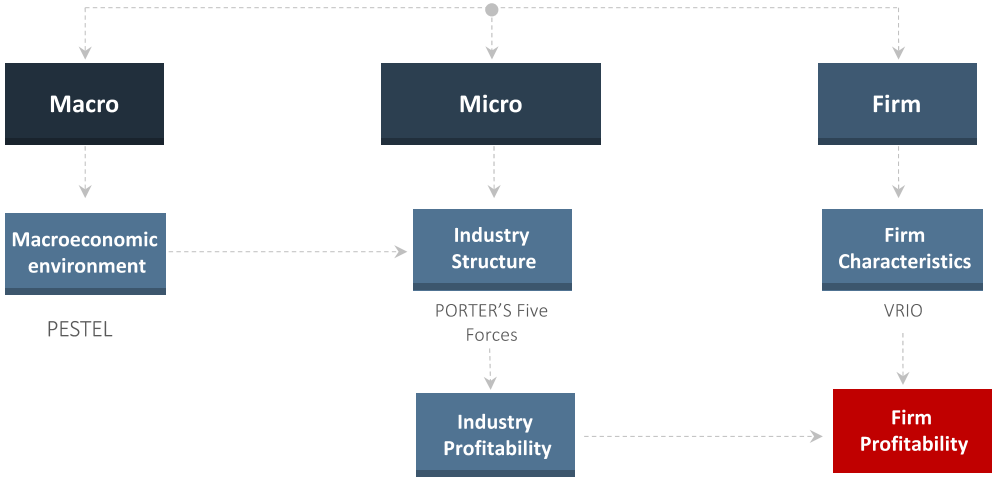
Norway Royal Salmon (NRS) was established in 1992 and was later listed on Oslo Stock Exchange in 2011. The group harvested 30.500 GWT in 2020 through their operations in Northern Norway and Iceland. In 2018, NRS received eight development licenses for their Artic Offshore Farming plant which is expected to be in operation during the summer 2021. Furthermore, the group have invested in their own hatchery and production facility which will be operational in 2021. Through increased integration and strategic agreements, NRS is represented across the whole value chain (NRS, 2020). NRS is relatively small compared to the other peers, however they have interesting features and are therefore included in the peer group.

4.0 Strategic Analysis

Having established the key characteristics of Salmar and the salmon farming industry, the following sections aim to identify the factors affecting Salmar's key value drivers. When forecasting future earnings, these factors constitute the fundament for Salmar's growth prospect and profitability. The strategic analysis has been split into two parts, assessing both external- and internal factors. The external analysis examines the industry forces and the macro-economic conditions affecting profitability and risks in salmon aquaculture. By doing so, the analysis seeks to identify opportunities and threats for Salmar. Whereas the external analysis focuses on the environmental threats and opportunities facing the firm, internal analysis helps identify the firm's organizational strengths and weaknesses. It also provides an understanding of which resources and capabilities are likely to be sources of competitive advantages, strengthening Salmar's future outlook.

The economic literature provides a great number of strategic models and frameworks. It is therefore important to assess the usefulness of the different models with respect to the industry under consideration. The PESTEL framework, Porter's Five Forces framework, and the VRIO framework have been chosen to ensure a comprehensive understanding of the micro-, macro-, and firm specific factors affecting Salmar. The Porter's Five Forces framework provides valuable insight into the forces shaping the industry's profitability, which is essential in forecasting Salmar's profitability going forward. Moreover, an important step in forecasting is to assess how Salmar's economic environment, such as macroeconomic conditions, will change in the years to come. Hence, a PESTEL analysis is chosen to take such conditions into account. Finally, a VRIO analysis is chosen to evaluate Salmar's firm specific resources- and capabilities. This analysis will help determine whether Salmar possesses any competitive advantages differentiating the company from its competitors.

Figure 11: Structure of the strategic analysis and interconnection between the models



Source; The authors creation

4.1 PESTEL

In order to estimate the future profitability of Salmar, it is important to have an overview of the macro-environmental factors that may have a profound impact on the company's performance. A PESTEL analysis will be conducted to analyze and monitor these factors. Moreover, the analysis will be used to examine how these factors generate both opportunities and threats for the company. The PESTEL analysis covers political, economic, socio-cultural, technological, environmental, and legal factors. For each factor, the analysis provides a description of the current situation, an opinion of the future outlooks, and the implied effect on future growth prospects for Salmar.

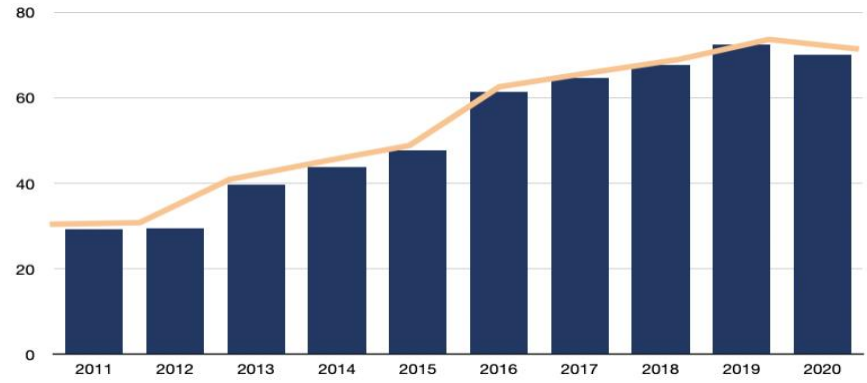
4.1.1 Political and Legal Factors

The following section seeks to provide insight into the general political- and legal environment of Salmar's operations. Essentially, farmed salmon is produced in Norway, Scotland, Chile, and Canada. Hereafter, the fish is shipped around the world for consumption. The following addresses aspects such as trade conditions, taxation policies, and industry legislation.

Trade conditions in Norway

Norway is an export driven economy, and the fish farming- and process industry is highly export focused. The most important exported goods are metals, engineering products, chemicals, and seafood (Norwegian Ministry of Trade, Industry and Fisheries, 2017). Since aquaculture plays an important role in the Norwegian economy, the authorities are attempting to increase the value of Norwegian seafood. The Norwegian Seafood Council (NSC), which is a public company owned by the Ministry of Trade, Industry and Fisheries, aims to further increase the demand for Norwegian seafood in both new and established markets (Norwegian Seafood Council, 2016). The export value of Norwegian Atlantic salmon has more than doubled the last decade, as illustrated below.

Figure 12: Value of Norwegian exported salmon (billion NOK)

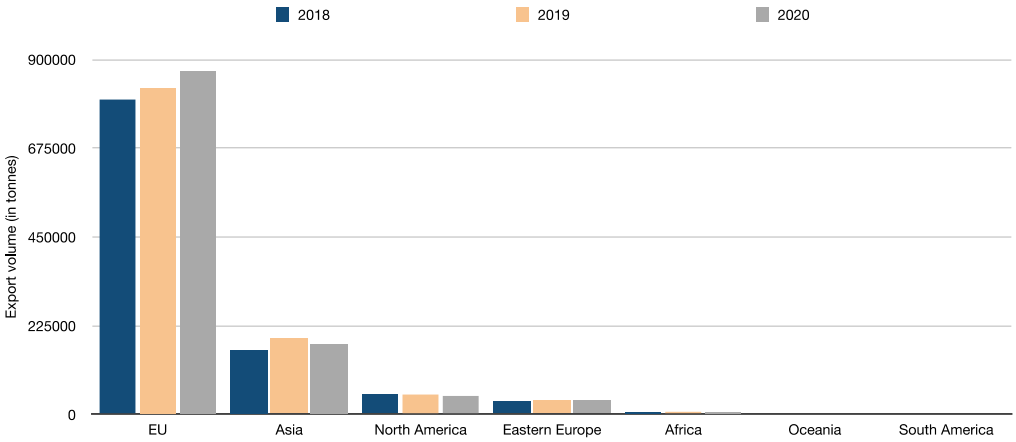


Source: Authors' compilation based on data from (Norwegian Seafood Council, 2021)

Access to international markets play an important role in the aquaculture industry, as salmon is exported for consumption worldwide. The vast majority of harvested salmon in Norway are exported and the industry is thus uniquely impacted by trade policies. In order to secure access to foreign markets, the government has entered several trade agreements. This has resulted in Norway being a member of several intergovernmental organizations, including the World Trade Organization (WTO), the European Economic Area (EEA), and the European Free Trade Association (EFTA), who are continuously working to dissolve trade barriers and promote faster and easier flow of goods across

borders. The EU market is clearly the most important market for Norwegian Atlantic salmon, followed by Asia and North America, which is illustrated in figure 13.

Figure 13: Export of Norwegian Atlantic salmon to regions



Source: Authors' compilation based on data from (Norwegian Seafood Council, 2021)

Fast growth in the production of salmon and fluctuations in profitability due to decreased prices and production costs have exacerbated trade tensions in the salmon industry. Several trade wars have erupted in the last decades, including the United States, the European Union, and Asia. Attempts to shield domestic producers from the full impact of international competition have been considered unfair by other global producers. As the Norwegian producers hold the largest market share, they have been the primary targets (Asche & Bjørndal, 2011). Russia was previously an important market for Salmar and other Norwegian salmon producers. However, due to trade sanctions imposed after the 2014 Crimean conflict, the Russian market remains closed to Norwegian fish farmers (SalMar, 2020). Additionally, China used to be a major importer of Atlantic salmon. However, after the Nobel Peace Prize was awarded to Chinese dissident Liu Xiaobo in 2010, China imposed a trade barrier against Norwegian exports. The Chinese salmon market has grown around 30% since the trade barrier, and Norwegian farmers had to give up their market share to other foreign players (Godfrey, 2020).

In 2015, China restricted the import of whole salmon from three main Norwegian areas, accounting for 40% of the country's overall yield. The reason for this was worries about the presence of salmon anemia and other virus variants in Norwegian farms (Karagiannopoulos, 2018). The Chinese market still accounts for a small portion of the exports from the Norwegian salmon industry. This is primarily attributed to limitations imposed on the importation of Norwegian salmon. Active attempts have been made over time to improve access to the Chinese market. In May 2019, China lifted its limitations on the Norwegian counties where they had applied. Salmar's harvesting plant InnovaMar was also included in the area where restrictions were lifted (Salmar, 2020). Hence, Norwegian supply of Atlantic salmon

to China almost doubled from 2018 to 2019 (Kontali, 2020). In 2015, China restricted the import of whole salmon from three main Norwegian areas, accounting for 40% of the country's overall yield. The reason for this was worries about the presence of salmon anemia and other virus variants in Norwegian farms (Karagiannopoulos, 2018). The Chinese market still accounts for a small portion of the exports from the Norwegian salmon industry. This is primarily attributed to limitations imposed on the importation of Norwegian salmon. Active attempts have been made over time to improve access to the Chinese market. In May 2019, China lifted its limitations on the Norwegian counties where they had applied. Salmar's harvesting plant InnovaMar was also included in the area where restrictions were lifted (Salmar, 2020). Hence, Norwegian supply of Atlantic salmon to China almost doubled from 2018 to 2019 (Kontali, 2020).

Industry regulations

All the salmon-producing countries regulate their industries. Regulations are primarily set to ensure that environmental standards are met, and that coastlines are appropriately protected. Osmundsen, Almklov, and Tveteras (2017) pointed out that managing and regulating the aquaculture industry is a complicated issue, with main contributors being uncertainty and lack of understanding about the effects of aquaculture production externalities. The Norwegian salmon industry has been regulated since salmon farming became commercialized. Although the regulatory design differs across regions, an environmental impact assessment is required in all countries. The following provides information of the regulations influencing industry structure and competitiveness.

Licenses and the traffic light system

As early as 1973, a government license was introduced as a regulatory tool needed to operate a fish farm in Norway. Since then, both the number of licenses and the size of the farms have been controlled by the government. The framework for the licensing system is established in The Aquaculture Act (2005), and applies to issues such as environmental standards, land utilization, entrance, as well as ownership and enforcement. The purpose of the Act is to promote profitability and competitiveness of the aquaculture industry within the framework of sustainable development on the coast.

Salmar’s operations are subject to increasingly stringent environmental laws and regulations. The growing awareness of businesses’ impact on the environment are increasing global concerns. To prevent activities that cause damage to the environment, a set of regulatory regimes are emerging. In late 2017, the Ministry introduced a new management system that regulates production capacity of Atlantic Salmon in the Norwegian aquaculture sector. The system is called ‘traffic light system’, since production zones are designed as being green, amber or red, depending on the perceived risk of salmon

lice-induced mortality on wild salmon. Growth is permitted in green zones, put on hold in amber zones, while production in red zones must be haltered or reduced in scale. As of February 2020, there were 13 production zones of which nine were designed green, two amber and two red (Norwegian Government, 2020)

Production Tax

In 2018, the ministry of finance appointed a committee to investigate possible new taxation of the aquaculture industry. Recent years' high profit margins and utilization of community resources (that is, seawater along the coastline), was the underlying foundation for the investigation. The principle that the community should have a share of the return on the utilization of community resources is the fundamentals of Norwegian politics (NOU, 2019). The committee presented three different taxation schemes in their report. Later in 2020, the Norwegian Government confirmed their choice of a production-fee of NOK 0,40 per KG produced salmon valid from January 1st, 2021 (Norwegian government, 2020).

Expected effect of political- and legal factors on future growth prospects

Changes in the political and legal climate in which Salmar operates are thought to have a **positive** effect in the forecasting horizon.

The industry is highly export focused and thus dependent on international relationships. Future value creation will therefore depend on international connections between the world's sovereign states. Trade conditions within- and between EU countries are especially important. However, conditions in the EU market are expected to be stable, as intergovernmental organizations are continuously working to dissolve trade barriers and promote easier, faster flow of goods. Moreover, NSC aims to further increase the demand for Norwegian seafood in both new and established markets, which is likely to increase the demand for Norwegian salmon going forward. Nevertheless, strict regulations prevent growth opportunities for individual farmers, such as Salmar. On the other hand, excessive growth in the short term can reduce future value creation, by not accounting for either the negative effects on the environment or the market. Hence, the regulations are set to ensure a sustainable long-term industry growth and is consequently expected to have a positive impact on future profitability.

4.1.2 Economic Factors

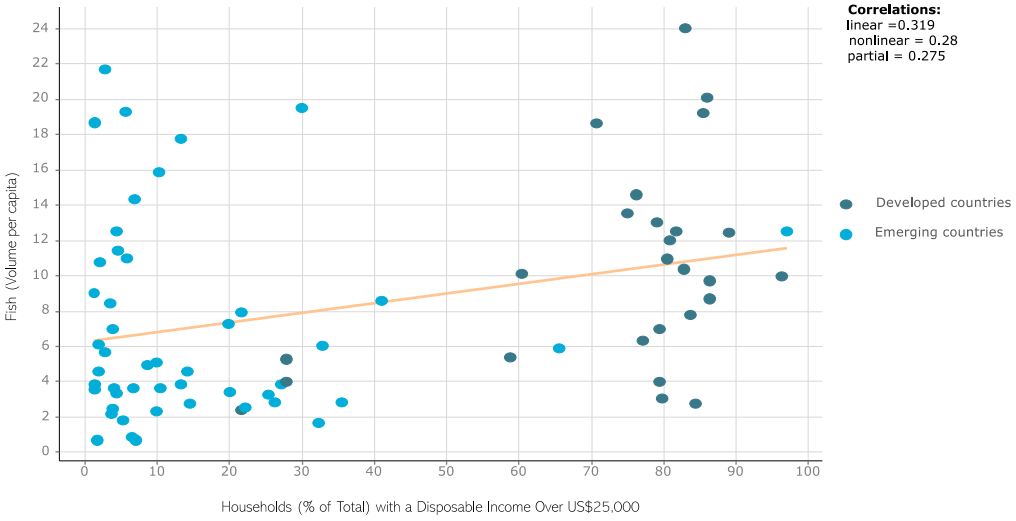
The salmon farming industry is mainly driven by consumer demand. Consequently, factors such as real gross domestic product (real GDP), annual disposable income- and expenses per capita, changes in salmon price, exchange rates, and interest rates are considered. These economic factors affect the industry both in the short and long run.

Real GDP and salmon consumption

Real GDP is an inflation-adjusted measure that reflects the value of all goods and services produced within a year by an economy, expressed in base-year prices. Countries with large GDPs will generate a greater amount of goods and services and will generally have a higher standard of living. Real GDP provides a basis for judging long-term national economic performance, which makes it an important indicator of the health of a country's economy. The general consensus is that the ideal GDP growth rate is between 2% and 3%, because this contributes to value creation without causing too high inflation (Khan, Yahya, Farooq, & Naumann, 2013).

Jang & Chang (2014) investigated the long-term co-movement and the causal relationship between national income and fish consumption in a panel of 101 countries, covering the period of 1970-2006. The authors demonstrate that there is a positive long-term relationship between real GDP and fishery consumption (Jang & Chang, 2014). On the one hand, the benefits of economic growth tend to increase the fishery consumption. On the other, a negative GDP is expected to decrease consumption of fish. The relationship between fish consumption and purchasing power is presented in the figure below.

Figure 14: Fish consumption per capita and purchasing power



Source: Authors' construction based on data from (Passport, 2021).

Global GDP growth is estimated to be around 3.5% annually (Guillemette & Turner, 2018). The majority of this growth is related to emerging markets, while countries with an already well-established economy typically report a growth rate below 3%. As a result, the GDP growth rates for emerging market economies outperform those of developed countries. As seen in table 2, the world economy contracted in 2020, as the Covid-19 pandemic caused a global recession whose debt was surpassed only by the two world wars. Although global economic output is recovering from the collapse triggered by the pandemic, it will remain below pre-pandemic trends for a prolonged period (World Bank, 2021). However, recent vaccine approvals have raised hopes of a turnaround in the pandemic, forecasts that reflects expectations of a strengthening economy (Table 2). The strength of recovery is projected to vary across nations, depending on factors such as access to medical interventions, effectiveness of policy support, and cross-country spillovers (International Monetary Fund, 2021).

Table 2: Real GDP growth in percent

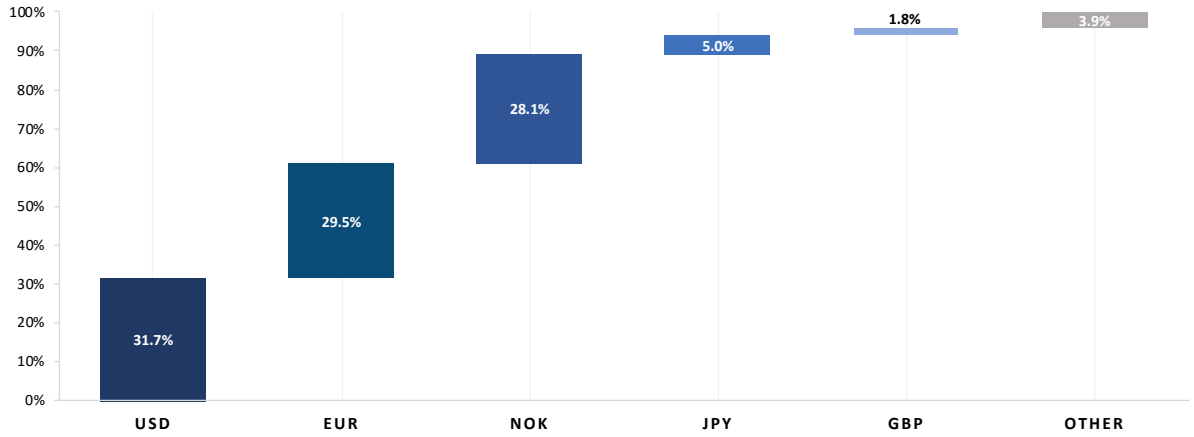
Region	2018	2019	2020	2021E	2022E	2023E	2024E	2025E	2026E
World	3.6	2.8	-3.3	6	4.4	3.5	3.4	3.3	3.3
Euro area	1.9	1.3	-6.6	4.4	3.8	1.9	1.6	1.4	1.3
Asia and Pacific	5.3	4.2	-1.3	7.3	5.2	5	4.8	4.7	4.6
North America	2.8	1.9	-4.1	6.1	3.5	1.5	1.5	1.6	1.6
Norway	1.1	0.9	-0.8	3.9	4	2.8	2.1	1.9	1.7
Advanced economies	*2.3*	*1.6*	*-4.7*	*5.1*	*3.6*	*1.8*	*1.6*	*1.5*	*1.5*
Emerging market and developing economies	*4.5*	*3.6*	*-2.2*	*6.7*	*5*	*4.7*	*4.6*	*4.5*	*4.4*

Source: Authors' own creation based on data from International Monetary Fund (2021)

Hedging against exchange- and interest rate exposure

Multinational corporations are, due to the nature of their business, exposed to exchange rate risks and Salmar is no exception. This risk is particularly significant when it comes to the USD, EUR, GBP, and JPY (see figure 15). Foreign exchange risk is introduced by future trading transactions, capitalized assets and liabilities, and net investments in foreign market activities. The exchange rate risk associated with revenues and assets denominated in foreign currencies is partly hedged by forward contracts and currency accounts (SalMar, 2020). Nevertheless, the vast majority of Norwegian salmon is exported, making currency exchange rates an important element in the supply-demand relationship in the spot market for salmon. While customers mostly pay in foreign currencies, the producers receive payment in Norwegian kroner. The EUR/NOK exchange rate has been a major economic determinant of the spot price of salmon and thus the revenues of farming companies (Bloznelis, 2016). However, the raw materials used to produce fish feed are generally quoted in USD and EUR (Mowi, 2020). As fish feed accounts for around 50% of the production costs in salmon aquaculture, fluctuations in currencies tend to affect both revenues and costs in a positively correlated relationship.

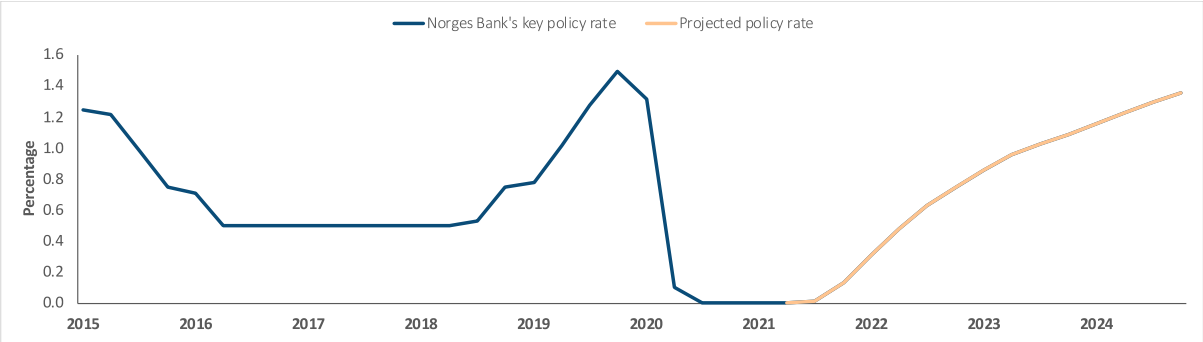
Figure 15: Salmar's revenue by currency 2019



Source: Authors own creation based on data from Salmar (2020)

In addition to exchange rate risk, most companies are affected by interest rates. Due to the absence of material interest-bearing assets, Salmar's profit/loss and cash flow from operating activities are essentially unaffected by fluctuations in market rates. Instead, the Group's interest rate risk derives from long-term borrowing at floating interest rates, which is partly reduced by the opposite effect on cash equivalents which earn floating interests. Moreover, as a result of the economic downturn triggered by the pandemic, authorities have stepped in with a broad array of actions to limit the economic damage, including reduction of policy rate. Hence, the Norwegian key policy interest rate has been kept at a historical low level (zero percent) to stimulate consumption and economic growth. Although the policy rate is expected to increase, the rate is projected to remain on a low level; reaching 1.36 % in 2024, as illustrated in Figure 16.

Figure 16: Developments in Norges Bank's key policy interest rate

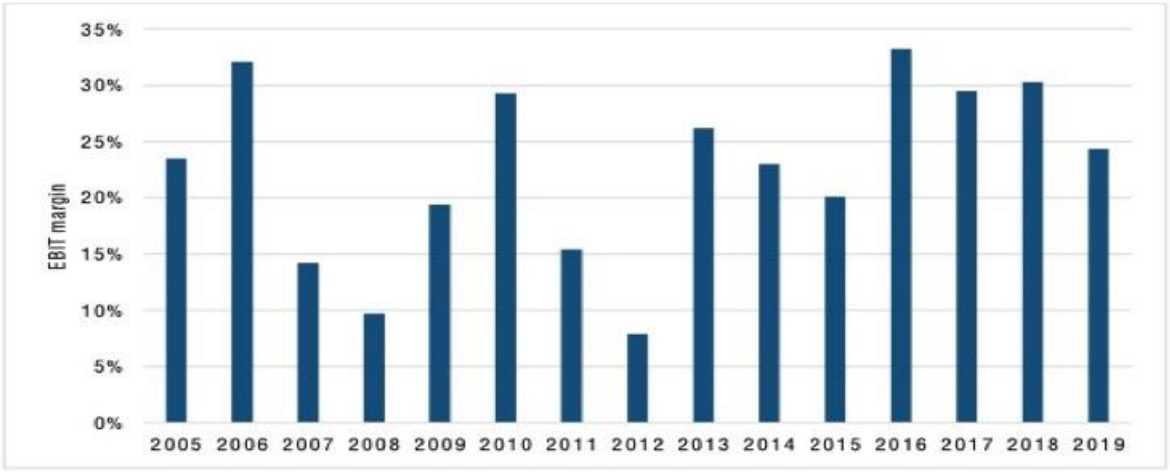


Source: Authors' own creation based on data from (Norges Bank, 2021)

Cycles in profitability

Salmon farming is a cyclic industry that historically has experienced substantial variability in prices and profitability (Asche, Misund, & Øglend, 2016), and figure 17 shows the operating margin for salmon farmers the last 15 years. Cycles in profitability are common in biological industries with a significant time gap between the decision to increase output and when the increased production enters the market. A high margin provides a signal to increase production, but due to the time gap in production and demand delivery, conditions may have changed dramatically by the time the increased production enters the market. According to Asche & Bjørndal (2011), high margins sometimes result in excessive investment, causing supply to increase too much, and prices may drop to, or even below, the cost of production. Likewise, low margins will signal the need to reduce production, which also takes time, and production will often decrease excessively, resulting in a new cycle of high margins. As a result of producers' delayed reactions, boom and bust cycles can occur at erratic intervals and with varying degrees of intensity.

Figure 17: EBIT Margin for large companies (6+ licenses) last 15 years



Source: (Kontali, 2020a)

In 2002-2003, the EBIT margin for Norwegian salmon producers was even negative, and several firms went bankrupt due to low salmon prices (Misund, Common and fundamental risk factors in shareholder returns of Norwegian salmon producing companies, 2018). However, the situation is very different now, with a limited supply and a heavy demand driven by downstream activities such as product growth, systematic marketing, and increased logistics pushing the salmon price to new highs in 2016. Additionally, the Norwegian krone's depreciation over the last few years, mainly as a result of the massive decrease in oil prices in 2014, has moved the salmon price higher in NOK/kg. Thus, the Norwegian salmon farming firms have enjoyed strong profit margins, which is possibly a significant factor in the seafood sector's substantial stock price rise (Asche & Sikveland, 2015). However, as a

result of a high proportion of imported ingredients in salmon feed and a weak Norwegian currency, production costs have begun to rise in lockstep with salmon prices (Asche & Øglend, 2016)

Expected effect of economic factors on future growth prospects

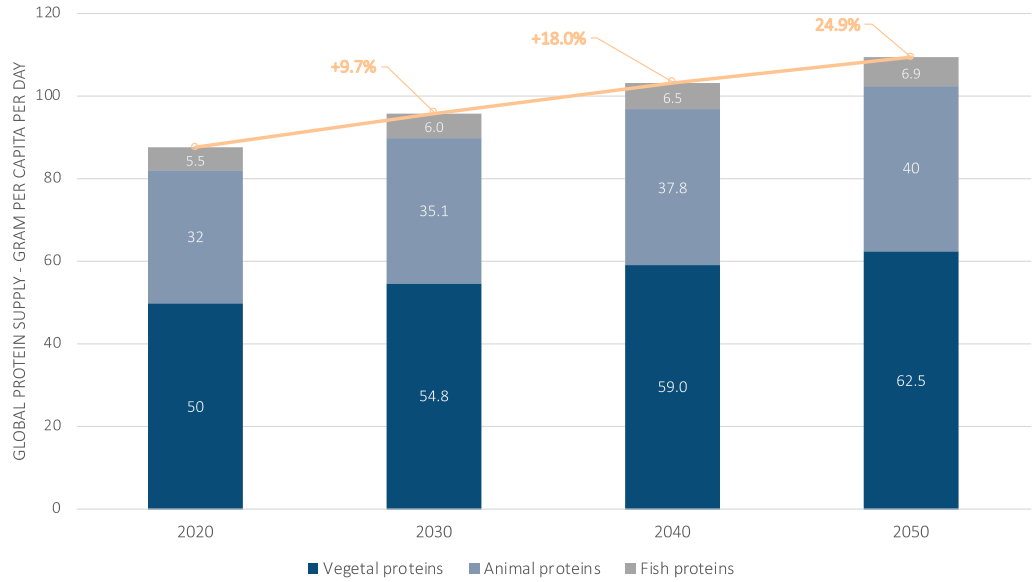
The economic factors affecting Salmar's growth prospects are considered to have a **positive** impact in the forecasting period.

This is primarily due to optimistic development and outlook for real GDP in emerging markets. Increased annual disposable income on a global scale is expected to increase the demand for Atlantic salmon. Moreover, the fluctuations in salmon prices seems to have stabilized since 2016, as limited supply and increased demand are driving the salmon price upwards. Nevertheless, Salmar has shown the ability to effectively hedge against currency- and interest rate risks.

4.1.3 Socio-Cultural Factors

United Nations (2020) projects that the world's population is expected to increase by two billion people in the next 30 years, from 7.8 billion currently to 9.7 billion in 2050. As the world is likely to have two billion more mouths to feed by mid-century, the supply of food is going to increase. Fish accounts for around 6.3% of the protein sources for human consumption (FOA, 2018). Assuming the per capita consumption stays constant, the population growth alone implies a 25% increase in demand for fish by 2050. Nevertheless, global seafood consumption has more than doubled in the past 50 years, with a global per head consumption estimated at 22.3 kg in 2018 (European Commission, 2018). This trend clearly illustrates the need for an increase in the production of marine proteins.

Figure 18: Implied growth in protein consumption driven by population growth only



Source: Authors own construction based on data from FOAstat New Food Balances (2018).

In addition to giving rise to an increased demand for food as a result of more mouths to feed, other changes, such as increased standard of living and more health-conscious consumers, will result in changes in consumption patterns. Obesity is one of the most central health problems in the world today and the problem is escalating. According to the World Health Organization (2020), worldwide obesity has nearly tripled since 1975. It is estimated that more than 1.9 billion people are overweight, in which 650 million people are obese (WHO, 2020). As a result of the increased focus on the health risks associated with overweight, people are increasingly concerned about eating healthy. This is especially expected to be the case for the ageing population. The world's population is growing older, with the age group of 65 and older increasing fast. While farm-raised salmon is rich in omega-3 fatty acids, vitamins and minerals, the health benefits of seafood are increasingly being promoted by global health authorities (Mowi, 2020).

Expected effects of socio-cultural factors on future growth projects

The socio-cultural factors and trends affecting the growth prospects of the salmon farming industry are expected to have a **very positive** effect.

The combined effects of population growth, health-conscious consumers, and increased standard of living in developing countries are expected to create high demand for animal-derived protein. If this current trend continues and bearing in mind that the future resources for land-based protein production will be scarce, it is expected to see a tremendous growth for farmed salmon in the forecasting period.

4.1.4 Technological- and Environmental Factors

Salmon production has increased significantly during the previous decades. At the same time prices have declined substantially. The main reason for the reduction in production costs is productivity growth through improved technology and better production practices (Asche & Bjørndal, 2011). Technological innovations have in many ways led the aquaculture 'revolution' and shifted the industry from manual production to industrial automation. Nowadays, the technological- and environmental factors affecting the salmon farming industry are highly correlated, as the technological development to a large extent has a direct effect on the environmental impact of the industry, and vice versa.

License utilization

Until 1992 each Norwegian firm could only hold one license and production per license was the same. At the end of the century however, firms started to merge, and the firms holding more than one license started combining them. In addition to combing licenses, average production for each Norwegian salmon license increased from 47 tonnes in 1982 to 908 tonnes in 2008 (Asche & Bjørndal, 2011). The main reason for the increase in farm size is the cost reduction that follows larger scale operations, up to a given production level. Although the maximum farm size tends to be limited by the relevant authorities, other countries have seen similar developments. According to Mowi (2020), the average MAB utilization in 2019 was 87%, while Salmar reported a utilization above 90%. A high MAB utilization rate is a sign of efficiency and ability to create value.

Fish feed utilization

Feed is an important input factor in the production process, and improvement in feed quality is a major contributor for productivity growth. The creation of specialized feed companies has led to severe developments in feed quality. Dry feed has primarily been composed of dried meal and oil, produced as pellets. Historically, unconsumed feed sank through the pens, leading to major environmental problems and unnecessary expenses. Moreover, to ensure that the fish were fed sufficiently, more feed were put into the tanks than the fish actually consumed. Over the years, innovations in new formulas have resulted in more compact pellets that contain more energy and materials, while reducing the sinking problem. Innovations have also helped the development of automated feeders and subsequent feeding systems, in addition to larger-scale production, resulting in lower costs (Asche & Bjørndal, 2011).

Efficient feed utilization is crucial to ensure that the aquaculture industry is sustainable. The dependence of the aquaculture feed industry on fish meal and fish oil and the consequences for wild fish stocks have

historically been used as arguments against the sustainability of salmon production (Tacon & Metian, 2008). To prevent overfishing, the fishmeal and oils from wild fish in pellets have to a large extent been replaced by vegetable ingredients. As the industry obtain more knowledge about the nutritional requirements of the fish, and develops more advanced technologies for feed utilization, issues regarding feed waste and sustainable production of feed are likely to disappear.

Infections and lice

Farmed and wild fish, like all animals, are susceptible to bacterial, viral, and parasitic infections. It is worth noting that the high density of fish in captivity substantially increases the risk of diseases spreading. Salmon farming has throughout the history experienced several outbreaks of diseases, leading to substantial cost increases. In addition to the number of diseases, the spread of sea lice is a major problem in the industry. Lice is a parasite that weakens the salmon, making the fish more susceptible to other diseases. Moreover, sea lice are regarded as a serious environmental problem as the parasite is often spread to wild salmon surrounding the production site. This happens as farmed salmon escapes from the facilities, carrying lice and diseases that endangers the wild environment.

In the 1980s, the number of bacterial disease outbreaks rose. In the lack of adequate vaccines, use of antibiotic hit a peak of nearly 50 tonnes in 1987. Following the launch of successful vaccines against the most common bacterial threats at that moment, the amount of antibiotics used in the industry dropped dramatically to less than 1.4 tonnes by 1994 and has remained very limited since then (Appendix 4). These advances, along with the implementation of more stringent biosecurity and health protection policies, enabled the industry to expand and produce more. Accordingly, Salmar's fish farms in Norway and Iceland completely eliminated the use of antibiotics in 2020 (SalMar, 2021). This demonstrates that the movement toward using antibiotics sparingly or not at all is continuing. However, more research into sea lice control is needed in order to develop cost-effective treatments. Furthermore, improvements in technology have made escapes less likely. In the future, it is expected to see new cost-efficient medicines and escape-proof technologies that contributes to less economic and environmental costs.

New ways to farm salmon

Norway's salmon farms are spread along its coastline with its many fjords, inlets, and islands. The environmental conditions for salmon farming are generally very good, with favorable sea temperatures all year around thanks to the Gulf Stream, a high water replacement rate and several suitable locations. However, climate change is altering coastal and marine environments throughout the world at an unprecedented rate (IPCC, 2014; Riahi, et al., 2017). Additionally, climate scientist has predicted that

warming global temperatures is affecting ocean circulations, which could have a devastating effect on our climate (Thornalley, et al., 2018). There are only a few areas in the world that meet the environmental criteria for sea-based farming of salmon today. In the future, rising ocean temperatures may limit the production of Norwegian fish farms, reducing the number of areas suitable for salmon farming (Falconer, et al., 2020). Meanwhile, the introduction of land-based farming makes it possible to produce salmon all over the world, as the technology makes it possible to create growing conditions that occur naturally in the wild. Such technology might also be a solution to some of the biological issues, as the technology is considered to be escape-proof in addition to minimal risk of lice.

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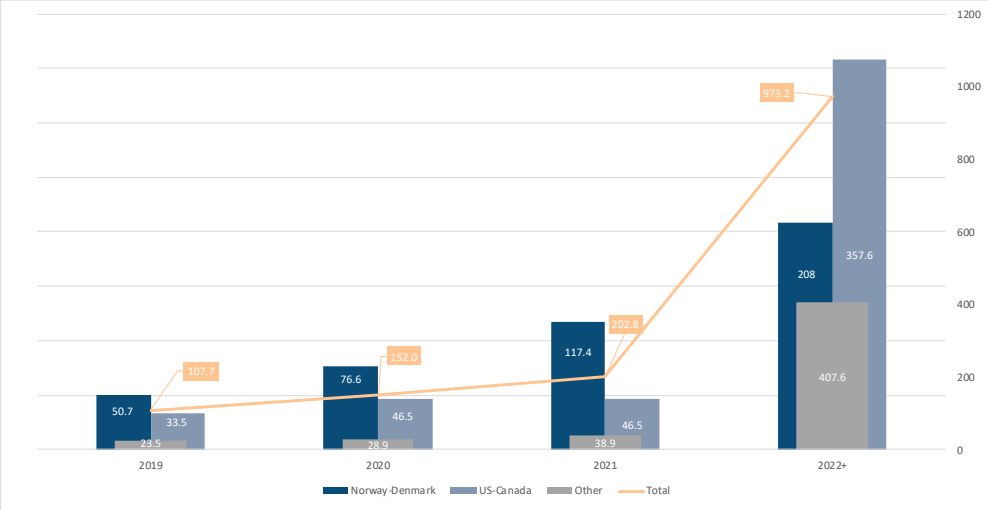
Figure 19: Maximum expected land-based/onshore salmon production capacity/volume (1000 tonnes)



Source: Authors own construction based on data from EY (2019).

Since 1991, fish farming has been prohibited without a special license. Due to area scarcity in the coastal zone, fish-farming has been explored relocated to offshore installations. Another driver for the exploration offshore is that, in addition to lice and fish escapes, fish farming's discharge of nutrients impacts the coastline. For instance, there is observed increased production for algae in the coastal areas surrounding fish farms, which in turn bring down the oxygen levels on the seabed. Offshore farming provides benefits as it is located a greater distance from the shore, hence minimizing negative effects on the coastal wildlife. Additionally, the occurrence of sea lice is expected to diminish by keeping the fish further below sea level, as offshore facilities can be lowered to a greater extent than today's solution with open net-pens close to the shore. Moreover, offshore farming provides optimal biological conditions in terms of improved fish welfare, stable temperatures and unidirectional currents (SalMar, 2021).

Expected effect of technological environmental factors on growth prospects

The technological- and environmental factors affecting the growth prospects of the salmon farming industry is expected to have a **positive** effect in the forecasting period.

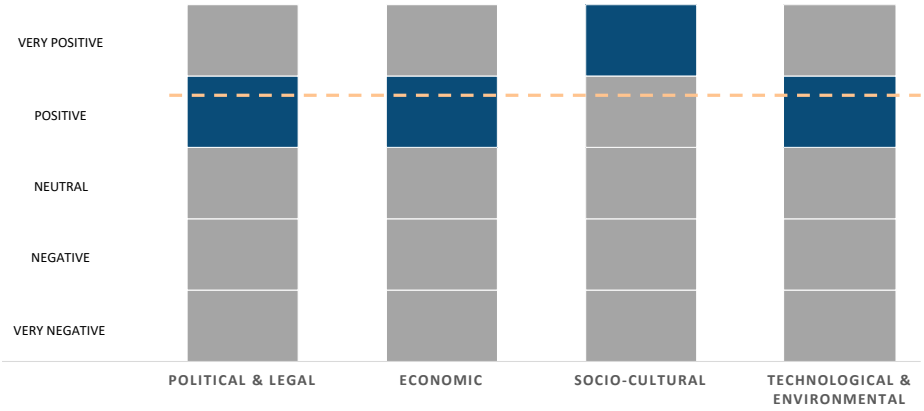
The increased focus on sustainable production and awareness concerning environmental impact have driven to research and innovations by the industry itself, in addition to public research and development. Salmon farming, as a knowledge-based industry, has gained significantly from fundamental research aimed at a variety of important issues, and this research has accelerated the industry's growth. Moreover, many of the issues the industry face today is expected to diminish, as the industry gain more knowledge

regarding sea lice control, medicines, nutritional requirements of the fish, and develops more advanced technology related to sustainable production and new ways to farm salmon.

4.1.5 Total impact of macroeconomic factors

According to the PESTEL analysis, the overall future outlook for the many macroeconomic factors affecting the growth prospects for the salmon farming industry is considered to be positive.

Figure 20: Overview of the impact from macroeconomic factors



Source: The authors own creation

All of the macroenvironmental factors are considered to have a positive impact on future growth prospects for Salmar. However, the socio-cultural factors are considered to be the most influential. In conclusion, the PESTEL analysis generally demonstrate a favorable macroenvironment for salmon aquaculture.

4.2 Porter's Five Forces (micro-environmental)

There is a vast body of research in industrial organization of industry structure on profitability. Relying on this research, strategic literature indicate that the average profitability of an industry is influenced by 'five forces' (Porter, 1980). The Porter's Five Forces Framework is a method for analyzing competition and determine the competitive intensity of an industry. According to Porter (1980), the forces represent the micro-environment of the market. This is because the relative strength of the competitive forces impacts the company's ability to serve its customers and make a profit. Accordingly, the forces are directly tied to the financial statements of the industry's participants. Analyzing the different forces creates a basis for understanding current profitability, and a fundament in forecasting future value creation. The strength of each force will be estimated on a five-valued scale, ranking from

'very low' to 'very high'. All things equal, a lower value indicates a greater potential for value creation and higher profitability in the industry, and vice versa.

4.2.1 Threat of New Entrants

The first environmental threat to be identified in the five forces framework is the threat of new entry. New entrants are firms that recently begun operations in the industry, or firms that threaten to start operations in the industry soon. New entrants are increasing the level of industry competition and reducing the performance of incumbent firms. Some economists have considered the threat of new entrants to be the dominant force (Greenwald & Kahn, 2005). The threat of new entry depends on, ceteris paribus, the existence and 'height' of barriers to entry.

Geographical limitations

Salmon farming is a global industry where production takes place on all continents, except Africa. However, there are several natural constrains that prevent the farming of salmon around the globe. Due to specific requirements for feasible areas and sea temperature, there are only a few coastlines suitable for salmon farming. According to Mowi (2020), the optimal temperature for the farming of salmon range between 8 and 14 °Celsius. Nonetheless, a vital condition is a temperature range for salmon between 0 and 20 °C. Other conditions include a sheltered coastline and optimal biological conditions. As a result, most of the production is concentrated in a few regions with coastlines within the certain latitude bands in the Northern and Southern Hemispheres.

Figure 21: Suitable locations for salmon farming

Source: Authors' own construction based on data from Mowi (2020)

Regulations and capital requirements

In all the regions that produce salmon today, the relevant authorities have a licensing regime in place. A license is granted in accordance with strict regulations and a collection of predetermined criteria, and it is an obligatory prerequisite needed to operate a salmon farm. The demand for such licenses has

grown vastly, resulting in a significant price increase over the past decades. Additionally, commercial licenses are infrequently issued for auction, and since the best locations already have been occupied, obtaining a license is now challenging. In August 2020, an auction of new biomass took place where more than of 27000 tonnes were available for purchase. The Ministry of Trade, Industry and Fisheries sold licenses for a record sum of NOK 6 billion, which is twice as much compared to the previous auction (Norwegian Government, 2020). Nevertheless, Salmar acquired more than 8000 tonnes and thus around 30% of the total licenses sold.

Salmon aquaculture production is typically resource-intensive, with high capital costs and funding difficulties acting as a common barrier to entry. Along with capital expenditures related to manufacturing infrastructure, these companies require substantial working capital. Bearing in mind the long production cycle of salmon, the production process requires significant working capital in the form of biomass. Fish feed accounts for a substantial proportion of the operating costs in the industry. Hence, large investments in working capital are required for building biomass related to organic growth. Nevertheless, the long production cycle further implies that for a new company that is building their biomass from scratch, it will take around three years after production has started until the firm generates their first revenues.

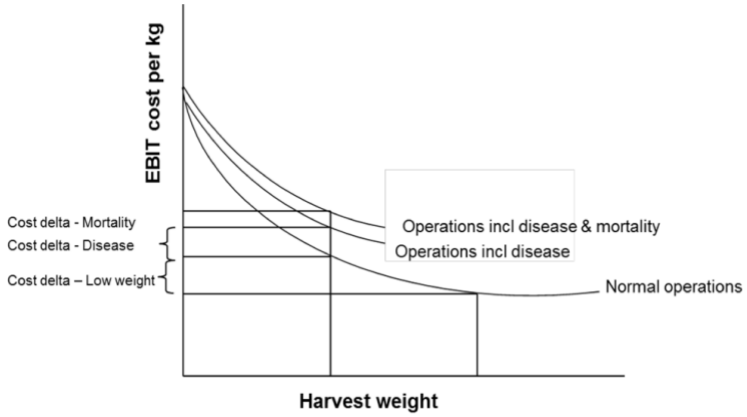
Economies of scale and vertical integration

Growth in the industry has been constrained in recent years, and current players have focused their capital expenditure on value chain optimization. Examples include Mowi's integration of fish feed and Salmar's investments in smolt production and processing capacity. As with scale, vertical integration can act as a significant barrier to the degree to which vertically integrated models accrue market power and control the supply chain. Though vertical integration has inherent risks and difficulties in a cyclical sector (e.g., highly leveraged exposure to downturns), the complexity and opacity of the seafood supply chain seem to reward integrated players with outsized market power, both upstream and downstream.

Salmon farming is a capital-intensive industry with significant start-up costs and clear economies of scale benefits for large players. One of the most important factors in explaining the reduction of production costs is increasing scale for the farms. In the early days of the aquaculture industry, each firm could only own one license and production per license was the same. At the end of the 1990s however, the most efficient production sites commonly operated with several licenses, producing 3000-4500 tonnes a year (Asche & Bjørndal, 2011). The main reason for expanding farm size is the cost reduction that follows larger-scale operations, up to a given production level. Today, most companies use several sites concurrently, which enables economies of scale and makes production more flexible (Mowi, 2020). Hence, bearing in mind the difficulties and costs related to obtaining a license, new

entrants are likely to enter the industry with a farm that have a relatively little effect on total supply. In this case, the new entrant faces a serious cost disadvantage because it does not produce at the low-cost position on the economies of scale curve (Figure 22).

Figure 22: Cost component – EBIT costs decline with increased production



Source: (Mowi, 2020)

There are few unutilized locations left within conventional salmon farming (traditional net pen production), which is reflected through strict governmental regulations. The high entrance barriers within conventional salmon farming have made onshore farming more relevant now than ever. As previously mentioned in this article, the number of proposed land-based production projects has increased dramatically, with many of these projects being planned in Norway. Land-based processing has the potential to be a valuable alternative to other methods of providing the consumer with the much-desired product. However, as the technology is still relatively new, the production cost per kilo is still higher compared to conventional farming, but this is expected to decrease over time (Furuset, 2020). Although land-based farms require significant capital investments, the entrance barriers are lower compared to conventional farming and new entrants are expected in the future.

Threat of New Entrants

The credible threat of new entrants is considered to be **low** within the salmon farming industry.

Salmon aquaculture is an industry with high entrance barriers. The credible threat of new entrants within conventional farming is considered to be low, as there are several factors limiting the likelihood of success and survival in this sector. The most dominant factors are area scarcity, strict regulations and requirements related to the operation of a fish farm, capital needs, and economies of scale. The short-term threat of new entrance is thus considered to be very low. However, it is expected to see new players

within land-based farming in the years to come, that might pose a credible threat in the long run, assuming that the technology improves and the production costs per kg declines.

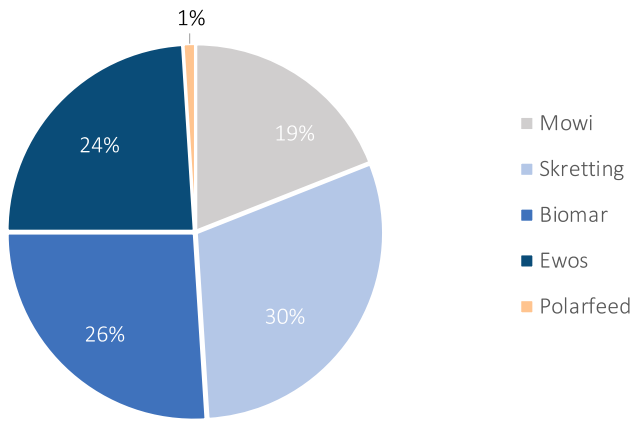
4.2.2 The power of suppliers

Suppliers can exercise bargaining power over industry participants by increasing prices or lowering the quality of their supplies. Thus, powerful suppliers can squeeze profitability out of a market that is struggling to withstand cost increases by rising own prices. Suppliers' bargaining power is determined by a number of variables, including supplier concentration, switching costs, integration, and the extent to which suppliers depend on industry revenue (Porter, 1980). The list of important suppliers for Salmar is long, including producers of equipment, electrical power, chemicals and packaging, as well as maintenance, to name a few. However, as is the case for all livestock activity, feed accounts for the lion's share of overall production costs. Hence, fish feed producers are considered to be the most important suppliers in the industry.

Consolidated and specialized supplier group

According to Porter (1980), suppliers are a greater threat if the supplier's industry is dominated by a small number of firms, and when suppliers are not threatened by substitutes. Fish feed accounts for a sizable portion of the expenditures of salmon farming firms, and sources of such feed are scarce. The salmonid feed industry has become highly consolidated over the last decade and is today more concentrated than the salmon farming industry. Along with Mowi, three global producers now dominate the bulk of salmon feed production, namely Skretting, EWOS, and BioMar, which is illustrated in figure 23. Furthermore, feed is the primary input factor in the production process, and feed quality enhancement is a significant factor in productivity growth. The creation of specialized feed companies has led to major developments in feed quality. Through systematic research on feed recipes and manufacturing techniques, fish feed allows for larger-scale operations and lower costs. Hence, there is no commercially available substitute for fish feed on the market, which in turn increases the threat of supplier leverage.

Figure 23: Feed producers market share in Norway 2018



Source: Authors own construction based on data from (Mowi, 2019)

Mutual dependency between suppliers and the industry

Although the salmonid feed industry benefit from the high consolidation and lack of substituting products, a number of factors reduces the power of the suppliers. First, the majority of the commercial feeds contain both vegetable and marine inputs, and the precise formula-mix tend to depend more on cost factors than on quality (Asche & Bjørndal, 2011). Although there is a trend towards differentiation of feed based on an image of sustainable production, fish-feed is considered to be a relatively homogenous product that is difficult to distinguish on a large scale. This indicates that the switching costs for the salmon farming players are minimal. Second, a potential rise in the price of fish feed by the suppliers may be used as a means to catch a greater share of the surplus at the expense of the farmers. This approach, on the other hand, incentivizes farmers to integrate backwards and thereby produce feed internally. Mowi, the world's largest salmon farmer, has achieved complete control of its supply chain and is now self-sufficient in the production of fish feed. Mowi's backward integration could indicate that some participants will choose to do the same, thus eroding suppliers' leverage. Third, fish feed is a perishable product with limited opportunity to store, while the industry is the most important customer of the supply group. As a result, suppliers' profits will be inextricably linked to the industry, and feed producers will naturally seek to defend this relationship through reasonable pricing.

Bargaining power of suppliers

The bargaining power of suppliers is considered to be **moderate** within the salmon farming industry.

Fish feed is the most important input factor in salmon farming, accounting for approximately 50% of total production costs. Hence, salmon farmers are highly dependent on the suppliers of feed and the prices they set. Feed suppliers are typically few and large, and it does currently not exist relevant

substitutes for fish feed. This points towards high bargaining power for the suppliers. However, there are several factors that serve to weaken their power. There is relatively low differentiation between the products offered amongst the suppliers, which indicate that the switching costs for the farmers are low. Moreover, the suppliers of feed and the salmon farmers are highly dependent on one another, as the suppliers' profits stem from the farmers.

4.2.3 The power of buyers

Whereas powerful suppliers act to increase a firm's expenses, powerful customers act to reduce a firm's revenues. The buyers of Salmar's products are global, and include exporters and importers of various sizes, in addition to major processing companies and supermarket chains (SalMar, 2020). This group of buyers serves as an intermediary between the producer and the end-consumer. This section covers the most significant factors influencing buyers' negotiating leverage.

Large retail chains

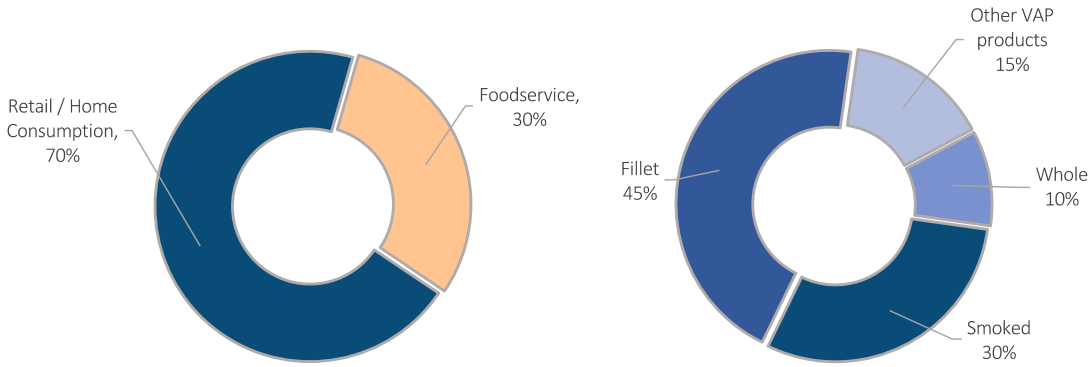
Salmar's fish is sold either as whole gutted salmon (fresh or frozen), fillets, in individual portions or a wide range of other products, which are distributed to markets around the globe. In the EU, which is the largest market for Norwegian Atlantic salmon, more than 70% of the supply in 2019 went to retailers, with the rest going to foodservice establishments (figure 24). Though there are anomalies, the bargaining power of buyers is generally high in the majority of marine aquaculture market segments and geographies. The dominance of supermarkets in the retail chain for food products, including seafood, has been exacerbated by mergers, acquisitions, and consolidation (Clarke et al., 2002), resulting in growing dominance of supermarket chains. The food industry is increasingly concerned that excessive antibiotic use in animals will result in the emergence of drug-resistant superbugs, jeopardizing human health. In 2015, the US retail giant Costco decided to reduce imports of Chilean salmon as a response to the farmers excessive use of antibiotics. The Norwegian salmon farmers benefitted from the power exercised over the Chilean market, as the retailers moved their custom to Chile's rival industry (Esposito, 2015). In Western markets, the consolidation of national wholesale distribution networks and supermarket chains has restricted producers' access to consumers. Salmon is a perishable and relatively homogenous commodity which in turn provide the dominant retailers with extensive bargaining power.

Value Added Products (VAP)

Seafood has traditionally been a price-sensitive commodity market, with a limited role for differentiation (O'Shea, et al., 2019). However, there has been a clear trend towards value-added

processing as a method to differentiate salmon products and hence increase the switching costs. The majority of the largest farmers base their processing on Atlantic salmon, supplying smoked salmon, fillets, and other VAP products. In addition, there can be found significant variations in consistency, which can be attributed to various characteristics such as color, fat content, and size. Consumers may be willing to pay a premium for a certain attribute in various countries, which may result in segmentation. On the other hand, providing special characteristics is expensive, and one will expect a farmer to provide the commodity only if the increased price offers enough compensation. As a result, the expense constrains the availability of particular attributes and tends to keep prices in line with each other (Asche & Bjørndal, 2011). Over the years, however, the production technology used by the industry have developed significantly, and the majority of exports from Norwegian salmon farms are value-added products (figure 24). Moreover, consumers are becoming more conscious of the environmental impact their purchasing habits have. Meanwhile, the salmon farming industry is continuously striving to reduce the biological footprint related to production, which in turn promotes to differentiation and facilitates differentiation.

Figure 24: Market segment in the EU 2019



Source: Author's construction based on data from (Mowi, 2020)

Bargaining power of buyers

The bargaining power of buyers is considered to be **moderate-to-high** within the salmon farming industry.

The dominance of highly consolidated retail chains, particularly in Western markets, are providing these buyers with excessive bargaining power. In general, salmon is considered to be a relatively homogenous commodity with little room for differentiation, resulting in low switching costs for customers. However,

there is an increasing focus towards value added production, both in terms of secondary processing and sustainable production. VAP production has become a method of differentiating salmon products and increase brand awareness, thus increasing switching costs and reducing buyers' leverage.

4.2.4 Threat of substitutes

A fourth environmental threat is the threat of substituting products. A substitute is a good or service that customers can conveniently swap out for another. Substitutes satisfy roughly the same customer needs, albeit in distinctive ways. Hence, they impose a limitation on the prices that firms in an industry can charge and on the profits that firms can generate (Porter, 1980).

Wild-caught salmon and other high-valued species

Through the 1980s, salmon remained a high-end refreshment, and some research suggest that there was substitution against other high-valued species (Asche & Bjørndal, 2011). However, the prices of salmon have declined substantially during the previous decades, mainly due to increased efficiency through advanced technology and better production practices. As prices decreased, this substitution ceased to exist, and no new replacements have been discovered (Asche & Bjørndal, 2011). However, another method for salmon harvest is fisheries, which includes the capture of fish rather than breeding, and is an alternative to farm raised salmon. Fisheries are typically numerous and small, which implies that major customers, such as supermarkets and food processors, will be able to exert more financial power. Furthermore, in 2019, around 70% of the world's salmon harvest came from farms rather than fisheries (Mowi, 2020), and this percentage is rising. In 2020, the supply of farmed salmon increased by 4%, whereas wild-caught salmon harvest dropped sharply by 37%, resulting in the lowest volumes since 1982 (Kontali, 2021). As being such, while fishing is a substitute, it plays a diminished role in the industry.

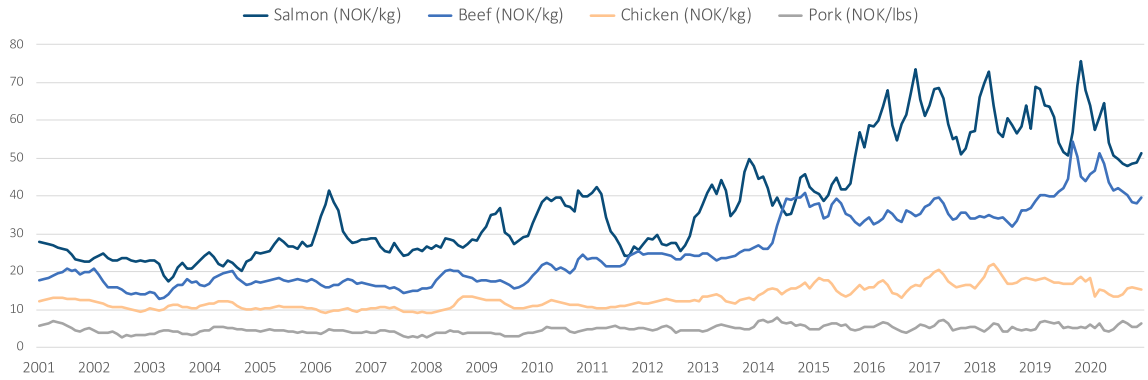
Animal proteins

Other species of fish, such as tuna and trout, contain many of the same nutrients as Atlantic salmon. Even so, there is evidence that salmon has increased demand for other seafood in some markets, suggesting a complementary relationship (Asche & Bjørndal, 2011). Furthermore, salmon farmers have been aggressively pursuing business growth and expansion into new markets. Thus, an important advancement in salmon marketing has been the expansion of the industry by the sale of more affordable fresh- and frozen fish to supermarkets. This has created a new market for customers who see salmon as a viable alternative to other protein-rich meat products. Although fish is a necessary component of many people's diets, it can be substituted with other foods. If various products may be partially substituted

for one another, the goods are imperfect substitutes. Two industries are linked or partially integrated if they influence one another to some extent, but not entirely.

Beef, chicken and pork provide the majority of animal protein in our diets. In 2020, the FOA estimated human consumption of 71 million tonnes beef, 132 million tonnes of chicken, and 107 million tonnes of pork. In sharp contrast, the total supply of all salmonid species, both wild and farmed, was around 4.2 million tonnes (Kontali, 2021). Some research indicate that the salmon price is relatively elastic in terms of own price, meaning that a 1% reduction in the price of salmon results in more than 1% rise in demand, and vice versa (Asche & Bjørndal, 2011). Hence, sharp increases in the prices of salmon leads to reduced consumption of salmon. In the most advanced markets, prepacked salmon is presented on store shelves in ways that resemble frozen meat rather than seafood, and it is reasonable to assume that reduced consumption of salmon favors other sources of protein-rich sources, such as beef, chicken and pork. However, as the supply of salmon keeps increasing, it is likely that the aggregated demand for salmon becomes inelastic. In fact, most of the studies use older datasets, and other research suggest that the demand for salmon has become less price elastic over time (Xie, Myrland, & Kinnucan, 2009).

Figure 25: Price development of protein-rich sources



Source: Authors own construction based on data from (Indexmundi, 2021)

Threat of substituting products

The threat of substituting products is considered to be **moderate** within the salmon farming industry.

Wild-caught salmon is presumably the closest substitute to farmed salmon. However, wild-caught salmonids share of total supply is relatively insignificant to farmed salmon, and it is expected to be even less significant in the future. Nonetheless, other types of protein-rich meat sources, such as pork, chicken and beef, are considered to be close substitutes to farmed salmon. Hence, if the price of salmon

continues to increase, this will likely encourage some consumers to switch to other protein-rich sources of meet.

4.2.5 Rivalry among existing firms

The final environmental threat comes from the intensity of competition among a firm's current direct competitors. Within an industry, the degree of rivalry is determined by the level of competition and the basis on which firms compete. Rivalry is regarded to be high if the industry is characterized by a large number of rivals who are roughly equal in size and power, if the industry is slow to grow and there is a fight for market share, or if fixed costs are high or the product is perishable, providing a strong incentive to cut prices. Extensive rivalry is particularly detrimental to profitability because it transfers profits directly from the industry to the consumers (Porter, 1980).

Historically, the salmon farming industry was composed of several small businesses. However, over the last few decades, the industry has gradually consolidated, with strict license regulations leading to increased M&A activity as a key strategy to grow. Consequently, the salmon farming industry currently consist of few and dominant players that evidently benefit from economies of scale. In Norway, the 10 largest players account for more than 69% of the total exported salmon, and the consolidation is expected to continue (Mowi, 2020). On the one hand, the consolidation in the salmon farming industry serves to limit the industry rivalry due to the presence of entrance barriers and market agreements between major players. On the other, salmon is considered to be a relatively homogenous product with low product differentiation, low switching costs for buyers, and relatively high exit costs owing to the dissolution of stock and equipment. These factors serve to increase rivalry and points towards higher competition in the future.

Salmon aquaculture is a capital-intensive commodity industry, which generally serves to limit the power of any individual operator. This dynamic is the result of similar positioned producers having high operating leverage, perishable inventories, and high commodity storage costs. Rivalry usually manifests itself through seasonal boom and bust cycles due to the time lag between the decision to increase production and the time the product is ready to enter the market. Producers tend to over-invest in periods with high margins, resulting in excess supply and corresponding price reductions. However, increasingly stringent regulations are constraining supply in terms of maximum allowed biomass, which serve to limit the players opportunities to over-invest in periods of high prices. Moreover, the salmon market experiences strong demand growth on a global scale, which has tended to support prices even

during market downturns. The fast-paced growth in the industry results in less competition and hence increased profitability among the players.

Rivalry among existing firms

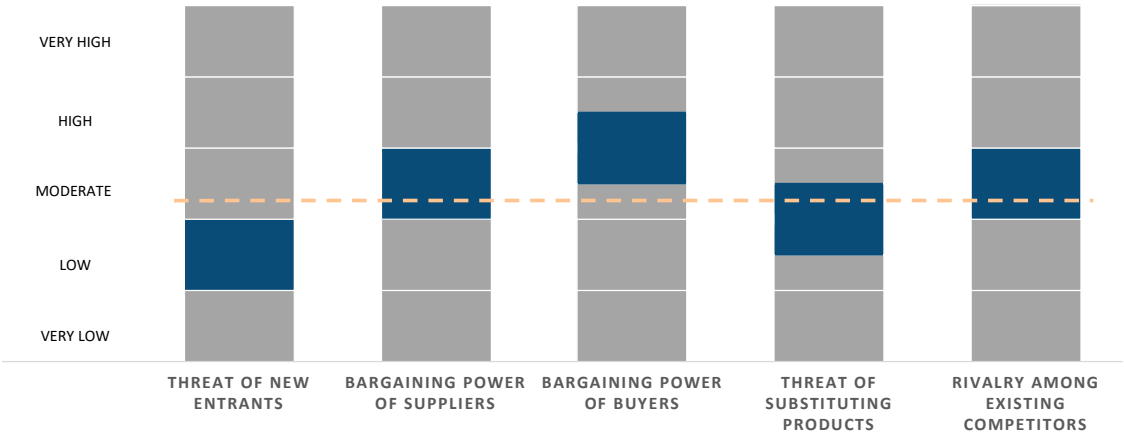
The rivalry among existing firms is considered to be **moderate** in the salmon farming industry.

The rivalry in the industry is currently considered to be low, as rivalry usually manifest itself through competition for licenses and feasible areas, rather than through tactics such as price cutting and marketing campaigns. The reason for this is mainly due to limited supply in combination with high demand. Moreover, the strong growth in demand is expected to exceed the growth in supply going forward, mainly as a consequence of government regulations regarding maximum allowed production (MAB). Moreover, salmon aquaculture is characterized as consolidated, with a small number of dominant firms and high entry barriers. Fewer and larger firms indicate that the industry participants have less competition. However, there can be seen a number of factors that point towards higher degree of competitive rivalry in the future. This includes factors such as high fixed costs, high inventory costs, perishable goods, high exit barriers, and relatively low switching costs for consumers.

4.2.6 The overall effect of the five competitive forces

The overall impact from the five competitive forces is considered to be **moderate-to-low**, which is illustrated in figure 26. The industry has historically had a high growth rate, and the players have enjoyed high profits. However, the industry is getting more mature, and the companies have integrated vertically as a means to grow. This is mainly due to limited growth opportunities within conventional farming. The most dominant force is considered to be the bargaining power of buyers, since the growth of dominant supermarket chains puts pressure on farmers around the world. On the other hand, major salmon farmers reduce this pressure through differentiation in terms of sustainable production and secondary processing.

Figure 26: The overall effect of the five competitive forces



Source: The authors own creation

4.3 VRIO Analysis of Firm Specific Factors

In 1991, Barney introduced the VRIN framework as a tool to determine whether resources and capabilities is to be classified as sustainable competitive advantages, and thus should be used when forming the strategy of the firm. The framework was later altered into the well-known VRIO framework. 'VRIO' is a mechanism that integrates two existing theoretical frameworks: the position perspective and the resource-based view (RBV) (Barney & Hesterly, 2019). In sharp contrast to the environment- and industry analysis' (like PESTEL and Five Forces), this view entails two critical assumptions that resources must be heterogenous and immobile. The former assumes that skills, capabilities and resources that organizations possess differ from one company to another. The ladder assumes that resources are not perfectly mobile and do not move between companies, at least not in the short run. Due to this immobility, a firm cannot replicate resources possessed by a rival. As a consequence, the resources a firm possess can be sustainable (Barney, 1991). According to Barney & Hesterly (2019), VRIO stands for four questions one must ask about a resource or capability to determine its competitive potential:

- **Valuable:** *Does a resource enable the firm to exploit an environmental opportunity, and/or neutralize an environmental threat?*
- **Rare:** *Is the resource currently controlled by only a small number of competing firms?*
- **Inimitable:** *Is it difficult to imitate, and will there be significant cost disadvantage to a firm trying to obtain, develop, or duplicate the resource/capability?*
- **Organization**: *Is the firm organized, ready, and able to exploit the resource/capability?*

The resource-based view perspective explores the role of key resources, viz., tangible- and intangible assets and capabilities, in creating competitive advantage and superior performance. To avoid possible confusion, it is essential to discuss the author's interpretation of some concepts related to the RBV. First, the analysis use Barney's (2001) definition of firm resources, which is considered to be all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness. Second, a sustainable competitive advantage is said to be present when a firm is implementing a value-creating strategy, which is not simultaneously being implemented by any current or potential competitors, as other firms are unable to replicate the benefits of this strategy. Finally, a sustainable competitive advantage does not necessarily imply that it will sustain in perpetuity.

The three groups of key resources incorporate multiple sub-categories. Tangible resources consist of financial, physical and technological resources, which in Salmar's case can be tied to their strong balance sheet and harvesting facilities. Accordingly, intangible resources and capabilities include personnel, innovation and reputation. This can be linked to license utilization, a fully integrated system for farming, processing, sales and distribution, or consumer insight leading to higher-level brand positioning. The analysis is limited to the most relevant resources and capabilities. Furthermore, the financial recourses have been covered in the upcoming chapter.

Identified resources and capabilities

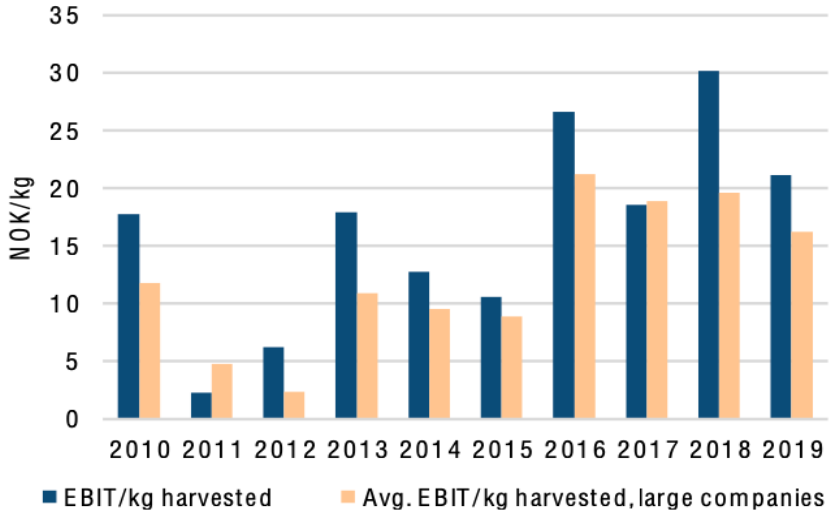
One way to identify potentially valuable resources and capabilities controlled by the firm is to study its value chain. During the last decades the industry has been through a period of consolidation in all regions. Salmon farmers have increasingly integrated their activities with the objective of becoming less reliable on third parties, resulting in increasing similarities throughout their value chain. Hence, improved utilization or increased effectiveness is alternative ways to differentiate from the other firms. The most prominent resources and capabilities obtained for Salmar is presented individually in the following section.

Harvesting and processing facilities

Apart from Salmar's innovations related to smolt- and offshore facilities, the company has invested in innovative and cost-effective harvesting and processing facilities. Their main harvesting and processing facility, called InnovaMar, provides a higher rate of automation and new combinations of technical

solutions. The facility is located in close proximity to their operations in central Norway which provides benefits in terms of logistics. Figure 27 display Salmar's EBIT/kg[4] relative to its peers.

Figure 27: EBIT/KG ratio Salmar vs. peers



** The peers in the figure consist of 41 Norwegian companies holding six or more licenses.*
Source: (Kontali, 2020a)

Moreover, the company is currently constructing a new harvesting plant in Northern Norway, called InnovaNor. The uncertainty due to the covid-situation reinforces the importance of Salmar's strategic focus on local processing. InnovaNor is considered to be an important strategic and industrial investment for the company. It will strengthen Salmar's position in Northern Norway and provide a considerable processing capacity in a new location. The facility is expected to go into operation the summer of 2021 (SalMar, 2021).

Offshore farming

In order to facilitate the industry to find new, sustainable solutions for sea farming, the Norwegian authorities has allowed farmers to apply for development licenses. Salmar currently holds 16 such licenses, which has enabled the construction of Ocean Farm 1, the world's first offshore fish farm. Ocean Farm 1 is a full-scale pilot facility for testing, learning, research and development. As of today, the group has successfully completed two production cycles for their offshore farm (Myrebøe, 2019). The project has delivered more than 10.000 tonnes of salmon to customers worldwide, with strong biological results in terms of high growth, low mortality, low levels of sea lice, and production costs in

[4] EBIT/kg provides a measure for how much earnings a company is creating per kg of harvested fish.

level with their best coastal locations (SalMar, 2021). Bearing in mind the limited growth potential followed by the traffic light system, offshore farming is a temporary competitive advantage for Salmar. Furthermore, experience and knowledge in operating an offshore farm is considered a greater advantage.

Licenses

There are currently 1,051 seawater farming licenses in Norway, of which Salmar owns 109. As previously discussed, obtaining a license is not only difficult due to strict requirements, but also costly as a result of high demand. With the new traffic light license system in place, the production sites located in green areas will, at least in the short run, be more valuable than sites located in red areas. In addition, there is possible to obtain development licenses through applications for R&D projects which means are to solve environmental- and areal issues. These development licenses can be converted into a standard license for a fee of MNOK 10 per license (Directorate of fisheries, 2021).

Smolt

Salmar maintain the control of their smoltification process, in contrast to many of its peers. They have invested in nine facilities for smolt production in Norway, with two more under construction (Kontali, 2020a), leading to an expansion of the company's smolt capacity. Moreover, Salmar has invested in recirculating aquaculture systems (RAS) technology that enables increased production. Their investments have further enabled the company to release smolts continuously throughout the year, as opposed to seasonal releases. Salmar is thus capable to achieve a greater utilization of its licenses and MAB compared to its peers.

Assessment of resources and capabilities

Keeping control over the smoltification process and investments in RAS technology enables Salmar to produce greater amounts of smolt with a leaner release cycle during the year. Recirculating aquaculture systems (RAS) technology is broadly known by other firms and is available to buy in the open market. However, investing in such technology is costly and time consuming considering the implementation of such processes in a well-established value chain. The resource is considered to be valuable and Salmar has clearly an organizational advantage in utilizing it sufficiently. On the other hand, it is possible to invest in similar facilities and technologies suggesting that the resource is inadequate to provide a lasting competitive advantage (Dierickx & Cool, 1989). In conclusion, the resource yields Salmar a temporarily competitive advantage compared to peers. Moreover, improved cost-management and a leaner value chain have positive economic implications.

Harvesting and processing (H&P) is an integral part of Salmar's strategy of being the cost-leader in the industry. InnovaMar was communicated to be the world's most innovative and cost-efficient H&P facility, providing improved atomization combined with new technical solutions. It is debatable whether the H&P facilities in itself creates a competitive advantage for Salmar. However, extensive investments in the construction and solutions over several years gives Salmar valuable knowledge which is difficult to imitate. Moreover, Salmar has proven to possess dynamic capabilities by successfully adapt, integrate, and reconfigure resources in order to gain new knowledge (Dixon, Meyer & Day, 2014). Hence, H&P facilities, based on Salmar's dynamic capabilities, is considered to yield a competitive advantage and positive economic implications.

Salmar has devoted great amount of time and resources in developing Ocean Farm 1, in collaboration with multiple other organizations. After completion of two successful production cycles with promising results, Salmar aims to increase their focus in this area. Offshore farming is still in an early phase and standard coastline farming is still considered to represent the core production and earnings capacity for many years (SalMar, 2021). There is, however, no doubt that Salmar has the organizational capabilities to exploit offshore farming in the future. Offshore farming as a resource is therefore not considered to have competitive implications in the short run. On the other hand, Salmar's early involvement in R&D on the area is expected to yield positive implications long-term. Focusing on the long-term implications, the authors consider the resource as a temporary competitive advantage.

Licenses is a necessity for salmon production in Norway. The Norwegian government has acted conservatively on the issuing of new licenses in recent years. Given the fact that licenses only can be issued by the government makes it naturally inimitable. Moreover, the traffic light system favors a capacity expansion of existing licenses, essentially making existing licenses valuable. Even though the industry is more consolidated than before, there is still a large number of firms in possession of licenses. Consequently, licenses are not considered rare following the VRIO-framework. Hence, licenses do not yield either a competitive advantage or have any economic implications for Salmar.

Figure 28: Summary of VRIO-analysis

Resource / Capability	Valuable?	Rare?	Imperfectly imitable?	Organized properly?	Implication
Harvesting & processing facilities	Ys	Yes	No	Yes	Competetive advantage
Offshore expertise	-	Yes	Yes	Yes	Competetive advantage
Licenses	Yes	No	Yes	Yes	Competetive parity
Smolt	Yes	No	-	Yes	Competetive advantage

Source: The authors creation based on the framework of (Barney & Hesterly, 2019)

5.0 Financial Analysis

The scope of this thesis is to capture the fundamental "fair" value of Salmar ASA. In order to do so, a thorough understanding of the historical financial performance is necessary. Financial statement analysis provide insight into historical profitability, growth rates, and risks. However, firm's generally do not distinguish 'operations' and 'investments in operations' from 'financing activities', so it is necessary to adjust the financial statements to make them better suited for valuation purposes (Plenborg & Kinserdal, 2021). Operations are the primary driver behind the fundamental value creation within a firm, and it is therefore important to adjust the original financial statements.

Plenborg & Kinserdal (2021) stresses the importance of adjusting the financial statements before analyzing financial ratios. That is, non-relevant (non-recurring) items and disposable items are excluded from operating profits, and changes in accounting policies across the analyzed period is adjusted to the same standard. Both issues are considered in the analytical income statement and balance sheet. When interpreting financial ratios, it is essential to address issues relating to trends of return, level of returns, and the relative performance. Hence, the financial data from the last six years are analyzed for Salmar and the peer group. Additionally, appropriate ratios are compared with estimations of the required rate of return. The structure of this chapter considers a new accounting standard before the analytical income statement and balance sheet are presented. Lastly, results and finding from the financial ratio analysis are discussed and visualized.

5.1 IFRS 16

All companies listed on Oslo stock exchange are expected to adhere to the IFRS accounting standard developed by the International Accounting Standards Board (IASB). In January 2016, IASB released IFRS 16, a new framework for accounting of leasing agreements with significant changes for reporting of these agreements. The new standard had to be adopted by the start of the fiscal year of January 1st, 2019, at the latest. The authors therefore find it convenient to elaborate on the most critical and decisive changes in an own section.

Prior to the new standard, firms have operated with a lot of flexibility related to their leasing agreements. All leasing agreements have been reported as either operating or financing, which has been accounted differently. Operating leasing has not been accounted in the balance sheet and thus all expenses tied to these agreements has been reported as an operating expense in the financial statement. Financial leases have been accounted as an asset, with the firm's own assets, and reported with an associated liability in the balance sheet. It has thus followed the same depreciation scheme as all other tangible assets. The IFRS 16 standard removes the separation of operational and financial leases because both, in practice, transfer the rights of using a specific asset from the lessor to the lessee for a definite period of time. Consequently, all leasing agreements are to be reported as a *right-of-use asset* in the balance sheet with the associated liability named *financial lease liability*. There are, however, some omissions for some leasing agreements. If the leasing contract has a duration less than 12-months, or if it is considered a low value asset (appx. less than NOK 50.000), it can be left out of the balance sheet.

Given this new practice, both the balance sheet and income statement will be affected. Other operating expenses will decrease because operating leases is now accounted as a financial liability. Furthermore, the firms' assets will increase, resulted in an increase in depreciation. PwC states that the decrease in other operating expenses surpasses the increase in depreciation. Additionally, the firms' liability will increase since operating leases will be reported in the balance sheet. The most important changes in financial ratios are summarized in the table below.

Table 3: Financial ratios and estimates with the corresponding effect of IFRS 16

Key estimates	Ratio	IFRS 16 Effect
Financial liability	Debt/Equity	Increase
EBITDA	EBITDA	Increase
EBIT	EBIT	Increase
FCF operations	FCF Operations	Increase
ROCE	EBIT/(Equity + Financial Liability)	Depending on the leasing portfolio
Net interest-bearing liability divided by EBITDA	NIBL/EBITDA	Depending on the leasing portfolio

Source: The authors own construction based on PwC report (2016)

5.2 Analytical Income Statement

The analytical income statement requires every accounting item to be classified as belonging to either "operations" or "finance". As previously stated, the reclassification enables one to gain better insight of the different sources of value creation in a firm. Investors, analysts, and creditors consider for example earnings before interest and taxes (EBIT) as the primary source of value creation within a firm. Investors and analysts usually measure value creation from operations separately from financing activities, where creditors value operational profit as the primary source for servicing its liabilities (Plenborg & Kinserdal, 2021).

The reclassification provides some extra items which purpose is to give further insight into the value creation of the firm. Firstly, net operating profit after tax (NOPAT) is a key measure for operating value creation and is simply defined as $\text{EBIT} \times (1 - \text{tax rate})$. Secondly, net financial expenses are expressed on a single line, which in turn provide the tax shield which the firm "earns" from their debt financing $(\text{Net financial expenses} \times \text{Tax rate})$. Lastly, the reclassification aims to carve out non-recurring items ("unusual items" according to IFRS) because these items are considered having low predictive value and in general are reviewed as less valuable (Plenborg & Kinserdal, 2021). The following section explains the adjustments and assumptions made when preparing the analytical income statement for Salmar. Furthermore, the complete financial statements for Salmar and the relevant peers are presented in appendix 5-9.

5.2.1 Classifications and adjustments of accounting items

Other operating revenue

This item consists of several other sub-items reported in the notes of the annual report. Other operating revenue consist of; *1) replacements, 2) rental income, 3) profit from outbound companies, and 4) other operating revenue*. Plenborg & Kinserdal (2021) considers the three former items as unusual items and should therefore be excluded from the operations. However, if these items are originated from operating assets or other core activities, they should be included as recurring items. Salmar do not report the origin of these items, and they are thus categorized as financial income and excluded from the income statement.

Cost of Goods Sold (COGS)

In 2015 and 2016, Salmar reported *change in stock of goods in progress and finished goods* as an individual item. From 2017 and onwards, Salmar reports this item as part of COGS. Hence, *change in stock of goods in progress and finished goods* is added with COGS for 2015 and 2016. Additionally, Salmar made a change in classification of non-medicament expenses in 2019. This item was previously recognized as other operating expenses. However, since it is not reported in the previous annual reports, only 2018 and 2019 are adjusted accordingly.

Income from associated companies

Salmar has over the years actively invested in subsidiary companies through several acquisitions. Each company is either in the salmon farming segment or represented in other levels of the aquaculture value chain. Plenborg & Kinserdal (2021) argues that this item should be included in operations if the associates is regarded as core business or part of the same industry. Income from associates is thus assumed to be part of operations and included as operating income.

Fair Value Adjustments

Fair value adjustments consist of other sub-items such as: *1) change in the fair value of the biomass, 2) change in provisions for losses on contracts, 3) change in unrealized Fish Pool contracts, and 4) change in the unrealized value of forward currency contracts.* There are relatively large fluctuations in this item from year to year, ranging from MNOK 845 to MNOK -370. Consequently, impacting operating profit considerably each year. To a large extent, many of the sub-items is related to hedging through financial instruments. Plenborg & Kinserdal (2021) states that decisions to hedge risk using financial instruments is a financial decision, and thus suggest that such items should be recognized as financial activity. Furthermore, publicly listed salmon farming companies are required to adjust their financial statements to account for changes in the fair value of their biomass (outstanding fish in the pens). The

fair value of biomass mainly depends on the spot price of salmon at the date of adjustment. As previously discussed, the spot price of salmon has proven to be very volatile, which implies that the 'fair' value might vary substantially throughout the year. However, research suggest that the pre-value-adjusted profits are the most relevant for investors and analysts (Misund, 2016). Hence, fair value adjustments are reclassified as a financial activity in the income statement.

Depreciation and amortization

There are made adjustments regarding depreciation and amortization in line with the new accounting standard IFRS 16, covered in the previous section. Depreciation and amortization were in accordance with IFRS 16 reported in Salmar's annual report for 2019 and 2020. However, to gain better insight of the development in right-of-use assets, depreciation and amortization, adjustments for 2015 to 2017 was required. Salmar's annual report includes estimated value on operational leases and the associated depreciation with tangible assets. Although these estimations do not represent the true value of operational leases or depreciation, it is assumed to be the closest estimate available. Expenses recognized from operating leases as other operating expenses have been subtracted the respective years.

Financial income

Salmar recognized gains from disposal of associated companies or other assets in 2019 under financial income. Plenborg & Kinserdal (2021) recognize gains and losses from disposals as an unusual item and part of financing activities. Until 2017, gains/loss on disposals were recognized with other operating revenue (ref. previous section of other operating revenue). 2019 is therefore adjusted accordingly to comply with previous years' net financial expenses.

Table 4: Adjusted analytical income statement

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Total Operating Revenue	7 326 202,00	9 003 214,00	10 798 726,00	11 322 190,00	12 229 837,00	12 898 337,00
COGS	3 562 811,00	4 000 818,00	4 722 474,00	4 789 691,00	5 770 027,00	5 870 577,00
Gross profit	**3 763 391,00**	**5 002 396,00**	**6 076 252,00**	**6 532 499,00**	**6 459 810,00**	**7 027 760,00**
Payroll Costs	765 881,00	861 534,00	929 100,00	1 040 438,00	1 202 494,00	1 319 961,00
Other Operating costs	1 266 695,00	1 347 839,00	1 231 944,00	1 263 034,00	1 479 023,00	1 902 210,00
Revenue from investments in associated companies	40 242,00	286 844,00	208 941,00	252 933,00	118 655,00	42 208,00
EBITDA	**1 771 057,00**	**3 079 867,00**	**4 124 149,00**	**4 481 960,00**	**3 896 948,00**	**3 847 797,00**
Depreciation of Right-of-use assets	69 652,73	102 346,83	96 765,93	131 959,94	192 153,00	211 635,00
Depreciation of intangible and tangible assets	246 801,00	306 069,00	371 549,00	446 776,00	524 653,00	569 337,00
Amortization of Right-of-use assets	-	-	553,00	-	-	-
Amortization of intangible and tangible assets	14 169,00	-	3 926,00	-	1 642,00	31 121,00
EBIT	**1 440 434,27**	**2 671 451,17**	**3 651 355,07**	**3 903 224,06**	**3 178 500,00**	**3 035 704,00**
Tax expense	265 344,50	552 414,26	713 858,71	765 592,84	617 790,74	665 013,39
NOPAT	**1 175 089,78**	**2 119 036,91**	**2 937 496,36**	**3 137 631,22**	**2 560 709,26**	**2 370 690,61**
Net financial expenses	- 103 659,27	- 54 549,56	- 168 896,98	- 127 354,75	- 220 765,00	- 298 530,00
Tax expense (tax shield)	- 19 095,23	- 11 279,99	- 33 020,23	- 24 979,83	- 42 909,10	- 65 397,17
Net financial expenses after tax	**- 84 564,04**	**- 43 269,57**	**- 135 876,75**	**- 102 374,92**	**- 177 855,90**	**- 233 132,83**
Net profits	**1 090 525,73**	**2 075 767,35**	**2 801 619,61**	**3 035 256,31**	**2 382 853,36**	**2 137 557,78**

Source: Authors own creation

5.3 Analytical Balance Sheet

The analytical balance sheet, like the analytical income statement, classifies assets and liabilities into operating or financing items. The classification should comply with the classifications made in the analytical income statement. That is, if investments in associated companies is classified as an operating activity in the analytical income statement, the corresponding item must be classified as an operating item in the analytical balance sheet. The reclassification enables one to calculate a firm's "invested capital", which combines the investments in a firm's operating activities and equals the sum of operating assets minus operating liabilities (Plenborg & Kinserdal, 2021). Invested capital, also known as net operating assets, can be calculated in two ways:

Eq. 1

$$\textbf{Invested capital (net operating assets)} = \textbf{Operating assets} - \textbf{Operating liabilities}$$
$$= \textbf{Equity} + \textbf{Net Interest Bearing Liabilities}$$

Where: Net interest bearing liabilities = Financial liabilities − Financial assets

Items considered as operating items are usually assumed not to carry any interest, whereas financial items carry interests and it therefore considered financing that requires a return from shareholders or creditors (Plenborg & Kinserdal, 2021). The next section will explain adjustments and assumptions considered when preparing the analytical balance sheet.

5.3.1 Classifications and adjustments

Land, buildings, and other material property

Historically, Salmar has reported *1) Land, buildings, and other material property, 2) Machines, plant & equipment, and 3) Vessels, vehicles, etc.* individually in their balance sheet. After the implementation of IFRS 16 in 2019, the abovementioned items are compressed into one – *Land, buildings, and other material property*. In order to make the financials more comparable, these items have been merged for each year prior to 2019.

Right-of-use assets

The estimation of this item is explained under 'Depreciation and amortization' in the previous section of the analytical income statement. Right-of-use assets is presented on an individual line in the analytical balance sheet and represent the present value of future leasing payments, complying with the new accounting standard covered earlier in this paper.

Investments in associated companies

Following the same assumptions and arguments covered under “Income from associated companies” in the analytical income statement, this item is considered as an operating item in the analytical balance sheet.

Pensions

The firm is liable for the future pension payments of earned rights for the employees. Since recognized pension liabilities, and associated pension assets to cover for the liabilities are interest-bearing, it seems fair to include this item as a financial item (Plenborg & Kinserdal, 2021). However, these assets are not utilized as financing of operating assets, which argues against classifying it as a financial asset. As the item makes up a small fraction of Salmar’s total assets, it would not make any difference in the fundamental enterprise value. Pensions is thus considered as an operating asset in the analytical balance sheet.

Investments in shares & other securities

This item consists of investments in other non-listed companies and other securities. Salmar do not provide any specification of the item in their annual report. It is reasonable to assume that this item is not part of operating activities, considering that it is recognized apart from investments in associated companies. Given the available information, this item is classified as a financing asset.

Other long-term receivables

Long-term receivables are often interest-bearing and should thus be classified as a financial asset. However, if the loans are part of usual inter-firm trading, it should be classified as capital invested in operations (Plenborg & Kinserdal, 2021). Salmar do not disclose any information about the origin of the item, and it is therefore difficult assess if this item is part of inter-firm trading. Since it is considered long-term and plausibly carry interest, it is classified as a financial item.

Bank deposits, cash & cash equivalents

Cash and cash equivalents are usually excess cash, which can be paid out as dividends, buy back shares, or repay debt without affecting the underlying operations. Firms usually do not disclose whether this item is operating cash or excess cash, which is also the case for Salmar. Rules of thumb is often used to estimate operating cash, which may lead to imprecise and vast different results (Plenborg & Kinserdal, 2021). Therefore, cash and cash equivalents are classified as financial assets.

Leasing and other long-term debt (non-current financial liabilities)

Following the changes regarding IFRS 16, leasing liabilities have increased due to implementation of operating liabilities in the balance sheet. See section of IFRS 16 leasing agreements for further explanation of the respective changes.

Table 5: Aggregated analytical balance sheet

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Non-current operating assets	6 024 604,32	7 362 560,11	7 997 596,78	8 568 965,00	10 399 372,00	13 981 588,00
Current operating assets	4 709 493,00	6 121 014,00	5 139 930,00	6 692 351,00	7 260 809,00	7 701 942,00
Total Operational non-interest bearing assets	**10 734 097,32**	**13 483 574,11**	**13 137 526,78**	**15 261 316,00**	**17 660 181,00**	**21 683 530,00**
Non-current operating liabilities	1 230 815,00	1 495 301,00	1 362 222,00	1 541 431,00	1 757 557,00	1 828 109,00
Current operating liabilities	1 583 852,00	2 587 383,00	2 496 264,00	2 686 987,00	2 725 686,00	3 133 425,00
Total Operational non-interest bearing liabilites	**2 814 667,00**	**4 082 684,00**	**3 858 486,00**	**4 228 418,00**	**4 483 243,00**	**4 961 534,00**
Net Operating Assets (Invested Capital)	**7 919 430,32**	**9 400 890,11**	**9 279 040,78**	**11 032 898,00**	**13 176 938,00**	**16 721 996,00**
Non-current financial liabilities	2 824 609,32	2 845 398,11	1 600 054,78	1 403 670,00	3 240 441,00	4 446 755,00
Current financial liabilities	140 421,00	198 613,00	243 633,00	748 187,00	522 272,00	1 603 002,00
Total Financial interest bearing liabilities	**2 965 030,32**	**3 044 011,11**	**1 843 687,78**	**2 151 857,00**	**3 762 713,00**	**6 049 757,00**
Non-current financial assets	7 129,00	50 238,00	55 677,00	19 206,00	94 887,00	91 219,00
Current financial assets	273 696,00	273 715,00	177 098,00	239 596,00	230 990,00	223 447,00
Total Financial interest bearing assets	**280 825,00**	**323 953,00**	**232 775,00**	**258 802,00**	**325 877,00**	**314 666,00**
Net Interest-bearing liabilities	**2 684 205**	**2 720 058**	**1 610 913**	**1 893 055**	**3 436 836**	**5 735 091**
Total equity	**5 227 040**	**6 680 833**	**7 668 128**	**9 139 843**	**9 740 101**	**10 986 902**
Invested Capital (NIBL + Equity)	**7 911 245**	**9 400 891**	**9 279 041**	**11 032 898**	**13 176 937**	**16 721 993**

Source: Authors own creation

5.4 Profitability Analysis

The process by which a business generates value is a critical aspect of financial analysis. It is critical to review past results and identify trends in order to forecast a firm's future condition. Additionally, comparing the firm's results to that of its peers would indicate whether the performance was reasonably good or bad. In general, shareholders and creditors prefer to evaluate only ongoing (core) activities, rather than non-recurring products (Petersen, et. al., 2017). Based on the conclusions and changes from the previous chapter, the subsequent profitability analysis would include only core items and recurring operations.

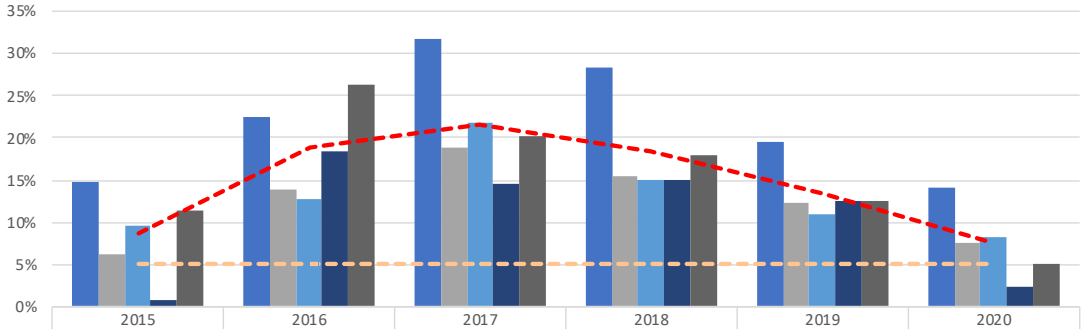
Return on invested capital (ROIC)

Return on invested capital (ROIC) is an important ratio for assessing a firm’s overall profitability. The ratio expresses the return on capital invested in net operating assets as a percent of net operating profit (Plenborg & Kinserdal, 2021). ROIC is thus measuring the return yielded from both equity and liabilities combined, which consequently eliminates the financial gearing in a firm. It is therefore considered an ideal ratio for comparison with peers in the same industry. Furthermore, to evaluate if the firm’s performance is at satisfactory levels, weighted average cost of capital is an appropriate benchmark. An after-tax measure is applied in this thesis and is defined as:

Eq. 2

$$\text{ROIC} = \frac{\text{NOPAT}}{\text{Invested Capital}} \rightarrow \text{ROIC}_{2020} = \frac{2.370.690}{16.721.996} = 14.18\%$$

Figure 29: Return on invested capital Salmar vs. peer group



	2015	2016	2017	2018	2019	2020
SALM	15%	23%	32%	28%	19%	14%
MOWI	6%	14%	19%	16%	12%	8%
LSG	10%	13%	22%	15%	11%	8%
GSF	1%	18%	15%	15%	13%	2%
NRS	11%	26%	20%	18%	13%	5%
Average	9%	19%	21%	18%	14%	8%
WACC	5%	5%	5%	5%	5%	5%

Source: Authors own creation

In 2016, strong demand combined with lower-than-expected supply resulted in all-time high prices for salmon. Nevertheless, the prices have stayed at a relatively high level in the following years, with demand exceeding supply as the main contributor. As figure 29 visualizes, Salmar achieved to double its ROIC from 2015 to 2017. Moreover, Salmar outperform its peers each year, only beaten by NRS in 2016. The level of return is satisfactory compared to WACC, which signify that Salmar creates excess value. However, figure 29 shows that the underlying trend for Salmar and the peer group is negative. In order to explain the underlying driver for the development in ROIC, a decomposition of the ratio is necessary.

Decomposition of ROIC

ROIC can be decomposed into an operating profit margin and a turnover rate of invested capital. This enables to determine whether ROIC is driven by a change in the revenue-expense relation or improved capital utilization (Plenborg & Kinserdal, 2021). ROIC can therefore be expressed as:

Eq. 3

$$\text{ROIC} = \text{Profit Margin} \times \text{Turnover of Invested Capital}$$

Eq. 4

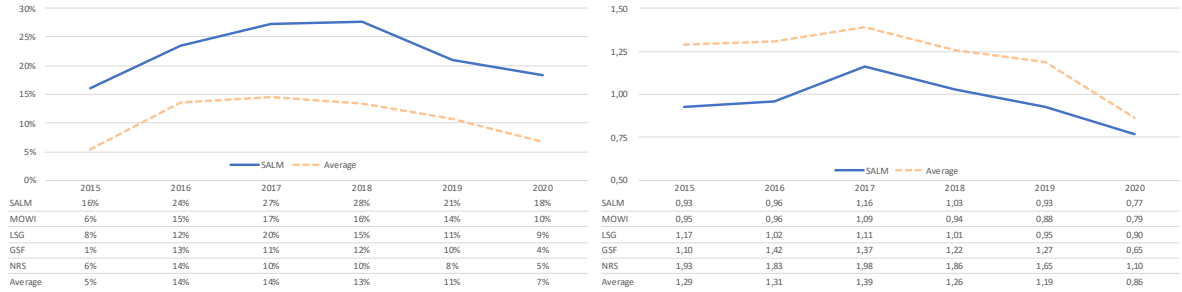
$$\text{Operating Profit Margin} = \frac{\text{NOPAT}}{\text{Revenues}} \rightarrow 2020 = \frac{2.370.690}{12.898.337} = 18.38\%$$

Eq. 5

$$\text{Turnover rate of Invested Capital} = \frac{\text{Revenue}}{\text{Invested Capital}} \rightarrow 2020 = \frac{12.898.337}{16.721.996} = 0.77$$

Operating profit margin reflects changes in the revenue-expense relation, whereas turnover rate of invested capital express changes in capital utilization. Covering both similarly is convenient because it brings more clarity in identifying any underlying change.

Figure 30: Operating profit margin (left) and Turnover of invested capital (right)



	2015	2016	2017	2018	2019	2020
SALM	16%	24%	27%	28%	21%	18%
MOWI	6%	15%	17%	16%	14%	10%
LSG	8%	12%	20%	15%	11%	9%
GSF	1%	13%	11%	12%	10%	4%
NRS	6%	14%	10%	10%	8%	5%
Average	5%	14%	14%	13%	11%	7%

	2015	2016	2017	2018	2019	2020
SALM	0,93	0,96	1,16	1,03	0,93	0,77
MOWI	0,95	0,96	1,09	0,94	0,88	0,79
LSG	1,17	1,02	1,11	1,01	0,95	0,90
GSF	1,10	1,42	1,37	1,22	1,27	0,65
NRS	1,93	1,83	1,98	1,86	1,65	1,10
Average	1,29	1,31	1,39	1,26	1,19	0,86

Source: Authors own creation

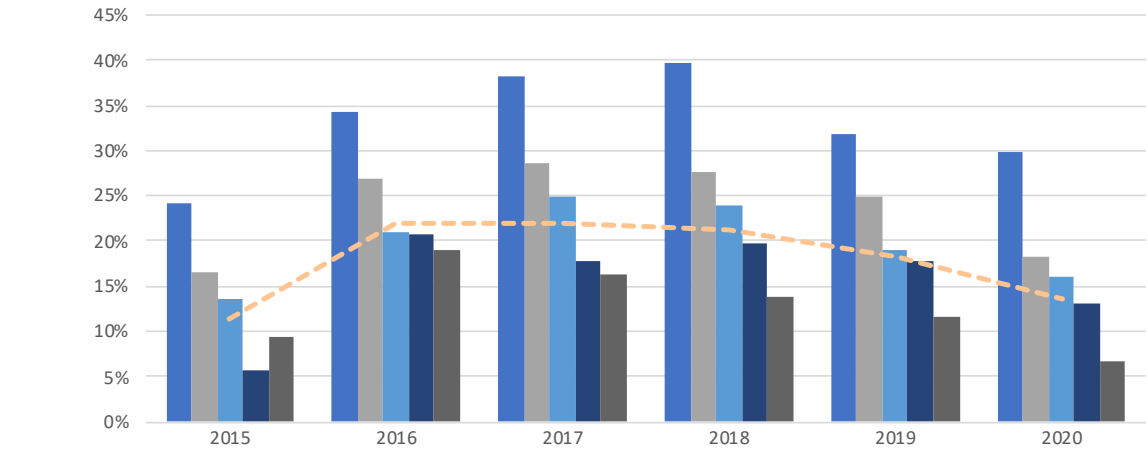
Salmar achieved increasing PM until 2018, whereas 2019 and 2020 resulted in a decrease. On the other hand, turnover of invested capital reached its highest level in 2017 and decreased every year afterwards. Figure 30 reviles that the decreasing ROIC from 2017 to 2018 was related to a lower capital utilization. However, both contributes to the decreasing ROIC after 2018. Salmar achieves higher profit margins than the peer average by a relatively high margin. This confirms that Salmar is the most cost-efficient player in this sample. Salmar performs worse than the peer averages each year in terms of turnover of invested capital, suggesting a lower utilization of capital invested.

The decomposition demonstrates that Salmar achieves higher profit margins than its peers by a relatively high margin. This confirms their strategic target of being the most cost-efficient firm, at least compared to the peer group in this sample. Furthermore, Salmar generates less value per invested unit of capital invested compared to its peers. Plenborg & Kinserdal (2021) states that it is usually a trade-off where increasing PM result in decreasing turnover of invested capital, which is supported by the decomposition. Even though Salmar's ROIC is decreasing, it is still within satisfactory levels compared to the required rate of return.

EBITDA-margin

EBITDA-margin is a standard measure for investigating profitability. Concepts like EBITDA has the advantage of excluding effects of accounting standards (e.g., depreciation, amortization, and taxes), giving investors a clear view of a company's main activities (Petersen et al., 2017). It is also a great tool for investigating the relation between revenues and operating expenses discussed above.

Figure 31: EBITDA-margin for Salmar and peer group



	2015	2016	2017	2018	2019	2020
SALM	24%	34%	38%	40%	32%	30%
MOWI	16%	27%	29%	28%	25%	18%
LSG	14%	21%	25%	24%	19%	16%
GSF	6%	21%	18%	20%	18%	13%
NRS	9%	19%	16%	14%	12%	7%
Average	11%	22%	22%	21%	18%	14%

Source: Authors own creation

Figure 31 further confirms that Salmar appears to be the cost-leader compared to the peers. Salmar consistently outperforms its peers with a relatively high margin. The fundamental trend is similar to previous findings. Even with a difficult year in 2020, Salmar reached an EBITDA margin of approximately 30%, which stands out as a strong performance compared to the peers.

Return on Equity (ROE)

As mentioned in the previous section, ROIC measures the firms' operating profitability without considering financial leverage. This section will take financial leverage into account and compare our peer group in terms of return on equity (ROE). ROE measures owners' accounting return on their investments in a firm (Petersen et. al., 2017). The following equation expresses ROE:

Eq. 6

$$\text{ROE} = \frac{\text{Net profit after tax}}{\text{Book value of equity}} = \text{ROIC} + (\text{ROIC} - \text{NBC}) \times \frac{\text{NIBL}}{\text{Equity}}$$

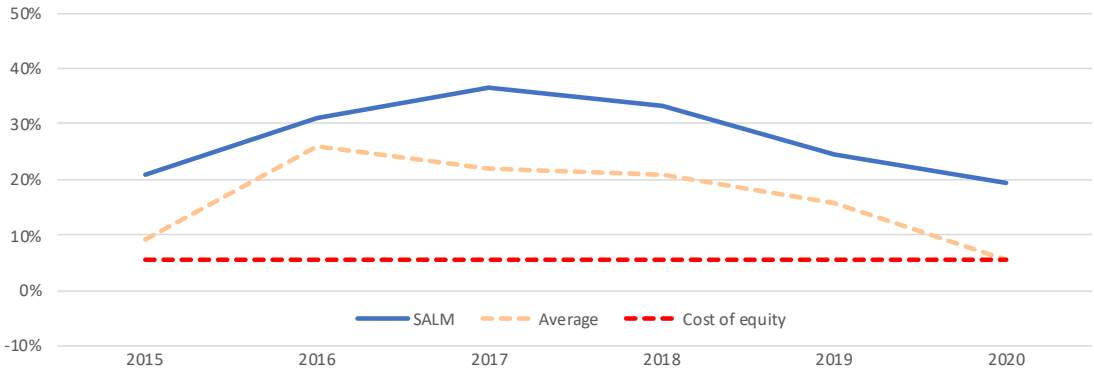
$$\textbf{Where}: \text{Net Borrowing Cost (NBC)} = \frac{\text{Net financial expenses, after tax}}{\text{NIBL}}$$

Equation 6 illustrates the effect of financial leverage on ROE. Additionally, it illustrates how businesses will benefit from financial leverage when their ROIC exceeds their net borrowing cost (NBC), which serves as a metric for the firm's borrowing rate. Petersen et. al. (2017) argues that NBC rarely matches a firm's real borrowing rate due to differences between rates on lending and deposit rates, and currency gains/losses. Table 6 presents ROE using ROIC, NBC, and NIBL over book value of equity:

Table 6: Return on equity calculated using equation 6

Financial Year	2015	2016	2017	2018	2019	2020
ROIC	14,84%	22,54%	31,66%	28,44%	19,43%	14,18%
Net borrowing cost	3,15%	1,59%	8,43%	5,41%	5,17%	4,07%
NIBL/BVE	0,51	0,41	0,21	0,21	0,35	0,52
ROE	**20,84%**	**31,07%**	**36,54%**	**33,21%**	**24,46%**	**19,46%**

Figure 32: Return on equity Salmar compared to peer average



	2015	2016	2017	2018	2019	2020
SALM	21%	31%	37%	33%	24%	19%
MOWI	7%	17%	29%	17%	20%	11%
LSG	11%	15%	24%	16%	12%	9%
GSF	-2%	23%	22%	22%	19%	-1%
NRS	20%	49%	13%	29%	12%	2%
Average	9%	26%	22%	21%	16%	5%
Cost of equity	5,53%	5,53%	5,53%	5,53%	5,53%	5,53%

Source: Authors own creation

The visualization from figure 32 suggests a similar pattern as presented in the previous section. Salmar experienced an improved in ROE of appx. 16% from 2015 to 2017, which is mainly a result of high ROIC levels. Furthermore, Salmar manages to achieve a greater ROE due to the benefit of financial leverage due to higher ROIC than NBC. The level of ROE is also stronger compared with the peer

average throughout the period, indicating greater accounting returns for Salmar's owners. Additionally, the level of ROE is satisfactory given the required rate on equity.

Summary of profitability analysis

Salmar shows a greater level of return in both ROIC and ROE compared to the respective required rates of return. Furthermore, Salmar is consistently overperforming the peer average, mainly because of better revenue-expense relation. However, the underlying trend is negative after the all-time-high profitability in 2017. The industry experiences decreasing spot prices and increased expenses related to diseases, which are the main drivers behind the negative profitability.

5.5 Growth and Industry Specific Ratio Analysis

Revenue growth is by many seen as the driving force of future progress. Firms are therefore often concerned about its own growth compared to its competitors in order to assess its relative performance and to recognize future growth opportunities (Petersen, et. al, 2017). Salmar reports as their main growth indicator (SalMar, 2021). In addition to the more commonly used ratios, the upcoming section will consider some industry specific measures to compare the historical development in revenue growth and operational growth in profitability.

Revenue Growth

Operating revenue is mainly driven by salmon prices and harvest volume. Investigating the historical trend in operating revenue is essential to get better insight into the industry composition. Furthermore, analyzing the driving forces behind operating revenue will help to explain the underlying trend.

Table 7: Harvest volumes (GWT) for Salmar and peers

Financial year	2015	2016	2017	2018	2019	2020	CAGR
SALM	149 900	131 100	152 200	158 800	166 100	173 500	3%
MOWI	420 148	380 621	370 346	375 237	435 904	439 829	1%
LSG	171 200	164 200	173 200	175 800	171 100	172 000	0%
GSF	65 398	64 726	62 598	74 623	82 973	71 142	2%
NRS	27 903	26 819	31 918	35 970	27 297	30 509	2%

Source: Authors own creation based on firms' annual reports

As outlined in the strategic analysis, demand for salmon has increased due to increased wealth, population growth, and greater focus towards healthy products. Improved knowledge and technological solutions have been developed to meet the increasing demand. However, strict regulation limits the potential growth in harvest volume for Norwegian famers. Also, biological issues in recent years have affected harvest volumes negatively. Table 7 presents the development in harvest volumes for Salmar and the peer group. As mentioned earlier, 2016 was especially harmed by diseases and high mortality. Increased focus on environmental conditions have resulted in a quick recovery and a sustainable growth

rate. Salmar has achieved the highest annual growth rate of appx. 3% throughout the period. The consolidation of Atlantic Salmon and investment in Ocean Farm 1 are large contributors to the growth.

Table 8: Revenue growth for Salmar and peer group

Financial year	2016	2017	2018	2019	2020	Average	CAGR
SALM	23%	20%	5%	8%	5%	12,23%	11,98%
MOWI	14%	4%	5%	8%	-9%	4%	4%
LSG	28%	8%	7%	3%	-2%	9%	8%
GSF	42%	7%	7%	10%	-47%	4%	-1%
NRS	32%	17%	3%	10%	-8%	11%	10%

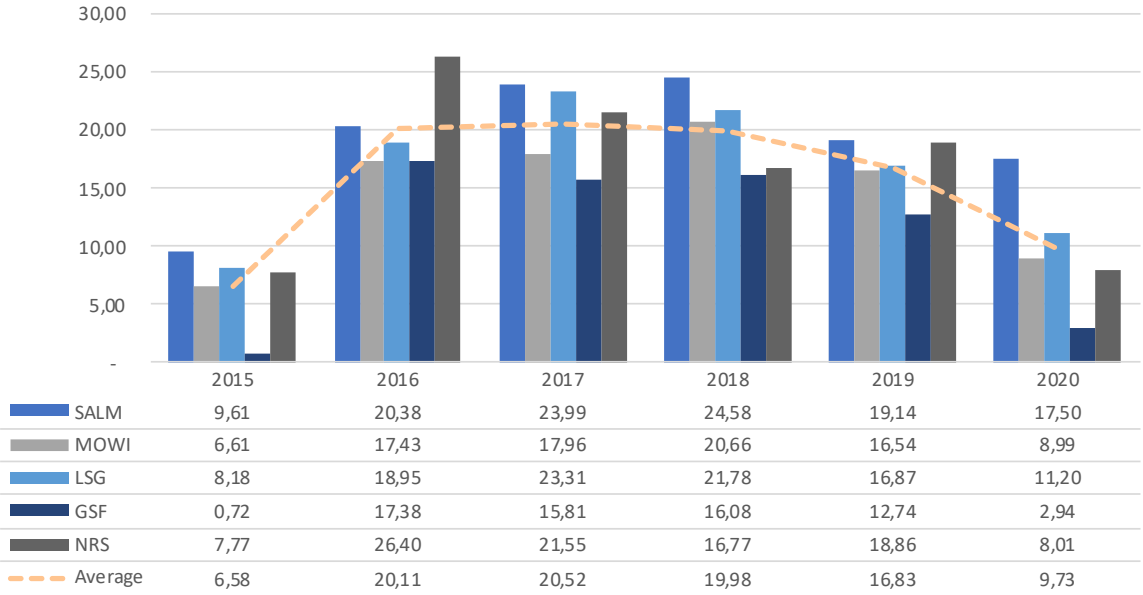
Source: Authors own creation based on firms' annual reports

As mentioned, the harvest volume of salmon dropped significantly in 2016. Consequently, global supply dropped significantly, while demand continued to grow. This led to a 40% increase in average salmon prices. Table 8 presents the growth in operating revenue for Salmar and its peers. Rates were peeking in 2016 for every firm investigated, which can be explained by the high spot prices of salmon. 2017, on the other hand, experienced greater variations. Salmar achieved a growth rate of appx. 20%, which was mainly due to a quick recovery in harvest volumes shown in table 7 above. Furthermore, Salmar outperform its peers overall in both average and CAGR terms. Even with a difficult year in 2020 due to the Covid-19 pandemic, Salmar achieved positive growth. This demonstrates a strong foundation for overcoming difficult periods and achieve further growth going forward.

EBIT per GWT

For observers in the salmon farming sector, the EBIT/KG ratio has proved to be an effective profitability and productivity calculation. The key explanation for this being that salmon goods are known for their homogeneity, which necessitates organizational excellence in order to boost overall profitability and provide investors with satisfying returns. Additionally, it demonstrates efficiency improvement in the operating value chain. Thus, it may serve as a pint of reference for the underlying growth rate. Amount of KG is measured in tones gutted weight (GWT).

Figure 33: EBIT/kg ratio for Salmar and peer group



	2015	2016	2017	2018	2019	2020
SALM	9,61	20,38	23,99	24,58	19,14	17,50
MOWI	6,61	17,43	17,96	20,66	16,54	8,99
LSG	8,18	18,95	23,31	21,78	16,87	11,20
GSF	0,72	17,38	15,81	16,08	12,74	2,94
NRS	7,77	26,40	21,55	16,77	18,86	8,01
Average	6,58	20,11	20,52	19,98	16,83	9,73

Source: Authors own creation

Average salmon rates, fish mortality, and other biological problems all have a significant impact on the EBIT/kg ratio. If a company experience a large outbreak of diseases, the fish must be harvested earlier and at a lower weight than expected. Consequently, a greater proportion of operating expenses per kg harvested serves as the result. However, as outlined previously, the Norwegian outbreak in 2016 resulted in significant increase in prices and thus revenues. As illustrated in figure 33, increases in revenue more than offset the effect of increased expenses per KG. Salmar's EBIT/kg ratio more than doubled from 2015 to 2016. Even with modest declines in salmon prices, Salmar achieved improving ratios until 2018 due to better utilization of direct input factors (COGS). The underlying trend is similar to that of ROIC and EBITDA margin. The result in 2020 proves to underpin the revenue growth presented above.

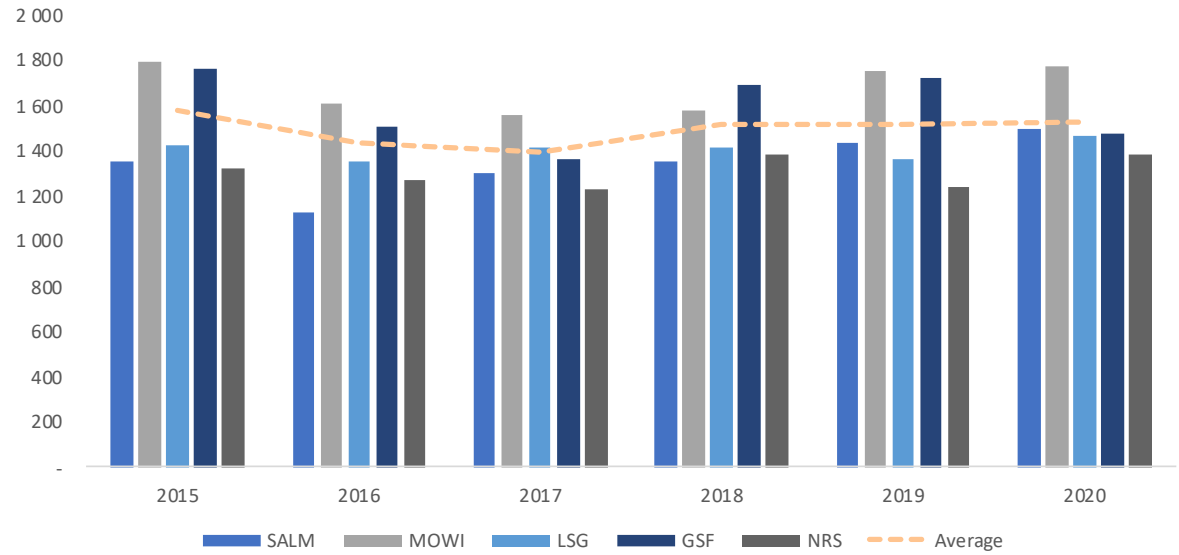
License utilization

Licenses is necessary to engage with salmon farming in Norway. As mentioned in the strategic analysis, available licenses and capacity per license is strictly regulated by the Norwegian government. Due to limited availability to acquire new farming licenses, better utilization of existing licenses is essential. License utilization is a ratio between harvest volumes measured in GWT compared to the firm's number of farming licenses. It is an indicator for investigating license efficiency and is simply calculated as follows:

Eq. 7

$$\text{License Utilization} = \frac{\text{Harvested Volume}}{\text{Number of licenses}} \rightarrow 2020 = \frac{173.500}{116} = 1496$$

Figure 34: GWT divided by number of licenses



Source: The authors construction

The peer average has been relatively stable over the investigated period. Again, utilization dropped in 2016 due to high mortality and early harvesting. Salmar has historically underperformed compared to its peers. However, the underlying trend is positive post 2016. Salmar has gone from the least efficient to the second most efficient firm during the last four years. Worth noticing is that figure 34 illustrates an inverse trend in license utilization compared to the previous ratios. Number of licenses has been unchanged since 2016, which makes harvest volumes the underlying driver for Salmar.

Summary growth analysis

Salmar has proven to be the fastest growing firm over the last six years, measured in both harvest volumes and revenue growth. Greater utilization of direct input factors than its peers, combined with improved utilization per license, contributes to explain the higher revenue growth. 2020 stand out as a particularly good example. While every peer firm achieved negative growth, Salmar attained a positive growth. The findings suggest a strong foundation in managing difficult periods and improved growth rates going forward.

5.6 Liquidity analysis

Liquidity analysis is a crucial subject when undertaking a financial analysis. Sufficient liquidity is important if the firm are to meet its financial obligations, undertake profitable investments, and essentially avoid bankruptcy. Lack of liquidity impact the firm's ability to perform potentially profitable activities and will thus hamper growth opportunities. Furthermore, it is important to analyze firms' liquidity in a long-term and short-term perspective. An adequate financing structure require a good balance between equity, long-term and short-term financing, which corresponds with the risk of the operations (Plenborg & Kinserdal, 2021). That is, optimal financing structure varies between industries and for firms within the same industry. The upcoming section begins with the long-term analyses, followed up by the short-term parameters, and concludes with a summary of the most relevant findings.

5.6.1 Long-term liquidity

The long-term perspective is concerned with the firm's ability to meet its long-term obligations. That is, is the firm able to pay all outstanding debt as part of the ordinary course of business (Plenborg & Kinserdal, 2021). There are several available ratios which can be applied to determine the firm's long term liquidity risk. The following section covers some of the most used ratios for Salmar and analyze the underlying trend over the last six years.

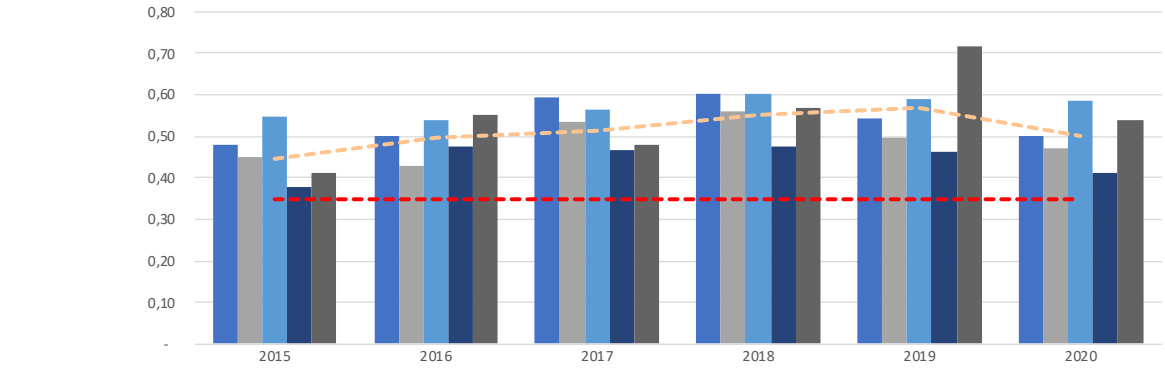
Solvency ratio

The solvency ratio is generally used to evaluate if the firm has a sound financing structure and a reasonable capital buffer to cover potential future short- and long-term losses (Plenborg & Kinserdal, 2021). Solvency ratio is simply defined as:

Eq. 8

$$\text{Solvency ratio} = \frac{\text{Equity}}{\text{Total assets}} \rightarrow \text{Solvency ratio}_{2020} = \frac{5.227.040}{10.943.501} = 47.76\%$$

Figure 35: Solvency ratio for Salmar and peer group



	2015	2016	2017	2018	2019	2020
SALM	0,48	0,50	0,59	0,60	0,54	0,50
MOWI	0,45	0,43	0,53	0,56	0,50	0,47
LSG	0,55	0,54	0,56	0,60	0,59	0,58
GSF	0,38	0,47	0,47	0,48	0,46	0,41
NRS	0,41	0,55	0,48	0,57	0,72	0,54
Average	0,45	0,50	0,51	0,55	0,57	0,50
Financial Covenant	0,35	0,35	0,35	0,35	0,35	0,35

Source: Authors own creation

Firms are often subject to various financial covenants or requirements stating a minimum level for financial ratios. Salmar's board of directors communicate that the group's equity ratio must exceed 35% measured in book-values (Salmar, 2021). Figure 35 confirms that Salmar is complying with the required level of 35%. After achieving improved operating profitability between 2016 and 2018, Salmar increased its equity share by appx. 10%. However, the equity ratio has dropped down to 2016-levels of 50%. The peer average also dropped down after 2019, which is explained by the unexpected consequences of Covid-19. Figure 35 illustrates a relatively consolidated equity ratio between Salmar and the peer average, which may serve as an optimal level for the industry.

Financial leverage Book-Value vs. market-value

Financial leverage, like the solvency ratio, provide information about the long-term liquidity risk. The financial leverage ratio can be based on book-values or market-value. Book-value is the accounting value of equity and liabilities, while market-value reflect the updated view on the assets and liabilities from the "market". There can be large deviations between the two value estimates, and it is generally recommended using market values (Plenborg & Kinserdal, 2021). Since Salmar and the peer group are all listed companies, market values for both equity and liabilities are available. However, both value estimates will be presented and compared.

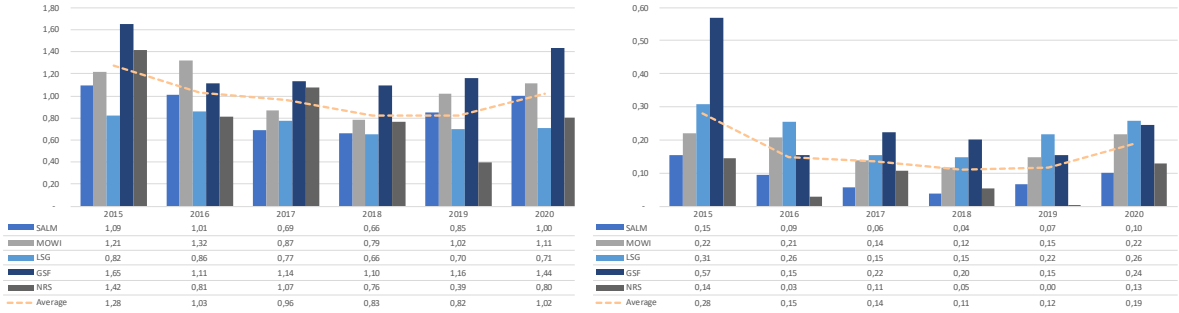
Market-value of equity are simply calculated as outstanding shares times the share price as of December 31st 2020, while market-value of liabilities equals NIBL. Equation 9 defines both value estimates:

Eq. 9

$$\text{Financial Leverage BV} = \frac{\text{Total Liabilities}}{\text{BVE}} \quad | \quad \text{Financial Leverage MV} = \frac{\text{NIBL}}{\text{MVE}}$$

$$\text{Financial Leverage BV}_{2020} = \frac{11.011.291}{10.986.902} = 1.002 \; | \; \text{Financial Leverage MV}_{2020} = \frac{5.735.091}{57.057.526} = 10\%$$

Figure 36: BV vs MV



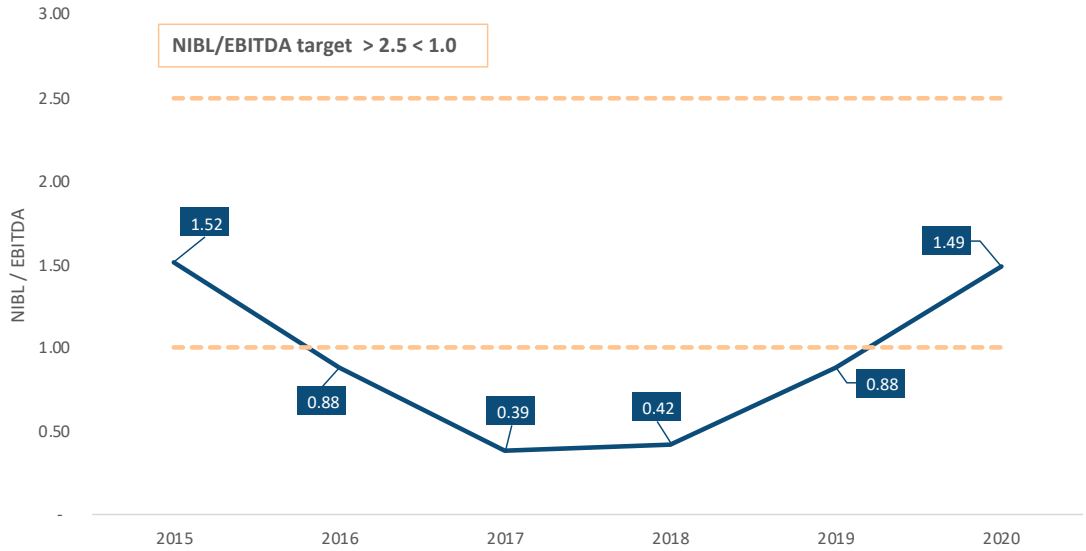
Source: The authors construction

Both value estimates show the same underlying trend throughout the period. It is also evident that the market value of equity is significantly greater than liabilities for each firm. Salmar's financial leverage ratio based on book-value is close to the peer average displaying equal amount of equity and liabilities. Based on market-values, however, equity is appx. 10x greater than liabilities. Salmar is also way below the peer average based on market-values, demonstrating that Salmar's assets are valued relatively higher than its peers. Both value estimates suggest a sound financing structure compared to the peer average, especially considering the market-value estimates.

NIBL to EBITDA

It is often useful to assess operating profitability with financial liability to determine a firm's potential to fulfill its financial obligations. NIBL to EBITDA measures how many times a firm has leveraged its EBITDA and serves as the estimated time needed to pay off all debt (Plenborg & Kinserdal, 2021). Salmar introduced in 2020 a new financial target requiring a NIBL/EBITDA ratio in the interval of 1-2,5 (SalMar, 2021).

Figure 37: Salmar's historical NIBD/EBITDA compared to their current target



Source: The authors construction

Earlier findings demonstrate improving EBITDA-margins until 2018, which ultimately contribute to a lower ratio. Salmar also decreased its NIBL in the same period. However, the trend has been the opposite post 2018 with declining EBITDA-margins and increases in NIBL. Salmar complies with the new requirement of a ratio between 1.0 and 2.5, as visualized above.

Interest coverage ratio

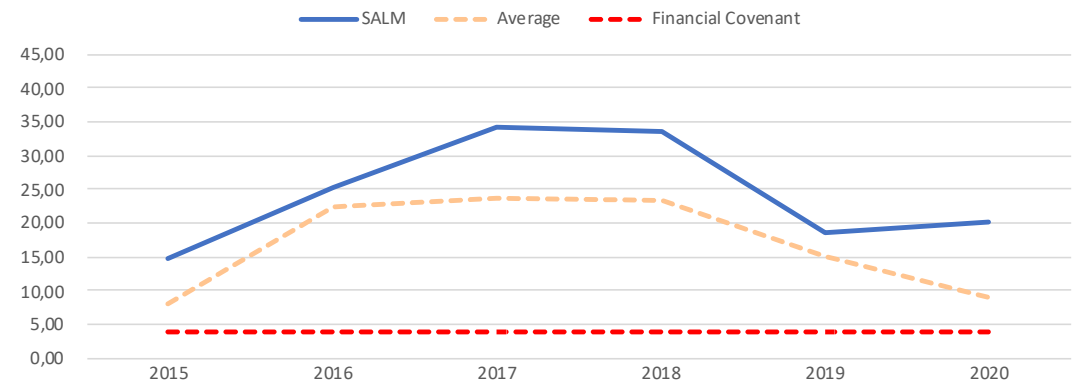
The interest coverage ratio (ICR) is a financial ratio that indicates a business's ability to satisfy its financial obligations. There are multiple ways of calculating ICR. However, Salmar operates with a ICR ratio using EBITDA over net financial expenses.

Eq. 10

$$\text{Interest Coverage Ratio} = \frac{\text{EBITDA}}{\text{Net financial expenses}}$$

The ratio considers how many times operating profit covers the firm's financial expenses. A high ratio is usually interpreted with low long-term liquidity risk (Petersen et. al, 2017). Salmar is also subject to a financial covenant stating a required interest coverage ratio exceeding 4.0.

Figure 38: Interest coverage ratio



	2015	2016	2017	2018	2019	2020
SALM	14,58	25,12	34,14	33,62	18,68	20,26
MOWI	6,69	14,76	15,27	16,14	10,43	5,85
LSG	10,88	23,67	19,26	23,77	13,44	8,49
GSF	0,36	7,25	17,43	12,39	13,64	0,84
NRS	7,94	40,86	32,96	31,16	19,14	9,23
Average	8,09	22,33	23,81	23,42	15,07	8,93
Financial Covenant	4,00	4,00	4,00	4,00	4,00	4,00

Source: The authors construction

Salmar's interest coverage ratio is more than covering the required level of 4,0. The lowest value calculated was 14.3 in 2015, which is still more than three times the minimum under the covenant. The fundamental pattern is consistent with the profitability report. As mentioned in the strategic analysis, interest rates have been historically low since 2016 and have contributed significantly to the high values post 2016. Consequently, interest expenses are comparatively modest in comparison to previous years.

Summary long-term liquidity analysis

Salmar is, as of 2020, complying with all its financial covenants and other group requirements regarding financial ratios. Furthermore, both book-value and market-value estimates suggest a sound financing structure compared to the peer average. Even though interest rates have been historically low in recent years, Salmar shows a strong ability to meet its net financial expenses. The overall long-term liquidity risk is therefore considered to be low.

5.6.2 Short-term liquidity analysis

Long-term liquidity risk aims to investigate a firm’s ability to meet its long-term obligations with long-term assets and value creation through operations. Equally important is it to investigate how the firm is positioned to meet its immediate obligations and thus the short-term liquidity risk. The upcoming section will dig into the most used short-term liquidity risk measures and analyze Salmar’s current state and compare it with the peer group.

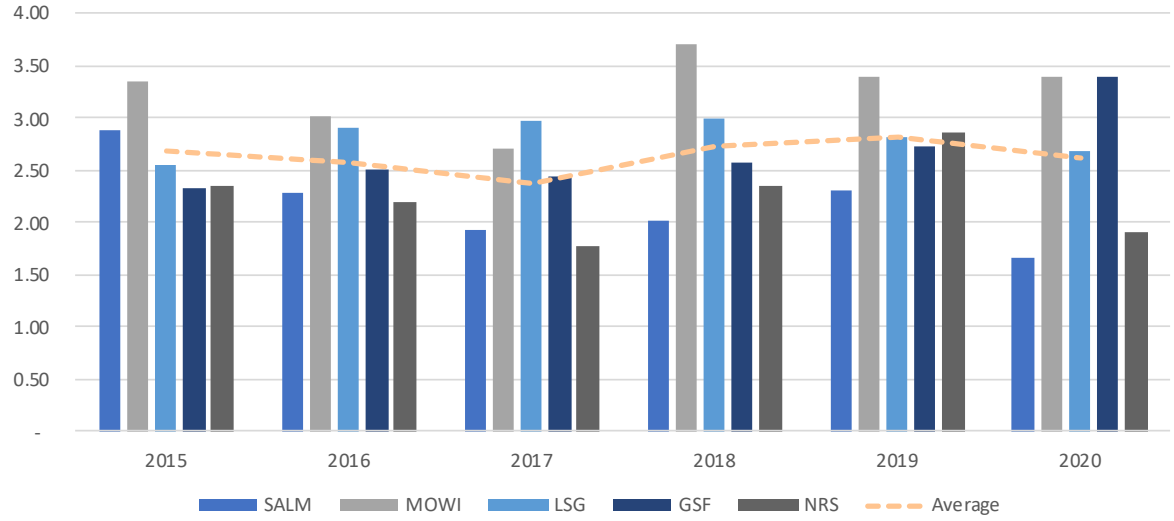
Current ratio

Current ratio compares a firm's current assets with current liabilities. The basic idea is that the larger the ratio, the greater the likelihood that the proceeds from a liquidation of current assets would cover current liabilities. Existing rules of thumb suggest that a current ratio exceeding 2.0 is considered with low short-term liquidity risk. However, the current ratio is largely exposed to differences between industries and variations in accounting policy (Petersen et. al, 2017). Current ratio is defined as:

Eq. 11

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} \rightarrow \text{Current ratio}_{2020} = \frac{7.918.172}{4.736.427} = 1.67$$

Figure 39: Current ratio



Source: The authors construction

Figure 39 clearly illustrates that Salmar is consistently below the peer average after 2015. The trend is relatively stable around a ratio of 2,5. Salmar reaches its lowest level of appx. 1,5 in 2020 which is mostly due to a significant increase in trade payables. Considering rules of thumb and the peer average, Salmar could have some short-term liquidity problems. However, current assets exceed current liabilities by more than 50%. In the absence of a clear benchmark, current ratio could indicate a moderate short-term liquidity risk.

Modified Current ratio

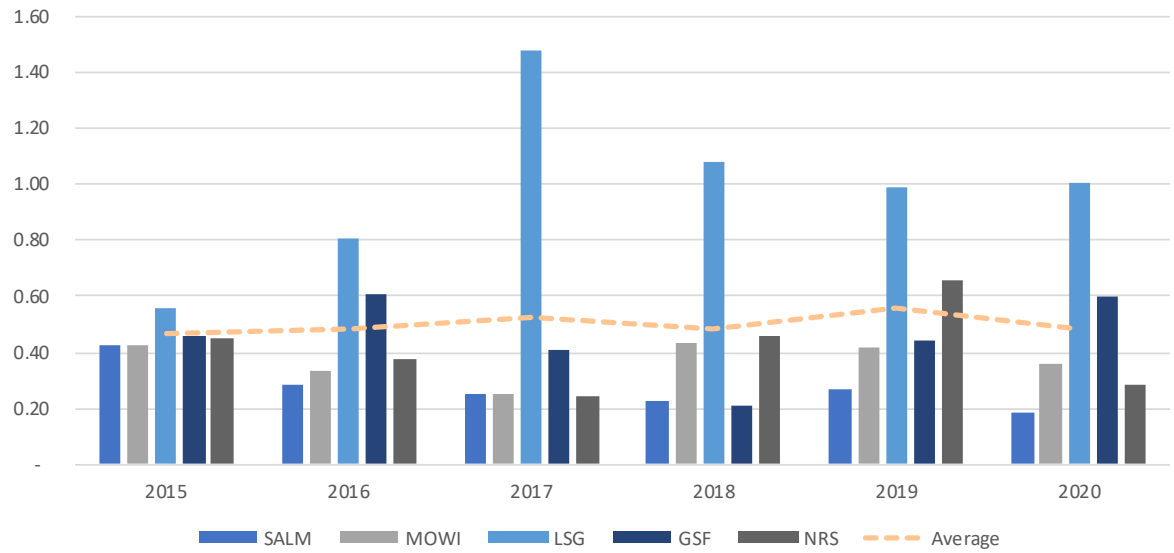
Modified current ratio aims to measure the short-term liquidity risk by comparing only liquid financial assets with current financial liabilities. Financing assets contains all assets which are easily realizable without influencing the operations, and non-current financial assets may be included if they are easily

realizable and are not used as collateral. Only current financial liabilities (must be paid within 12 months) should be included (Plenborg & Kinserdal, 2021). The modified current ratio is used to supplement the current ratio.

Eq. 12

$$\text{Modified Current ratio} = \frac{\text{Financing assets}}{\text{Current financing liabilities}} \rightarrow 2020 = \frac{750.613}{4.087.755} = 0.18$$

Figure 40:Modified current ratio



Source: The authors own construction

All the firms had the same items used as collateral, making the ratio more applicable. Figure 40 illustrates a similar trend for Salmar as the current ratio. Only about 20% of Salmar's financial assets cover its current liabilities in 2020. Even excluded LSG, the peer average is greater than Salmar's achievement. There are no defined guidelines for this ratio, leaving us to rely on the peer group. Hence, the modified current ratio supports the findings in the current ratio indicating a moderate short-term liquidity risk.

Working capital ratio and liquidity ratio

Another useful measurement when considering a firm's short-term liquidity risk is working capital ratio and its liquidity cycle. The two measurements are closely related and is therefore covered together. Working capital ratio measures how efficient a firm is in managing its net working capital (NWC), while the liquidity cycle calculates the number of days it takes to convert NWC into cash (Petersen et al, 2017). Working capital ratio is defined as:

Eq. 13

$$\text{Working capital ratio} = \frac{\text{Revenues}}{\text{Net working capital (NWC)}} \rightarrow 2020 = \frac{12.898.337}{2.740.408} = 4.71$$

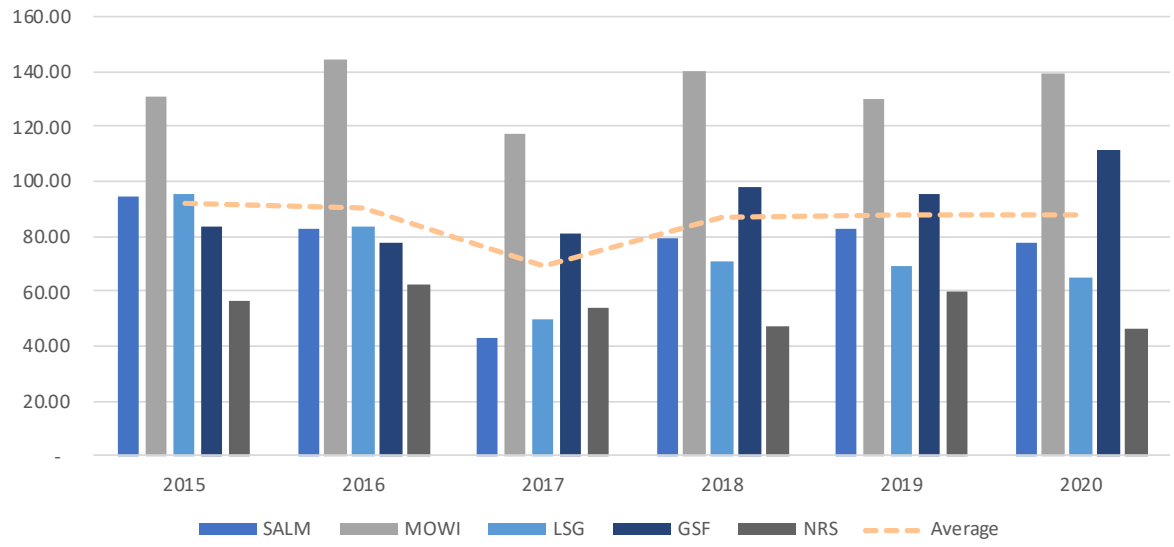
Where: NWC = Accounts receivables + inventory + prepaid expenses and other operating accruals − operating liabilities

There is no general rule for a sufficient level of working capital, even when comparing companies in the same industry. Liquidity cycle is therefore easier to interpret and compare between different firms. It is preferred to achieve lower levels when considering the liquidity cycle. A lower level indicates a higher ability to convert NWC to cash and consequently increase the cash flow. Liquidity cycle is defined as:

Eq. 14

$$\text{Liquidity cycle} = \frac{365}{\text{Working capital ratio}} = \frac{365}{\frac{\text{Net working capital}}{\text{Revenues}}} \rightarrow 2020 = \frac{365}{4.71} = 77.55$$

Figure 41:Liquidity cycle



Source: The authors own construction

The underlying trend is stable around 90 days, with 2017 as an outlier. Salmar generally has a greater capability to convert their NWC into cash. While the peer average stays stable, Salmar improves into 2020. However, both LSG and NRS achieves better results than Salmar the last three years. Figure 41 indicates that Salmar on average is better in managing its NWC.

Summary short-term liquidity risk

The short-term liquidity analysis demonstrates a potential risk for Salmar in covering its current liabilities. Current ratio should be interpreted with care, as the ratio is questionable as an indicator of short-term liquidity problems. The modified current ratio further supports a potential short-term risk compared to the peer average. However, Salmar proves a greater ability than the peer average in managing its Net-working capital. Overall, there is signals supporting moderate short-term difficulties.

6.0 SWOT Analysis

Until this point, the authors have identified and analyzed the most influential external factors affecting the salmon farming industry and its profitability. Additionally, an examination of Salmar's internal dynamics highlighted the company's strengths and weaknesses affecting its market position. Finally, the financial analysis clarified the fundamental causes affecting Salmar's recent economic performance, thus revealed potential weaknesses and financial strengths. Prior to forecasting the free cash flow, this section will help to connect the aforementioned analyses together. This is necessary in order to estimate the net effect of the many strategic- and financial aspects impacting Salmar's key value drivers in the future.

A SWOT analysis will be undertaken to integrate the strategic and financial analyses from above. The analysis provides a structured method to evaluate internal and external factors, focusing on Salmar's strengths and weaknesses, along with the opportunities and threats facing the firm. This enables a more complete picture of how Salmar is positioned today, and how the company is expected to be positioned in the future. Since the SWOT analysis first emerged in the 1960's, the framework has been subject to some major criticism. Some critics argue that the framework oversimplifies reality, making the effects difficult to quantify. Despite the criticism, the authors believe that the SWOT analysis is a useful tool for consolidating the findings from previous sections and connecting them to the forthcoming forecasting section.

Rather than displaying the SWOT analysis as the commonly used two by two matrix, a table has been created to showcase each factor vertically (Table 9). The reason for this is that the authors believe this arrangement provides a more comprehensive illustration. Each factor has been analyzed based on its expected impact on Salmar's future outlook. The effects are hereby classified as either positive, neutral or negative in the short- (ST) and long-term (LT), based on the timeframe. Short-term is considered to be 1-2 years, while long-term is considered to be 2 years and beyond.

Table 9: Summary of strategic- and financial analysis

SWOT	Strengths	Weaknesses	Opportunities	Threats	Economic Outlook
Macroeconomic					
Political & legal			'Lifiting of existing trade barriers. 'Regulations contribute to sustainable development.	'New trade barriers or tariffs imposed on Norwegian salmon. 'Reduction in MAB.	**Positive (ST-LT)**
Economic			Increased purchasing power driven by GDP growth, growing middle class in emerging economies. Less volatile salmon prices reduce uncertainty.	'Increased prices of fish feed, or fluctuations in exchange rate and thus salmon price. 'Aftermath of the pandemic proves to be worse than expected.	**Positive (LT)**
Socio-cultural			'Two billion more mouths to feed by 2050, with the health-conscious age group of 65+ growing fastest. 'Improve fish welfare, reduce negative externalities and increase transparency demanded from consumers.	'The rise of veganism and plant-based seafood could potentially harm operations. 'Reduced demand for Norwegian salmon, or Atlantic salmon in general.	**Positive (LT)**
Environmental & technological			New knowledge and technology can reduce issues such as feed waste and improve efficiency. Offshore farming can deal with these problems.	'Paradigm shift due to onshore farming. 'Climate change can reduce site availability. 'Biological issues, such as diseases and parasites.	**Positive (LT)**
Industry Specific					
Market position	'One of the market leaders with more than 100 licenses to farm. 'Supermarket chains demand for efficient logistics favors integrated incumbents.	Lower market shares outside of the EU. Rely on fish feed producers.	'An early leader in the offshore space. 'Improve access to new and established markets 'New sales channels such as e-commerce	Millions of dollars are being invested in land-based farming facilities located closer to market.	**Positive (ST-LT)**
Market saturation	Massive entrance barriers in terms of site availability, capital requirements and regulations.	Market becoming increasingly saturated as production is close to maximum, prohibiting further growth.	'Growth through M&A and new technology. 'Limited supply and high demand reduces rivalry and thus drives up prices.		**Positive (ST-LT)**
Value added products (VAP)	Holds the world's most efficient salmon harvesting- and processing plant.	Salmon is generally homogenous and thus challenging to differentiate on a large scale.	Increased focus on sustainable production and secondary processing will increase switching costs through differentiation.	New substitutes reduce demand for salmon.	**Neutral**
Company specific					
Innovation	'Historical track record for value creating innovations. 'Smolt- and processing facilities increases efficiency and reduces costs.		Granted development licenses to continue developing Ocean Farm 1, Ocean farm 2, and Smart Fish Farm.		**Neutral**
Liquidity	Long term liquidity risk is considered to be low.	Moderate liquidity risk in the short term. Scores relatively low compared to peers.		Unable to achieve their target capital structure due to excessive investments.	**Neutral**
Profitability	'Strong profitability relative to its peer group. 'EBIT/ kg reflects cost-efficiency relative to peers.	Entire business related to salmon; thus, revenues depend on salmon prices.			**Positive (ST-LT)**

Source: The authors own creation

The table above summarizes how the different value drivers will influence Salmar's profitability going forward. Some factors exhibit a mixture of strengths, weaknesses, opportunities, and threats, which in turn provides the basis for the net impact on the forecasting horizon. Overall, the expected future

profitability is to a large extent driven by limited supply despite increasing demand. Moreover, government regulations are creating ground for a sustainable development and less rivalry, which in turn provides a basis for a continuous, but moderate growth rate. Additionally, the massive barriers for entrance are further corroborate the expectations of insignificant rivalry in the future. On the other hand, onshore farming might pose a credible threat towards the end of the decade. However, as this type of farming still plays a diminished role in the industry, it is not expected to have a significant impact on the forecasting. The reason for this is that Salmar has previously shown ability to effectively adapt to changes in the environment. Moreover, as Salmar controls the world's first offshore farm, Ocean Farm 1, the authors expect the company to be one of the market leaders in a potential new era in fish farming.

7.0 Forecasting

In order to make credible forecasts, it is essential to obtain solid insight of the firm's financial abilities. Additionally, a fundamental understanding of the macro- and microeconomic factors affecting the firm's external and internal environment is crucial. This section will therefore build on the foundation laid out in the financial- and strategic analysis by presenting the key value drivers identified in the respective analyses. Pro forma statements are prepared to present Salmar's financial statements at a future state based on the key value drivers. Complete pro forma statement is appendix 10.

The pro forma statements follow a *sales-driven forecasting approach*, meaning that different accounting items are driven by the expected level of sales growth. There are, however, several forecasting approaches available when preparing the pro forma statement. Nevertheless, Plenborg & Kinserdal (2021) prefer the sales-driven approach, as it ensures a better link between the level of activity in a firm and the related expenses and investments. Salmon farming companies are exposed to volatile salmon prices and other external factors regarding harvesting volumes. These two components are the main value drivers behind revenues, which in turn affect expenses and investments. The sales-driven approach is therefore considered a good fit for salmon farming companies.

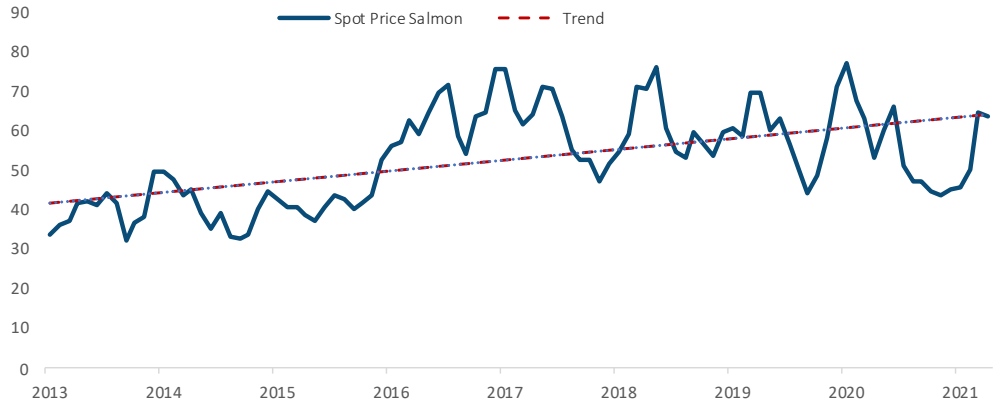
7.1 Salmon Price Forecast

Salmar's entire business is related to salmon, and it is therefore directly or indirectly affected by developments in salmon prices. Accordingly, their profitability and cash flows are strongly correlated with movements in the salmon price (SalMar, 2021). In this respect, salmon farmers adjust their production schedules to maximize profit, which is determined by the projected path of the spot price. Additionally, customers, such as retailers and processors, are particularly vulnerable to current and

future spot rates. This is due to the expense of purchasing and income from selling the product. Hence, forecasting the future spot price of salmon is an important activity for the salmon market participants. However, there exists only a few articles that consider the explicit modelling and prediction of the salmon spot price, implying that previous studies of salmon price forecasting are scarce. On the other hand, research that use implied models of the salmon market, such as volatility and price elasticity, are more commonly published.

The price of Atlantic salmon is characterized by high volatility both in terms of frequency and magnitude, which imposes uncertainty and costs for the entire value chain. Nevertheless, the Atlantic salmon spot and futures price are found to exhibit seasonal properties and trend (Guttormsen, 1999; Asche et al., 2016), reflecting deterministic patterns in supply and demand. The trend and seasonality can also be seen in the figure below, which further confirms these studies. On the supply side, high margins are the market's signal to increase production, which have historically resulted in over-investments and thus cyclical prices due to the time lag between production and harvest, as discussed earlier in this paper. In recent years, however, tighter industry regulations related to MAB have resulted in a more predictable development in supply, although supply shocks still may occur due to several external factors (e.g., diseases, regulations, changes in sea-temperature). On the demand side, salmon demand fluctuates mostly on a seasonal basis. For instance, Christmas and Easter are typically periods of increased demand (Bloznelis, 2017).

Figure 42: Monthly spot price salmon - 2013-2021



Source: Own construction based on data from Fish Pool (2021)

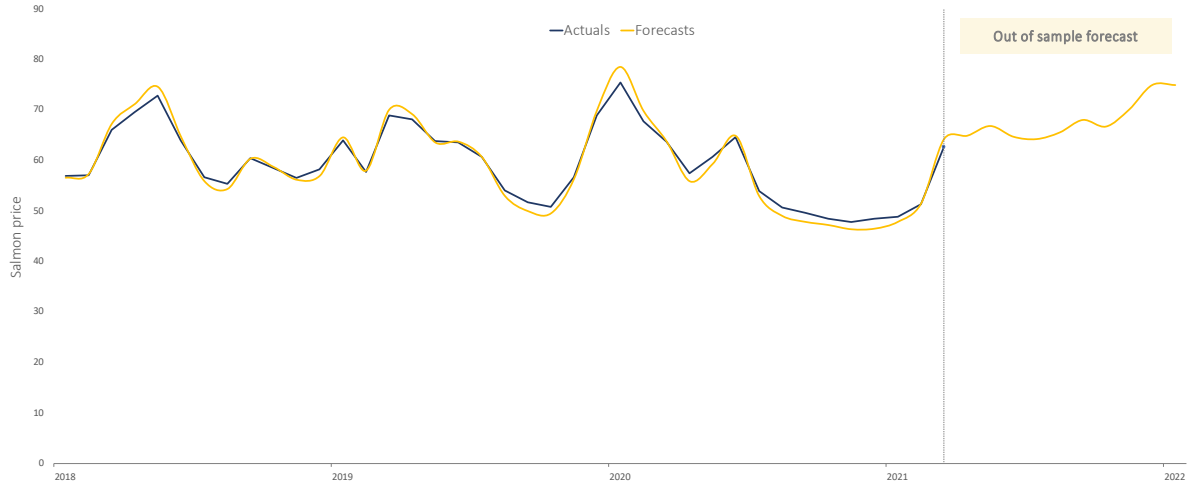
7.1.1 Estimating salmon price for 2021

Exponential Smoothing

Exponential smoothing is a subset of forecasting methods that uses unequal weighting of observed time series values. More recent observations are weighted more heavily than more distant observations. Unequal weighting is achieved by employing one or more smoothing constants, which determine the weight given to each observation. Although there are different exponential smoothing methods mentioned in literature, the Holt Winter's triple exponential smoothing method has been applied. The Holt Winter's method is a time series forecast capable of including both seasonality and trend, which is necessary for the salmon price times series data. It should be noted that forecasting is not an exact science, and it is rare for a forecast to be exactly right. Bearing this uncertainty in mind, the Holt Winter's method has been used as a tool to predict the developments in the price of salmon in 2021. Moreover, as the actual prices are known for the first 3 months of 2021, the monthly salmon price is predicted 1-9 months ahead. The dataset consists of the average monthly export prices of fresh Norwegian salmon in the period January 2012 to March 2021.

In order to improve the reliability of the model, training and test sets were made to measure the model's out of sample performance, which is essentially a simulation of how the model would have performed when used in the past. This is made possible as the in-sample forecasted values can be compared to the already known sample data. Moreover, the RMSE criteria were used for the selection of optimal model parameters, which is allowed to minimize the difference between the actual data and the forecasted in-sample data. As a result, the estimated average export price for 2021 equals NOK 64, with some gradual fluctuations until it reaches a peek of 75 NOK in December 2021. Thus, the price increase in December supports the historical seasonal observations, as this is a typical period of increased demand due to holidays, which in turn drives up the price. The forecast can be seen in the figure below. However, for a thorough description of the different steps and calculations related to the Holt-Winter's forecast, see appendix 11.

Figure 43: Holt-Winter's Forecast - Salmon prices 2021E



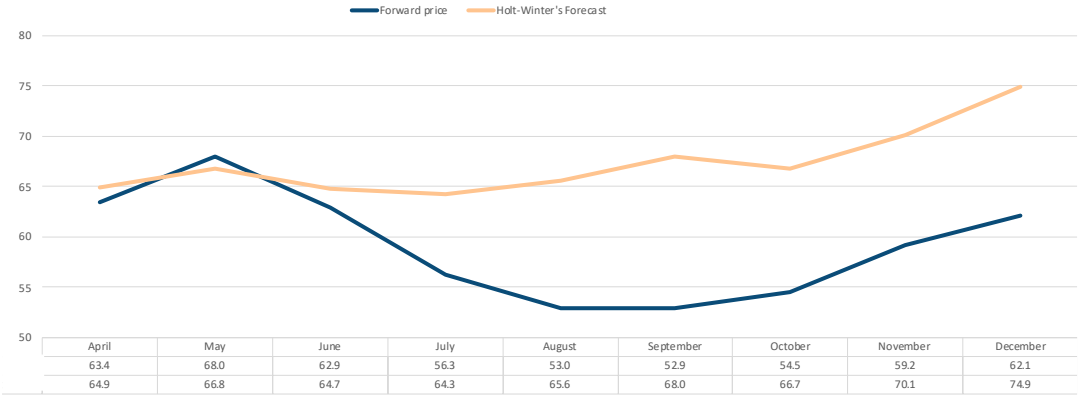
Source: Author's construction based on data from Statistics Norway (2021)

Fish Pool Index

Prices for salmon futures may be thought of as broad predictions of the spot price. Forward prices are publicly accessible and updated in real time, making them easily available and convenient to use for investors. As a consequence, forward prices are commonly used as an indicator of future prices. Forward prices of salmon us updated at the end of every trading day by Fish Pool, and the prices derives from trades executed at the exchange and interest in the market. Moreover, forward prices relate to spot prices because they are derivatives of spot assets. Previous research, however, has found the forward market to be endogenously determined and not very informative as a price discovery tool in the long run (Asche, Misund, & Øglend, 2016). Although the forward price is not considered as an unbiased estimator, the forward curve still provides a snapshot of where market participants are currently willing to transact. Nevertheless, some research has found a strong cointegration between forward prices and spot prices in up to a period of seven months, but this relationship disappears after 12 months (Scholtens & Chen, 2018). In this respect, the Authors consider the forward prices to be an important indicator of expected future spot prices, given the information available at present time.

The forward prices and the predicted Holt-Winter's prices are presented in figure 44. It can be seen that the forward prices are predicting slightly lower prices relative to the HW forecast, with average prices for 2021 at NOK 57.7 and NOK 63.8, respectively. Note that the actual spot prices in the first three months are already known, so the averages are calculated by including these figures.

Figure 44: Forward prices and HW forecasted prices 2021E (9 months)



April	May	June	July	August	September	October	November	December
63.4	68.0	62.9	56.3	53.0	52.9	54.5	59.2	62.1
64.9	66.8	64.7	64.3	65.6	68.0	66.7	70.1	74.9

**Actual spot prices January-March: 45.9; 49.9; 64.5*
Source: Author's construction based on data from Fish Pool (2021)

Standing Biomass

Due to the perishable nature of salmon, the global salmon market is largely a fresh-fish market, where all production in one period must be consumed in the same period. Hence, the total standing biomass at the close of 2020 can be used as an indicator for weather the supply is in 2021 is going to increase or decrease. According to Kontali (2021), the aggregated standing biomass in Norway, Chile, UK and the Farao Islands stood at 1 358 200 tonnes round weight, which is an increase of 4.4% relative to 2019. Norway had a standing biomass of 875 600 (+10.9%), while Chile's biomass declined to 318 700 (-12.6%). For the UK and the Farao Islands, the biomass increased to 112 900 (+10.9%) and 51 000 tonnes (+13.3%), respectively. However, the standing biomass year-on-year cannot be directly transformed to global supply. One must account for factors such as sea temperature, MAB utilization, survival rate, among others. The total change in supply is thus not considered to equal the total change in standing biomass at the year end.

Estimated salmon price 2021

According to Kontali (2021), the value of global Atlantic salmon supply has more than tripled in volume since 2005. Value growth (+261%) has outpaced supply growth (+117%), implying that there has been a large growth in the value per kg harvested as a result of increased demand. However, this was not the case in 2020, with global harvest volume increasing (+5.2%), whereas the value dropped significant. In terms of financial results, 2020 proved to be a difficult year for salmon farming firms, with HoReCa demand, and therefore prices, falling dramatically as a result of related linked to the covid-19 outbreak.

Provisional forecasts for 2021, provided by Kontali, indicate a global increase in supply of around 2%, which is a relatively small compared to the historical growth. The low growth in expected harvest

volume for 2021 is mainly primarily driven by lower volumes from Chile. Notwithstanding, following a year of restrictions and economic instability, the roll-out of mass vaccine programs around the globe has made the outlook for 2021 bright. The Author's thus expect the HoReCa demand to bounce back following the lifting of restrictions. Further, growth in demand is expected to surpass growth in supply, which in turn will push the prices to pre-pandemic levels.

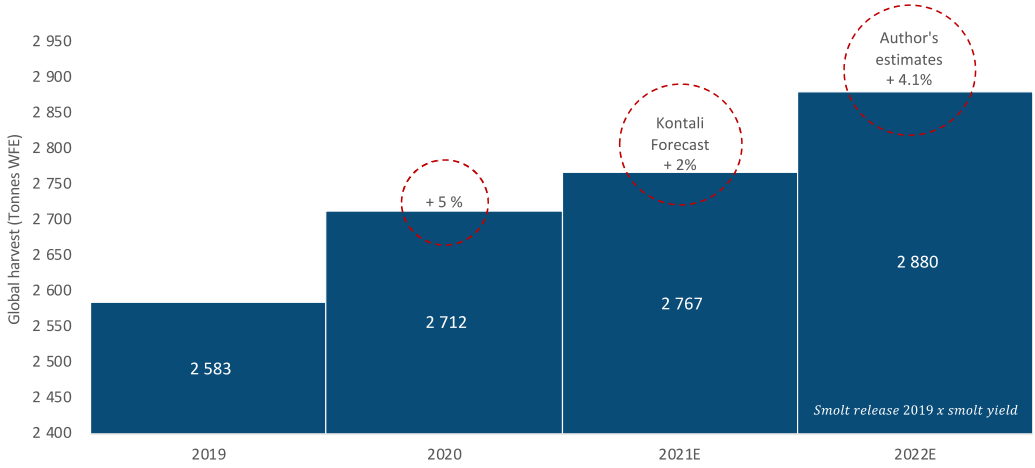
Before the coronavirus outbreak in 2019, the average spot price of salmon stood at NOK 59.2 (Fish Pool, 2021), while the global supply increased by 7% (FOA, 2020), which is significantly higher than the expected supply growth in 2021. As seen in figure 44, Fish Pool's forward prices yields an average price for 2021 equal to NOK 57.7, which is pessimistic relative to the more optimistic HW forecasted average of NOK 63.8. The Author's, however, expect the prices to be closer to the 2019 averages, which is in between the respective values. In this respect, the average between the Holt Winters forecast and the forward prices are considered as a reasonable estimate, which corresponds to a price of NOK 60.70.

7.1.2 Forecasting salmon price 2022E

In the short term, smolt release can be used as an indicator for supply. As covered earlier, the grow-out period for salmon in pens is up to two years. Bearing in mind that salmon is perishable and consumed in the same period as harvested, it can be assumed that all smolt release in period 't' is harvested and sold in period 't+2'. This assumption does, however, have several weaknesses. First, the time required in the grow-out phase mainly depends on seawater temperatures and feeding intensity. It is therefore unlikely that all smolts will be harvested two years after release. Second, due to a vast number of external factors, such as survival rate, MAB utilization, diseases, etc., it is unrealistic to assume that all smolt releases will be harvested at optimal weight. Hence, it is necessary to adjust for the smolt yield.

The smolt yield, or the harvest weight per smolt released, has historically been relatively stable in Norway. According to data from ABG Sundal Collier (2019), the median smolt yield in Norway has been around 4.2 from 2011 to 2018. This implies that for every 1000 smolt released, Norway will harvest about 4.2 tonnes of salmon. By assuming that all salmon producing regions have a smolt yield equal to 4.2, it is possible to estimate the global supply for 2022. Data from Kontali (2021) manifest that there were released 694 million smolts in 2020. Hence, by assuming a smolt yield equal to 4.2, the total harvest for 2022 is equivalent to 2,880 kilotonnes (wfe), which represents an increase of 4.1% relative to the estimated harvest in 2021.

Figure 45: Estimated global harvest (tonnes wfe)



Source: The authors construction based on data from (ABG Sundal Collier, 2019; Kontali, 2021)

The supply of salmon has increased at a CAGR of 7% in the period 2010-2019 (Mowi, 2020). Bearing in mind that a growth in supply is negatively correlated with the spot price, this should correspond to a decrease in spot price. However, this has not been the case. Instead, the spot price of salmon increased with a CAGR of 5% in the same timeframe. It is a fundamental economic principle that when demand exceeds supply for a good, prices will rice. Hence, by relying on this principle, the only logical explanation is that demand has grown with a CAGR higher than 7% in the period 2010-2019. Nevertheless, the expected growth in supply for 2022 was estimated to be +4.1% (figure 45), which is significantly less than the historical growth. For this reason, it seems reasonable to assume that the prices will increase more than 5%, supposing recent history will reflect the future.

However, as previously discussed, the currency exchange rate is an important element in the supply-demand relationship, and the weakening of NOK/EUR can to a large extent explain the growth in demand, and thus the price increase between 2010 to 2019. In this respect, estimating the actual numerical CAGR for demand is proven to be a challenging process. Moreover, according to research from Capia (2019), the demand elasticity for Norwegian salmon is about -1.1. This means that a 10% increase in the price of salmon results in a reduction in demand of 11%, and vice versa. Earlier, the average spot price of salmon was estimated to be NOK 60.7 in 2021. This represents an increase of 9.4% relative to the actual average spot price in 2020 (NOK 55.48). Using the method provided by Capia, the significant price increase in 2021 should correspond to a decline in demand of 10.3%[5].

[5] $\Delta\text{Demand} = \left(\frac{60.70}{55.48} - 1\right) \times -1.1 \ = 10.3\%$

There are several factors that needs to be considered when estimating the salmon price for 2022, given a predicted supply growth of 4.1%. On the one hand, the predicted growth in supply is relatively small compared to the historical CAGR, which points in the direction towards higher prices. On the other hand, the weakening of the NOK can to a large extent explain the increased demand the past decade. Moreover, the estimated price increase in 2021 should correspond to a decline in demand of about 10%, while the predicted supply growth in 2022 will further push down the prices. Based on the above context, the Author's expect the combined forces from the supply growth in 2022, and the increased prices in 2021, to be more powerful than the 'steadily' annual growth in demand, which in turn will push the prices down. As a result, the Author's expect a price decline of **3%** in 2022, which corresponds to a spot price of **NOK 58.9.**

7.1.3 Long-term salmon price forecast

In recent years, the price of salmon has stayed at a consistently high level, albeit with a high degree of volatility and significant fluctuations within relatively short time periods. Norwegian salmon is traded on both the spot and future markets, with the price determined by the supply-demand relationship. In the long run, the demand for salmon is mainly driven by macroeconomic factors, such as population increase, purchasing power, and consumer tastes. With a projected global population of 9.7 billion by 2050, global demand for salmon is likely to increase steadily, with aquaculture accounting for the majority of that development. Moreover, the middle class in emerging economies is growing, leading to an increase in purchasing power. Meanwhile, salmon consumption is reasonably well correlated with GDP growth. Over the last decades, increased focus on marketing campaigns have introduced salmon to new markets around the globe. Similarly, global health authorities are increasingly promoting the benefits of seafood to an aging, health-conscious population. Based on the above context, global seafood consumption is expected to continue its growth in the years to come.

As discussed earlier, the annual supply growth of Atlantic salmon has increased tremendously in recent decades. However, the production growth has stagnated since 2012. The reason for this is that the industry has entered a point of development where biological limits are being pushed. There are only a few areas in the world that satisfy the conditions to operate a salmon farm. Meanwhile, the locations that are suitable for salmon farming today are heavily regulated by the government. It is therefore expected that future growth can no longer be driven only by the industry of conventional salmon farming. Rather, alternative ways to farm salmon is needed in order to meet the growing demand. In turn, this will potentially incentivize equity investors to devote more resources into onshore- and offshore farming facilities. However, the total harvest of Atlantic salmon from land-based recycling facilities only constituted to 7400 tonnes in 2020 (Kontali, 2021), which corresponds to less than 0.3%

of the total supply. Furthermore, although there is a large number of identified planned projects, as little as 3 to 4 percent of the planned capacity has started the construction (Furuset, 2020). Hence, the vast majority of salmon supply is expected to come from conventional salmon farming in the foreseeable future.

With reference to the discussion above and in the strategic analysis, the authors expect a stable growth in demand in the forecasting period. This growth is mainly driven by population trends, income, consumer tastes and availability of other protein-rich substitutes. On the other hand, constrains on supply from existing sources may result from factors such as diseases, new regulations and climate change. However, in the long run, the dominant barrier for further supply growth is the lack of suitable areas to expand production. Hence, the authors anticipate continued demand growth and constrained conventional supply. According to the law of supply and demand, this will point towards the direction of a price increase. Between 2010 and 2019, the spot price of salmon increased with a CAGR of more than 5%. However, the authors find it unlikely that the prices will grow in the same rate, as currency effects can partly explain this growth. Moreover, as prices continue to increase, quantity demanded is likely to fall. As a result, the authors long-term price forecast is more conservative than the historical growth the last decade, and a growth rate equal to **3%** is believed to be more reasonable.

In conclusion, the estimated salmon prices in the forecasting period are presented below:

2020	2021E	2022E	2023E	2024E	2025E
55.5	60.7	58.9	60.7	62.5	64.4

7.2 Pro Forma Income Statement

The pro forma income statement appears as a compressed version of the analytical income statement, where operating expenses is merged into one item. Plenborg & Kinserdal (2021) suggest five financial value drivers which the pro forma income statement relies on. These are *revenue growth, EBITDA-margin, depreciation and amortization as a percentage of intangible and tangible assets, tax rate,* and *net borrowing costs times NIBL*. Each financial value driver will be covered individually and assessed with previous findings from the strategic and financial analysis. Index and common-size indexes will be utilized in forecast estimations and is represented in appendix 12-16.

Revenue growth

The first and main financial driver is revenue growth. In order to project future revenue growth, it is necessary to construct an overview of the various factors impacting Salmar's operating revenue. In

addition, evaluate the historical development and trend of these factors is essential. Salmar's operating revenue is determined by salmon price, harvest volume, share of secondary processed products, and price premium. As salmon prices were covered in the previous section, the following section will estimate the other three individually in the upcoming section.

7.2.2 Harvest volumes

Regulations and Environmental Conditions (Biological conditions)

The ministry of trade, industry and fisheries introduced the traffic light system in 2017, as a consequence of environmental problems and a lack of predictability in the previous regulations (Ministry of trade and fisheries, 2015). The purpose of the regulation is to prevent damage to the environment and facilitate sustainable growth. Currently, there are 13 production zones where nine are considered green, two considered amber, and two considered red. Salmar has licenses represented in five green zones and one amber and red zone. There is thus room for increased production volume on many of Salmar's existing licenses.

In addition, increased research in recent years have resulted in significantly better treatment of sea lice and other fish diseases. The traffic-light system has probably also contributed to better monitoring of seawater conditions, resulting in better fish health. As a result, the industry experiences less mortality and, all else equal, increased harvest volumes.

Technology and Innovations

Salmar has the potential to apply for new licenses, and thus increased MAB, through their current and upcoming offshore farms. There is considerable growth potential in offshore farming, and Ocean Farm 1 proves that Salmar har the knowledge and capabilities to exploit this potential. However, significant investments of MNOK 600-800 and BNOK 2,3 is required for Ocean Farm 2 and Smart Fish Farm respectively. Even though construction plans are currently under development, a final investment decision has not yet been made.

Historical growth expectations of future growth

The aquaculture industry has gone from being fragmented into a consolidated industry, driven by several M&A's. This has historically been considered as the major contributor to production growth because of the limited supply of licenses. This has also been the case for Salmar. However, acquisitions are not accounted in future growth estimates for several reasons. Firstly, the pro forma statement is purely based on publicly available information, and inside information is required to foresee or expect

any M&A activity. Secondly, a valuation is an estimation of a firm's attributes at its current state, and therefore attempts to forecast organic growth of existing resources (Plenborg & Kinserdal, 2021). Lastly, recent years show a decreasing trend of M&A activity for Salmar. Based on these arguments, future production growth will only reflect external and internal factors that impact Salmar's existing resources and investments.

Table 10: Harvest volumes (GWT) historical period

Financial Year	2015	2016	2017	2018	2019	2020
Harvest Volumes	149 900	131 100	152 200	158 800	166 100	173 500
Growth		-12,54%	16,09%	4,34%	4,60%	4,46%

CAGR 2015-2020	2,97%
CAGR 2017-2020	4,46%

Source: Authors own creation

As shown in the table above, the annual CAGR in harvest volumes has been 2,97% from 2015 until 2020. After implementation of the new regulations system outlined earlier, growth has been more stable. The annual CAGR from 2017 until 2020 is thus assumed to better reflect future growth. However, Salmar states an expected harvest volume of appx. 12% in 2021 (SalMar, 2021). In comparison, the Norwegian supply is expected to increase by 7% (Kontali, 2021). Furthermore, smolt release in Norway increased with appx. 5% from 2019 to 2020 (Kontali, 2021). As the production cycle after the smolt is released into seawater take about 14-24 months, it could work as an indicator of harvested volumes in 2022. On the basis of these expectations and indicators, harvest volumes for 2021 and 2022 are estimated individually. Continuous growth will be based on a combination of the previous outlined factors, with emphasize on historical growth.

Table 11: Harvest volumes (GWT) forecast

Financial year	2020	2021E	2022E	2023E	2024E	2025E
Harvest Volumes	173 500	190 850	200 393	209 336	218 678	228 437
Growth		10%	5%	4,46%	4,46%	4,46%

CAGR 2020-2025	5,66%

Source: Authors own creation

VAP and Price Premium

Value-added processing (VAP), also referred to as secondary processing, is used as a method by salmon farmers to differentiate their products. Such products are smoked salmon, fillets, and other types of VAP products. However, differentiation can also be achieved other attributes like color, fat content, and size. Secondary processing is a major part of Salmar's strategic goals to obtain best possible prices and ensure optimal yields for their products. Further confirmed through their key performance indicator (KPI) target of reaching above 42,5% share of secondary processed products (SalMar, 2021). Moreover,

investments in harvesting and processing facilities underpins their capacity to reach this target. As a result, Salmar achieves a price premium for their sold volume. Salmar's achieved price and estimated premium is illustrated in table 12.

Table 12: Secondary processed products (VAP) historical

Financial year	2015	2016	2017	2018	2019	2020
Total harvest volume	149 900,00	131 100,00	152 200,00	158 800,00	166 100,00	173 500,00
Secondary processing	31 900,00	36 900,00	46 700,00	59 708,80	65 277,30	72 870,00
Secondary processing as % of total volume	**21,28%**	**28,15%**	**30,68%**	**37,60%**	**39,30%**	**42,00%**
Achieved price	48,87	68,67	70,95	71,30	73,63	74,34
Average yearly spot price	42,09	63,13	60,88	60,76	59,15	55,48
Price premium	6,78	5,54	10,07	10,54	14,48	18,86
Premium as % of spot price	**16,12%**	**8,78%**	**16,54%**	**17,34%**	**24,48%**	**34,00%**

Source: Authors own creation

Achieved price is simply estimated as total operating revenue divided by total harvest volume within a year. Price premium is subsequently divided by average spot price to obtain premium as a percentage of average spot price. Volume of secondary processing is reported in the respective annual reports from 2015 to 2020, and then divided by total volume to find share of secondary processed volume as a percentage. Table 12 suggests that share of secondary processed volume and price premium are correlated, only opposed by 2016. As previously outlined, 2016 was heavily affected by large cases of sea lice and significantly impacted the achieved price this year. Nonetheless, Salmar's strategic focus on this area are assumed to influence future price premium.

Market changes

Salmar's buyers consists of companies of various sizes within the retail and HoReCa segment. The entrance of COVID-19 in the start of 2020 has led to forced lockdowns, which essentially resulted in a temporary shutdown for the HoReCa segment. Previously, around 70% of supply is made up by retailers and the last 30% is made up by other foodservices (Mowi, 2020). HoReCa, as a part of other foodservices, is expected to make up a smaller proportion of the supply in 2020. The fact that almost 50% of retail salmon supply is VAP-products, means that larger volumes of secondary processed products have been sold and distributed. Salmar achieved all-time high secondary processed products and price premium in 2020. However, a re-opening of the communities globally suggests that the market segment would naturally move back to previous distributions. As a consequence, demand for secondary processed products is assumed to somewhat decrease from current level going forward.

Fixed-price contracts

It is worth mentioning that a considerable amount of Salmar's harvest volumes is sold on fixed-price contracts each year. The rates of salmon sold on these contracts have decreased from appx. 52% in 2015

to 25% in 2020 (SalMar, 2015; 2021). Salmar reports each year whether these contracts have resulted in a higher, lower, or similar price compared to the average annual spot price. There is otherwise limited information about the contribution from these contracts in terms of revenue. Fixed-price contracts are arguably affecting the price each year, but due to vastly limited information, they are not included as an individual factor.

Historical achievement

Assuming secondary processing will yield similar premiums in the upcoming years, premiums can be estimated as the product of secondary processing and premium from previous periods. Premiums will therefore be a product of estimations and expectations of harvest volumes, share of secondary processing, and average spot price. The years between 2018 and 2020 better reflect future expectations because of the increased rates of secondary processing and price premiums and is illustrated in the table below.

Table 13: Price premium as a percent of secondary processed products last three years

Financial Year	2018	2019	2020	Average
Premium as % of spot price	17,34%	24,48%	34,00%	25,27%
Secondary processing as % of total volume	37,60%	39,30%	42,00%	39,63%
Relative premium achievement	46,13%	62,29%	80,95%	63,12%

Source: Authors own creation

The relative relationship between secondary processing and price premium are estimated as:

$$\frac{\text{Price premium}}{\text{Average salmon price}} \text{ divided by } \frac{\text{Secondary processing}}{\text{Total harvest volume}}$$

$$= \frac{\text{Historical premium as \% of spot price}}{\text{Secondary processing as \% of total volume}}$$

Secondary processed products are assumed to drop going into 2021 and increase with 0.5% thereafter. Price premiums are expected to stay constant at 63.12% of secondary processed products as a percentage of total harvest volume going forward. The estimated price premium is illustrated in table 14 below.

Table 14: Price premium forecasted period

Financial year	2020	2021E	2022E	2023E	2024E	2025E
Total harvest volume	173 500,00	190 850,00	200 392,50	209 335,59	218 677,79	228 436,92
Secondary processing	72 870,00	76 340,00	81 158,96	85 827,59	90 751,28	95 943,51
As % of total volume	**42,00%**	**40,00%**	**40,50%**	**41,00%**	**41,50%**	**42,00%**
Average yearly spot price	55,48	60,70	58,93	60,70	62,52	64,40
Price premium	18,86	15,33	15,07	15,71	16,38	17,07
Price premium	34,00%	25,25%	25,56%	25,88%	26,20%	26,51%

Source: Authors own creation

Revenue growth forecasting period

After completing the forecasting of all necessary components, revenue growth is estimated in the table below.

Table 15: Revenue growth forecasting period

Financial year	2020	2021E	2022E	2023E	2024E	2025E
Harvest Volumes	173 500,00	190 850,00	200 392,50	209 335,59	218 677,79	228 436,92
Average yearly spot price	55,48	60,70	58,93	60,70	62,52	64,40
Price premium	18,86	15,33	15,07	15,71	16,38	17,07
Total operating revneue	**12 898 337,00**	**14 509 527,46**	**14 828 537,45**	**15 995 115,61**	**17 253 361,36**	**18 610 469,82**

Source: Authors own creation

EBITDA-margin

The pro forma statement is constructed with a high level of aggregation. In this case, operating expenses are calculated as the residual of EBITDA-margin. Consequently, items included as operating expenses are not separated and forecasted individually. It is thus useful to utilize a more refined model to forecast each item individually (Plenborg & Kinserdal, 2021). The common-size analysis shows each operating expense item as a percentage of revenues, while the indexing-analysis shows the underlying trend.

Table 16: Operating expenses and EBITDA-margin historical period

Common-size analysis (Revenues)	2015	2016	2017	2018	2019	2020	Average
Total Operating Revenue	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%
COGS	48,63%	44,44%	43,73%	42,30%	47,18%	45,51%	45,30%
Payroll Costs	10,45%	9,57%	8,60%	9,19%	9,83%	10,23%	9,65%
Other Operating costs	17,29%	14,97%	11,41%	11,16%	12,09%	14,75%	13,61%
Revenue from investments in associated companies	0,55%	3,19%	1,93%	2,23%	0,97%	0,33%	1,53%
EBITDA-margin	**24,17%**	**34,21%**	**38,19%**	**39,59%**	**31,86%**	**29,83%**	**32,98%**

Index analysis	2015	2016	2017	2018	2019	2020	CAGR
Total Operating Revenue	100	123	147	155	167	176	11,98%
COGS	100	112	133	134	162	165	10,50%
Payroll Costs	100	112	121	136	157	172	11,50%
Other Operating costs	100	106	97	100	117	150	8,47%
Revenue from investments in associated companies	100	713	519	629	295	105	0,96%
EBITDA-margin	**100**	**174**	**233**	**253**	**220**	**217**	**13,81%**

Source: Authors own creation

COGS and payroll expenses

Both items have been stable as a percent of revenues and achieved almost equal annual CAGR as revenues. COGS and payroll expenses are expected to achieve similar growth paths going forward and will be held constant at 45% and 10% respectively of total revenues.

Other operating expenses

Several adjustments have been made for all years pre-2019, further outlined in earlier chapters. These adjustments improve the comparability over the analyzed period. Other operating expenses has varied between 11-17% of revenues, with an average of 13%. Annual CAGR has been lower than for revenues over the past six years. However, the index analysis illustrates that other operating expenses have grown

more relatively to revenues. The majority of changes are due to increased freight and distribution expenses, which may be connected with Ocean Farm 1. Salmar does not revile any further information regarding this item. The authors assume that this item will continue to slightly outgrow revenues in the forecasted period. Continuing period will be equivalent to the relative relation as in 2025.

Revenue from investments in associated companies

This item makes up a relatively small fraction in percent of revenues, ranging from less than 1% and up to 3%. Given previous assumptions regarding M&A activity and other investments, an annual CAGR of 1% is expected in the forecasting.

Table 17: Operating expenses and EBITDA-margin forecasted period

EBITDA-margin	2020	2021E	2022E	2023E	2024E	2025E
Total Operating Revenue	12 898 337,00	14 509 527,46	14 828 537,45	15 995 115,61	17 253 361,36	18 610 469,82
COGS	5 870 577,00	6 572 772,88	6 717 283,46	7 245 739,90	7 815 721,49	8 430 487,60
Payroll Costs	1 319 961,00	1 399 743,31	1 430 518,41	1 543 058,94	1 664 442,71	1 795 363,82
Other Operating costs	1 902 210,00	2 049 213,56	2 207 577,62	2 378 180,11	2 561 966,83	2 759 956,67
Revenue from investments in associated companies	42 208,00	42 612,58	43 021,04	43 433,41	43 849,73	44 270,05
EBITDA	3 847 797,00	4 530 410,29	4 516 179,00	4 871 570,06	5 255 080,06	5 668 931,78
EBITDA-margin	29,83%	31,22%	30,46%	30,46%	30,46%	30,46%

Common-size analysis (Revenues)	2020	2021E	2022E	2023E	2024E	2025E
Total Operating Revenue	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%
COGS	45,51%	45,30%	45,30%	45,30%	45,30%	45,30%
Payroll Costs	10,23%	9,65%	9,65%	9,65%	9,65%	9,65%
Other Operating costs	14,75%	14,12%	14,89%	14,87%	14,85%	14,83%
Revenue from investments in associated companies	0,33%	0,29%	0,29%	0,27%	0,25%	0,24%
EBITDA-margin	**29,83%**	**31,22%**	**30,46%**	**30,46%**	**30,46%**	**30,46%**

Source: Authors own creation

Depreciation

Rate of depreciation is significantly different for intangible assets and tangible assets. Furthermore, right-of-use assets differs greatly from other tangible assets. To obtain an equally weighted rate of depreciation as a percentage of intangible and tangible assets, some adjustments were required. Intangible, tangible, and right-of-use assets and the belonging amount of depreciation are separated in order to calculate individual rates. Depreciation rate for right-of-use assets experienced a relatively large increase from 2018 to 2019, assumably a result of IFRS 16. An average of the last three years were estimated, to better reflect the recent changes. A weighted average between tangible assets and right-of-use assets were estimated because the pro forma balance sheet does not distinguish these two items.

Estimated marginal tax rate

The tax rate applied is equal to the current marginal tax rate. In accordance with Plenborg & Kinserdal (2021), the authors acknowledge that actual cash taxes are somewhat lower than the marginal tax rate. The same tax rate will be applied on net financial expenses.

Net borrowing cost

There have been some fluctuations the last five 6 years in this item. Like other estimations, a three-year average is estimated to reflect most recent years' situation. An estimated NBC of appx. 4,77% is assumed going forward.

7.3 Pro Forma Balance Sheet

The pro forma balance sheet relies on three financial value drivers: intangible and tangible assets, net working capital, and net interest-bearing liabilities. Due to high level of aggregation of the value drivers, the following section separates them into a less aggregated form and forecast each underlying item individually.

Intangible assets and tangible assets

Intangible assets include licenses, goodwill, and other intangible assets. As outlined previously, the forecasting only considers organic growth and do not include acquisitions or other similar investments. Strict regulations regarding licenses makes it difficult to acquire new licenses in Norway without carrying out acquisitions. The same goes for goodwill. Other intangible assets are made up almost entirely of capitalized R&D expenses which constitute a modest amount of total intangible assets. It is therefore assumed that intangible assets will be constant going forward. As a result, intangible assets as a percent of revenues in decreasing as revenues increase.

Tangible assets have been relatively stable over the investigated period until 2020 where it increased almost 10% compared to revenues. Salmar has reported an expected investment in 2021 of BNOK 1,6 and MNOK 170 in Norwegian operations and co-owned subsidiaries in Iceland. The former represents continued investments in construction of InnovaNor and Senja 2. Both investments are therefore assumed to represent total increase in 2022. Tangible assets are thus held constant as a percentage of revenues in 2022-levels. Implying that tangible assets will grow with the same rate as revenues going forward.

Table 18: Intangible and tangible assets incl. right-of-use assets forecasted period

Financial year	2020	2021E	2022E	2023E	2024E	2025E
Total operating revenue	12 898 337,00	14 509 527,46	14 828 537,45	15 995 115,61	17 253 361,36	18 610 469,82
Intangible assets	6 826 231,00	6 826 231,00	6 826 231,00	6 826 231,00	6 826 231,00	6 826 231,00
Tangible assets	7 155 357,00	8 925 357,00	9 121 592,06	9 839 198,24	10 613 192,61	11 448 001,15
Total tangible and intangible assets	**13 981 588,00**	**15 751 588,00**	**15 947 823,06**	**16 665 429,24**	**17 439 423,61**	**18 274 232,15**

Common-size analysis (Revenue)	2020	2021E	2022E	2023E	2024E	2025E
Total operating revenue	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%
Intangible assets	52,92%	47,05%	46,03%	42,68%	39,56%	36,68%
Tangible assets	55,48%	61,51%	61,51%	61,51%	61,51%	61,51%
Total tangible and intangible assets	**108,40%**	**108,56%**	**107,55%**	**104,19%**	**101,08%**	**98,19%**

Source: Authors own creation

Net working capital

Current operating assets and current operating liabilities as a percentage of revenues have been vastly stable after 2018. It is expected that both items will maintain similar rates as the most recent years. An average of the last three years of 59,68% and 38,66% of revenues are expected going forward. Net working capital is thus assumed to grow with the same rate as revenues in future years.

Table 19: Net working capital forecasted period

Financial year	2020	2021E	2022E	2023E	2024E	2025E
Total operating revenue	12 898 337,00	14 509 527,46	14 828 537,45	15 995 115,61	17 253 361,36	18 610 469,82
Total current operating assets	7 701 942,00	8 658 753,88	8 849 127,34	9 545 298,41	10 296 173,33	11 106 045,89
Total current operating liabilities	4 961 534,00	5 609 578,62	5 732 912,17	6 183 926,99	6 670 381,73	7 195 058,13
Net Working Capital	**2 740 408,00**	**3 049 175,27**	**3 116 215,17**	**3 361 371,42**	**3 625 791,60**	**3 910 987,76**

Common-size analysis (Revenue)	2020	2021E	2022E	2023E	2024E	2025E
Total operating revenue	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%
Total current operating assets	59,71%	59,68%	59,68%	59,68%	59,68%	59,68%
Total current operating liabilities	38,47%	38,66%	38,66%	38,66%	38,66%	38,66%
Net Working Capital	**21,25%**	**21,01%**	**21,01%**	**21,01%**	**21,01%**	**21,01%**

Source: Authors own creation

Net interest-bearing liabilities

Salmar does not communicate a target capital structure or level of liabilities. They are, however, subject to different financial covenants regarding equity ratio and interest coverage ratio. The recognized equity ratio shall exceed 35%, whereas interest coverage ratio shall not fall below 4,0 – measured as EBITDA over net financial expenses. Salmar currently complies with both covenants, with a relatively good margin. The board of directors also reports the current capital structure as adequate and in line with the group's risk profile. Current level of NIBL is appx. 34,3%, and it is assumed to be relatively equal to comply with the financial covenants. Based on the reported investments for 2021, a constant level of 35% of invested capital is assumed going forward.

Table 20: NIBL as a percent of IC historical period

Financial year	2015	2016	2017	2018	2019	2020
Invested capital	7 919 430,32	9 400 890,11	9 279 040,78	11 032 898,00	13 176 938,00	16 721 996,00
NIBL	2 684 205,32	2 720 058,11	1 610 912,78	1 893 055,00	3 436 836,00	5 735 091,00
Equity BV	5 227 040,00	6 680 833,00	7 668 128,00	9 139 843,00	9 740 101,00	10 986 902,00
NIBL as percent of IC	**33,89%**	**28,93%**	**17,36%**	**17,16%**	**26,08%**	**34,30%**
Equity as percent of IC	**66,00%**	**71,07%**	**82,64%**	**82,84%**	**73,92%**	**65,70%**

Source: Authors own creation

7.4 Pro Forma Cash Flow Statement

The pro forma cash flow statement applies the estimations from the pro forma income statement and balance sheet to find the cash contribution within a year. Furthermore, the cash flow statement forms the basis for valuation in subsequent chapter. Terminal values are based on a revenue growth of 2%, while the other key financial value drivers are held constant as a percent of revenues in 2025-levels. Revenues are assumed to be equal to the average GDP growth rate for developed countries, as a higher rate essentially indicate that Salmar will outgrow the world forever.

Table 21: Pro forma cash flow statement

Cash flow Statement	2021E	2022E	2023E	2024E	2025E	Terminal Value
NOPAT	2 609 979,77	2 577 359,89	2 783 968,22	3 007 056,68	3 247 935,29	3 312 894,00
+ Depreciation	1 107 942,38	1 131 714,45	1 218 645,80	1 312 408,07	1 413 537,40	1 441 808,15
- Change in NWC	308 767,27	67 039,91	245 156,24	264 420,18	285 196,16	78 219,76
- Net investments (CAPEX)	2 877 942,38	1 327 949,51	1 936 251,98	2 086 402,43	2 248 345,95	1 807 292,80
= FCFF	**531 212,50**	**2 314 084,92**	**1 821 205,80**	**1 968 642,14**	**2 127 930,59**	**2 869 189,60**
+ Change in NIBL	845 176,14	92 146,24	336 966,85	363 445,09	392 001,65	155 296,54
- Net financial expenses, after tax	216 713,57	233 207,65	240 758,76	253 083,92	266 377,53	305 856,53
= FCFE	**1 159 675,07**	**2 173 023,51**	**1 917 413,88**	**2 079 003,31**	**2 253 554,70**	**2 718 629,61**
- Dividends	1 159 675,07	2 173 023,51	1 917 413,88	2 079 003,31	2 253 554,70	2 718 629,61
= Cash Sureplus	-	-	-	-	-	-

Source: Authors own creation

8.0 Cost of Capital

To determine Salmar's enterprise value, the firm's forecasted free cash flow must be discounted to present value using an appropriate discount rate. The discount rate should reflect the opportunity costs that investors incur by investing in a single business rather than in other businesses with comparable risk (Koller, Goedhart, & Wessels, 2015). Given that the term 'investors' encompasses all equity and debt holders, the discount rate should be a weighted average of the required rates of return for these two investor classes, typically referred to as the weighted average cost of capital (WACC).

8.1 Weighted Average Cost of Capital

Several considerations and judgments have been made in deciding the required WACC for Salmar, including the cost of equity (CoE), the after-tax cost of debt (CoD), and the company's target capital

structure. The three components inevitably form the framework for the subsequent sections and will provide a detailed explanation of the methods used. WACC's general formula is as follows (Petersen & Plenborg, 2012):

Eq. 15

$$\mathrm{WACC} = \frac{\mathrm{D}}{\mathrm{D}+\mathrm{E}} \times \mathrm{r_d} \times (1-\mathrm{t}) + \frac{\mathrm{E}}{\mathrm{D}+\mathrm{E}} \times \mathrm{r_e}$$

8.1.1 Cost of Equity (r_e)

Many researchers have come up with different theories aiming to calculate the cost of equity, and the models vary largely in their definition of risk (Koller, Goedhart, & Wessels, 2010). One of the groundbreaking models is the CAPM which was established by Sharpe (1964) and Linter (1965), which is still used prevalently in order to calculate cost of equity. However, the model has come under fire for its unrealistic assumptions, and efforts have been made to improve and gap the limitations posed by CAPM. The critics often points out factors like firm size, various ratios, and price momentum (Fama & French, 1993). More recent research, on the other hand, refutes some of the criticism, demonstrating that ratios and returns typically translate to normal values over the course of a market cycle (Chung, Johnson, & Schill, 2006). Although the authors are aware that the model is based on certain potentially unrealistic assumptions, further examination is beyond the reach of this thesis, and the model is thus believed to be reliable in estimating the owners' required rate of return.

The Capital Asset Pricing Model (CAPM)

CAPM's fundamental premise is that by holding a sufficiently diverse portfolio of shares, investors will only pay for the systematic risk of a portfolio. This means that investors can eliminate the idiosyncratic risk that is inherent in a specific firm or share. Hence, the investors' required rate of return (r_e) equals the interest rate of holding a risk-free asset (r_f), plus a premium for holding a risky asset. The premium varies with the relative risk of the portfolio (β_e) to the return expected from the market above the risk-free rate (MRP). The equation for the required rate of return is also labelled the security market line (SML) and is defined as (Plenborg & Kinserdal, 2021):

Eq. 16

$$\mathrm{r_e} = \mathrm{r_f} + \beta_e \times (\mathrm{r_m} - \mathrm{r_f}) = \mathrm{r_f} + \beta_e \times \mathrm{MRP}$$

The security market line displays the expected return of a security as a function of systematic, non-diversifiable risk. Each component of the SML will be addressed and calculated in the following sections.

Risk-free rate (r_f)

The risk-free interest rate indicates how much return an investor will gain without taking any risk. This implies that there should be no default- or reinvestment risk associated with the asset. The best approximation of the risk-free rate would theoretically be the estimated return on a zero-beta portfolio. However, due to the high cost and difficulties associated with constructing such a portfolio, this approach has been shown to be ineffective in practice. For this reason, most analysts apply a zero-coupon rate based on a highly liquid, long-term (10y-30y) government bond as a proxy. The underlying assumption is that a government bond is risk-free. Additionally, to address inflationary concerns, it is important that the bond is denominated in the same currency as the underlying cash flow (Plenborg & Kinserdal, 2021).

Although Salmar operates internationally and generates income in a variety of currencies, the nominal cash flow is measured and reported in NOK. As a consequence, it is suggested that the applied risk-free rate should equal the yield of a long-term Norwegian government bond (Damodaran, 2012). Moody's, S&P and Fitch all provide credit ratings for a country, and Norway holds an AAA-rating from all the mentioned rating agencies. Norway is thus regarded as one of the most solvent countries in the world – with no change of default. The 10-year yield on a zero-coupon government bond from Norway has been applied. As of 26 April 2021, at the valuation date, the yield was 1.38 % (Norges Bank, 2021).

Systematic risk, beta (βe)

Beta is a measure of volatility, or systematic risk, of a security or portfolio in relation to the market as a whole. The beta is calculated as the covariance between the stock return and market return, divided by the variance of the return on the market (Plenborg & Kinserdal, 2021):

Eq. 17

$$\beta = \frac{\mathrm{Cov}(r_1, r_m)}{\mathrm{Var}(r_m)}$$

In reality, there are many methods for determining a company's unique beta-value, and these sections will address the most popular approaches used by practitioners. The most basic approach is to perform a simple regression on historical market returns. As a proxy for the overall stock market, local indices are often used. However, the OSEBX in Norway is dominated by firms operating within the oil industry

and thus sensitive to fluctuations in the oil price. Instead, the stock return can be regressed towards a value-weighted, well-diversified 'world' index, such as the Morgan Stanley Capital International (MSCI) or the S&P 500 global (Plenborg & Kinserdal, 2021).

Historically, the old 'rule' suggest that the measurement period should be at least 60 months of return observations on monthly data (Koller, Goedhart, & Wessels, 2010). However, as markets have become increasingly efficient, weekly observations are more commonly used. By performing a regression analysis on OSEBX, S&P 500, and MSCI world, the beta values in the table below are obtained. The measurement period is three years of weekly observed returns. Furthermore, for the complete regression analysis, see appendix 17.

Table 22: Beta values from regression

	Raw Beta	Adjusted	R2
SALM / OSEBX	0.51	0.673	0.094
SALM / MSCI World	0.17	0.445	0.012
SALM / S&P 500 Global	0.20	0.467	0.018

Source: Own construction

Another often used method by researchers is to use comparable companies to determine the beta-value (Plenborg & Kinserdal, 2021). Salmar's peer group was identified in earlier, and will be used as a benchmark to estimate the beta-value, β. The projections are based on the peer group and MSCI World's three-year, weekly historical returns. There exist, however, differences in financial leverage between the comparable firms and Salmar. It is therefore necessary to adjust for these differences. The beta-values are thus adjusted for each individual company's historical capital structure and re-levered using the Salmar's capital structure, as seen in Eqs. 18 and 19. Later in this segment, the capital structure will be discussed in greater detail. See appendix 17 for the complete peer group regression review.

Eq. 18

$$\beta_e = \beta_u \times (1 + \frac{D}{E})$$

Eq. 19

$$\beta_u = \frac{\beta_e}{1 + (1 - t) \times \frac{D}{E}}$$

Table 23: Estimation of βe from comparable firms

	Levered	Unlevered	Re-levered
Lerøy Seafood	0.479	0.422	0.464
Mowi	0.324	0.271	0.299
Grieg Seafood	0.561	0.470	0.517
Norway Royale Salmon	0.252	0.221	0.243
Average	**0.404**	**0.346**	**0.381**

Source: Own construction

According to Damodaran (2012), estimating betas from a large sample of industry-related firms can represent a significant improvement on regression betas, as it has lower standard error, while being better to represent the expected changes in the future. It is therefore suggested that the most reliable method is to use an industry-derived unlevered beta and re-lever it based on the target company's capital structure (Damodaran, 2012). Updated beta values across industries are frequently reported by Damodaran. In his latest report (2021), Damodaran estimates an average unlevered industry-beta of 0.65, which is derived from 154 'food processing' companies in Europe.

It is debatable whether these companies genuinely reflect Salmar's risk profile, given that many of the included firms are multinational corporations with scattered regional operations. Moreover, as Salmar's operations are not limited to food processing, or the European market, it seems reasonable to make a comparison to the betas that derive from the global 'food processing' and 'farming' industries. Damodaran estimates these average unlevered industry-derived betas to be 0.68 and 0.66, respectively. Given the small differences between the estimated betas, the decision of which beta to choose is considered to be of minor importance. However, according to Damodaran (2021), Salmar is reckoned to belong to the food processing industry, which seems reasonable due to similarities in capital structure. Hence, the European food processing industry-derived beta is presented in table 24. Furthermore, because betas for entire sectors can change over time, the presented beta is the average unlevered industry beta between 2017 and 2021. Furthermore, adjusting this beta for Salmar's capital structure yields a re-levered beta of 0.72.

Table 24: Industry-derived beta

	# Companies	Levered	Unlevered	Re-levered
Food Processing (Europe)	154	0.67	0.65	0.72

Source: Damodaran (2021)

When valuing a company, the objective is not to measure the firm's historical beta. Rather, it is to estimate the future beta. It is also found that individual betas can at any point in time be heavily influenced by nonrepeatable events, in addition to unusual events in the stock market (Koller, Goedhart, & Wessels, 2015). In 2020, the coronavirus-pandemic caused a major and sudden stock market crash, which created instability for individual betas. The historical regression betas presented above, both for Salmar and its peers, had R-squared values below 10% (Appendix 18). This indicates that the beta estimates are limited in their reliability and can produce a wide range of estimates compared to the 'true' market beta. Hence, the authors do not consider recent history to be very useful as a predictor of future beta. In this respect, the industry-derived re-levered beta from the European food processing industry is assumed to improve the precision of beta estimation, and thus considered to be a more reliable estimate for the future.

Market risk premium

Estimating the market risk premium, measured as the difference between the market's expected return and the risk-free rate, is arguably one of the most debated issues in finance. The market risk premium varies with time, since it is often measured ex-post using historical excess returns on the stock market (Plenborg & Kinserdal, 2021). The assumption behind this approach is that the historical market risk premium is a reasonable indicator of the future. However, it is suggested that equity research analysts should use the implied market risk premium, assuming the analysts are market neutral (Damodaran, 2012). PWC releases an annual report about the market risk premium in the Norwegian equity market. The report from 2020 are based on responses from 151 members in The Norwegian Society of Financial Analysts. The findings suggest that the market risk premium is unchanged with a median equal to 5% (PwC, 2020). However, stock prices increased substantially in the final quarter of 2020, and continued to increase in the first quarter of 2021. Hence, a more recent report suggests using a market risk premium of 5.75%, as of March 2021 (KPMG, 2021).

While there is controversy about the appropriate approach for calculating the market risk premium, there seems to have been a consensus among managers, analysts, and professors in recent years to add a premium in the range of 5% to 7%. (Plenborg & Kinserdal, 2021). The applied risk premium is therefore considered to be 5.75% throughout the forecasting period.

8.1.2 Cost of debt (r_d)

The required return on debt (NIBL) is calculated as the risk-free rate plus a risk premium on net-interest bearing liabilities, on an after-tax basis. The required return on NIBL, or the credit spread, represent a premium to lenders for the exposure to default risk.

Eq. 20

$$r_d = (r_f + r_s) \times (1 - t)$$

The credit spread can be determined by investigating the firms default risk. The credit spread is expressed as a risk premium on the NIBL and indicates the likelihood of a company not being able to pay back its debt. A high credit spread indicate that the debt is risky, and debtholders thus require a larger premium. When there is no credit rating available for a firm, Damodaran (2012) suggest two approaches to estimate the cost of debt. First, by looking at the most recent borrowings made by a firm, analysts can get a sense of the types of default spreads being charged the firm. Salmar states in its recently published annual report that they have a marginal borrowing rate equal to 3%. This can broadly be considered as an indicator for the premium debtholders require above the risk-free rate. Second, the analysts can play the role of a ratings agency and assign a rating to the firm based on financial characteristics. According to Damodaran's ratings table (2021), the credit rating of Salmar should equal a AAA rating due to its interest coverage ratio. This leaves the company with a credit spread of 0.69%, and thus an after-tax cost of borrowing equal to 1.61%[6] (See appendix 19).

This approximation, however, does violate the consistency between the variables in the estimation. The risk-free rate is based on a 10-year Norwegian Government bond, while the credit spread is developed by looking at rated companies in the US. However, as of April 2021, Nordic credit rating assigned a first-time long-term issuer rating of A-, with a stable outlook to Salmar. 'A' rated companies demonstrate high credit quality with low default risk, and this rating corresponds to an expected default rate at 1.4% in a selected 10-year period (Nordic Credit Rating, 2018; Nordic Credit Rating, 2021).
The cost of debt represents the cost to the firm of borrowed funds. It reflects the current level of interest rate and the level of default risk as perceived by investors. Hence, the cost of debt, or the required return on NIBL, is estimated based on eq. 20.

Eq. 21

$$r_d = (1.38\% + 1.4\%) * (1 - 22\%) = 2.17\%$$

Corporate tax rate (t)

The free cash flow to the firm (FCFF) is measured after tax, so the cost of capital has to be adjusted to account for deductible interest expenses. In addition, the tax benefit that accrues from paying interest

[6] (Risk free rate (1.38%) + credit spread (0.69%)) x (1-Tax (22%)) = after-tax cost of borrowing (1.61%)

results in a lower after-tax cost of debt, relative to the pretax cost. Plenborg & Kinserdal (2021) favor the use of marginal corporate tax, rather than the effective tax rate when estimating the tax shields. This is foremost because the use of effective tax rate rests on several assumptions that is difficult to fulfill in practice. In Norway, the corporate tax rate stands at 22%, which has been the case in recent years. Consequently, the tax rate is assumed to remain at 22% throughout the forecasting horizon.

8.1.3 Capital Structure

Management can repay debt and repurchase shares without altering the capital structure, but this has to be done in market values. In this respect, market values reflect the true opportunity costs for equity- and debtholders alike. Hence, the capital structure must be based on market values (Plenborg & Kinserdal, 2021). The cost of capital should, however, be determined using target weights, rather than current weights, since at any point, a company's current capital structure may not reflect the level expected to prevail over the course of the firm's existence (Koller, Goedhart, & Wessels, 2015).

One of the objectives of Salmar's capital management is to maintain an optimal capital structure, and Salmar's Board considers their current structure to be adequate in relation to the company's strategy and risk profile (SalMar, 2021). Nevertheless, the company has established long term financial target linked to gearing. More specifically, the target is set in the interval 1.0-2.5x NIBD/EBITDA, which is within the company's current structure. The target capital structure is therefore assumed to reflect the current capital structure, which equals a D/(E+D) of **9.9%.** In conclusion, the weighted average after-tax cost of capital is estimated to be 5.20% based on Eq. 15.

Table 25: Weighted Average Cost of Capital (WACC) for Salmar

Type of capital	Proportion of Total Capital	Cost of Capital	Corporate Tax Rate	After-tax Cost of Capital	Contribution to Weighted Average
Debt	9.9%	2.78%	22%	2.17%	0.22%
Equity	90.1%	5.53%		5.53%	4.98%
WACC	**100.0%**				**5.20%**

Source: Authors own creation

9.0 Valuation

After comprehensively analysis of Salmar's strategic- and financial value drivers, estimating proper required rates of return, and investigated comparable peers, the following section gathers everything into the valuation. Plenborg & Kinserdal (2021) urges the importance of utilizing more than one valuation approach to ensure an unbiased valuation and that it does not contain technical errors. In addition, different models can stress test valuation estimates from different perspectives. The valuation aims to estimate the expected market value of a firm's invested capital. That is, the estimated market value of equity and net interest-bearing liabilities. The enterprise value is thus the sum of equity and net interest-bearing liabilities measured in market values (Plenborg & Kinserdal, 2021).

9.1 Present value approach

Of the various valuation approaches, this assignment applies the present value approach and the relative valuation approach. The former is based on discounted future streams of income, whereas the latter is based on the assumption that perfect substitutes should sell for the same price. Thus, the estimated value of a firm can be captured by applying the price of comparable peers. The other two main groups are an asset-based approach and a contingent claim valuation (Plenborg & Kinserdal, 2021). Each valuation approach has its advantages and disadvantages in terms of attributes. Preferable attributes reflect each approaches' ability to be precise and yield unbiased estimates, based on realistic assumptions, characterized by a low level of complexity, and communicate understandable output (Plenborg & Kinserdal, 2021).

Present value approaches

PV approaches estimate the intrinsic value of a firm where the goal is to calculate the "true" value independent of its market value. All PV approaches derive from the dividend discount model, which essentially means that all approaches yield identical value estimates given the same input factors (Plenborg & Kinserdal, 2021). The following section presents *the enterprise value approach* and *the economic value-added approach* which are used to estimate Salmar's enterprise value, and subsequently share price value.

Enterprise value approach

According to the enterprise value approach, a firm's market value is determined by future free cash flows (FCFF) and the weighted average cost of capital (WACC). The pro forma statement calculates FCFF as:

Eq. 22

$$\text{FCFF} = \text{NOPAT} + \text{Depreciation} - \Delta\text{NWC} - \Delta\text{CAPEX}$$

The enterprise value is obtained following the two-stage formula defined by Plenborg & Kinserdal (2021):

Eq. 23

$$\text{EV}_0 = \sum_{t=1}^{n} \frac{\text{FCFF}_t}{(1+\text{WACC})^t} + \frac{\text{FCFF}_{n+1}}{\text{WACC} - g} * \frac{1}{(1+\text{WACC})^n}$$

Table 26: DCF enterprise value approach

DCF model	2021E	2022E	2023E	2024E	2025E	Terminal value
FCFF	531 212,50	2 314 084,92	1 821 205,80	1 968 642,14	2 127 930,59	2 869 189,60
WACC	5,20%	5,20%	5,20%	5,20%	5,20%	5,20%
Discount factor	0,95	0,90	0,86	0,82	0,78	0,78
PV	504 975,03	2 091 137,24	1 564 457,93	1 607 582,48	1 651 830,82	2 227 241,74

PV of FCFF (Forecast period)	7 419 983,50
PV of FCFF (Terminal value)	69 692 894,70
EV	**77 112 878,21**
NIBL	5 735 091,00
MVE	**71 377 787,21**
Outstanding Shares	113 299,30
Value Shares	**629,99**

Source: Authors own creation

Economic value added (EVA) approach

The EVA approach, categorized as an excess return approach, rely on accrual data, and estimate the enterprise value of a firm. Excess return is represented by the relation between ROIC and WACC. If ROIC exceeds the estimated WACC, the firm creates value in excess of the required rate of return. According to the EVA model, the initial invested capital plus present value of future EVAs determines a firm's enterprise value (Plenborg & Kinserdal, 2021).

Eq. 24

$$\text{EV}_0 = \text{Invested capital}_0 + \sum_{t=1}^{n} \frac{\text{EVA}_t}{(1+\text{WACC})^t} + \frac{\text{EVA}_{n+1}}{\text{WACC} - g} \times \frac{1}{(1+\text{WACC})^n}$$

$$\textbf{Where: } \text{EVA}_t = \text{NOPAT}_t - (\text{WACC} \times \text{Invested capital}_{t-1})$$

After calculating the enterprise value in both approaches, the market value of net interest-bearing liabilities is subtracted to obtain market value of equity. Furthermore, market value of equity is divided by outstanding shares to get the estimated share price. Because all accounts are stated in NOK 1.000, number of outstanding shares is divided accordingly to keep the same quantitative ratio.

Table 27: Economic value-added approach

EVA model	2021E	2022E	2023E	2024E	2025E	Terminal value
NOPAT	2 609 979,77	2 577 359,89	2 783 968,22	3 007 056,68	3 247 935,29	3 312 894,00
IC, beginning of period	16 721 996,00	18 800 763,27	19 064 038,24	20 026 800,66	21 065 215,20	22 185 219,91
WACC	5,20%	5,20%	5,20%	5,20%	5,20%	5,20%
Cost of Capital	868 840,56	976 849,04	990 528,26	1 040 551,42	1 094 505,31	1 152 698,45
EVA	**1 741 139,21**	**1 600 510,86**	**1 793 439,96**	**1 966 505,26**	**2 153 429,99**	**2 160 195,55**
Discount factor	0,95	0,90	0,86	0,82	0,78	0,78
PV EVA	**1 655 141,46**	**1 446 311,60**	**1 540 606,43**	**1 605 837,52**	**1 671 625,03**	**1 676 876,88**

IC, beginning of period	16 721 996,00
PV EVA (Forecast period)	7 919 522,03
PV EVA (Terminal value)	52 471 360,18
EV	**77 112 878,21**
NIBL	5 735 091,00
MVE	**71 377 787,21**
Outstanding Shares	113 299,30
Value Shares	**629,99**

Source: Authors own creation

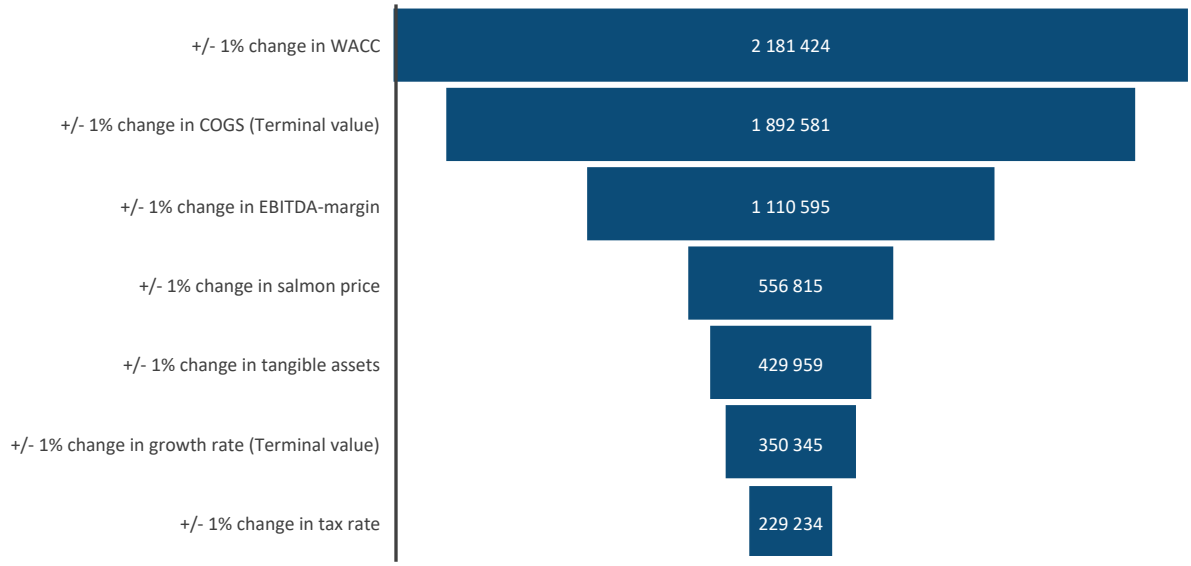
Both present value approaches are based on a comprehensive fundamental analysis of the key strategic and financial value drivers. They therefore represent the fair value given the authors' subjective assumptions for the future. As illustrated in the figures above, both present value approaches yield the same share price of NOK 630 as of April 26th, 2021. Salmar's currently trades at a price of NOK 582.8, implying a potential upside of 8.1%. However, current levels of uncertainty related to the input factors, and potentially rapid changes, could result in a significant change in the estimated share price. Thus, a sensitivity analysis is utilized to uncover potential fluctuations from the fair value estimate.

10.0 Sensitivity analysis

As outlined in the beginning of this chapter, the present value approach is based on thorough analysis and expectations about future events. Even though these expectations are considered to be reliable, different outcome is likely to appear. The present value approach is highly sensitive to input changes in the key value drivers and the cost of capital. Consequently, a sensitivity analysis is conducted to investigate plausible changes in input factors and the fundamental change in estimated enterprise value.

The pro forma statement is subject to a lot of correlations derived from the key value drivers. Changes in the underlying items of the key value drivers, described in the forecasting chapter, will therefore have an impact on other value estimates. For example, a single change in COGS as a percentage of revenues will impact the EBITDA-margin, which consequently impact NOPAT and FCFF. While invested capital relate to revenue growth alone and will therefore stay unchanged given a change in COGS, resulting in unchanged number of investments. Investigating plausible changes in the key value drivers are thus a good starting point for the sensitivity analysis. A visualization of various input factors is presented in the figure below.

Figure 46: Visualization of sensitivity analysis



Source: Authors own creation

The values represent changes in enterprise value given 1% change in the input factor. WACC has as expected a significant impact on the enterprise value. The causal effect of small changes in COGS as a percentage of revenue yield greater impact than an equal change in EBITDA-margin. This is intuitive since a direct change in COGS as a percent of revenue results in a relatively larger change compared to an equal change in EBITDA-margin. Figure 46 confirms that Salmar is exposed to changes in salmon prices. However, since price premium is a product of average spot price, a 1% change in spot prices gets an amplified effect. Lastly, a change in revenue growth will essentially impact every financial driver throughout the model, leading to changes in investments, expenses, and operating margins. Hence, the different effects counteract each other and yields less impact in enterprise value.

The proceeding analysis will demonstrate changes in Salmar's share price given the most sensitive input factors covered above. Figure 47 presents how Salmar's share price varies with different WACC- and growth values. Given the assumption that firms cannot outgrow the global economy in perpetuity implies that revenue growth is tested with a maximum of 2%. Due to the significant impact in EBITDA-margin, an additional matrix is presented to broaden the specter of share price sensitivity.

Figure 47: Scenario analysis with changes in WACC and terminal value growth

WACC	Growth Terminal value						
	1,67%	1,72%	1,77%	1,83%	1,88%	1,94%	2,00%
4,74%	683,21	692,32	702,04	712,44	723,57	735,52	748,37
4,89%	648,10	656,23	664,91	674,16	684,06	694,65	706,02
5,04%	615,10	622,38	630,12	638,37	647,17	656,58	666,66
5,20%	584,06	590,57	597,48	604,84	612,68	621,05	**629,99**
5,35%	555,65	561,50	567,70	574,29	581,30	588,77	596,75
5,51%	528,81	534,06	539,63	545,53	551,81	558,48	565,60
5,68%	503,42	508,14	513,14	518,43	524,05	530,02	536,37

Source: Authors own creation - Sensitivity range is based on 3% changes from the estimated WACC and growth values.

The marked area in figure 47 represents the most-likely range from the estimated values. Best case yields a share price of NOK 666.66, while worst case yields a price of NOK 581.30. This represents an upside of 14.4% and a downside 0.3% respectively, from the current traded value. Figure 47 illustrates only one scenario where the share price is lower than the current traded share price, which support the evidence of an undervalued share price. However, Salmar's EBITDA-margin is found to have a greater impact than growth rate. A new matrix with changes in WACC and EBITDA-margin is therefore performed.

Figure 48: Scenario analysis with changes in WACC and EBITDA-margin

WACC	EBITDA-margin Terminal value						
	27,80%	28,66%	29,55%	30,46%	31,37%	32,31%	33,28%
4,74%	647,73	680,23	713,74	748,29	782,83	818,41	855,06
4,89%	611,16	641,80	673,39	705,95	738,51	772,05	806,59
5,04%	577,17	606,07	635,87	666,59	697,31	728,95	761,54
5,20%	545,49	572,78	600,92	**629,92**	658,93	688,81	719,58
5,35%	516,77	542,60	569,23	596,68	624,13	652,41	681,54
5,51%	489,86	514,32	539,54	565,54	591,54	618,32	645,90
5,68%	464,60	487,78	511,68	536,31	560,95	586,33	612,46

Source: Authors own creation - Sensitivity range is based on 3% changes from the estimated WACC and EBITDA-margin.

Again, the marked area illustrates the base-case scenarios. The share price ranges between NOK 569.23-697.31 within the base-case scenarios, representing a downside of 2.3% and an upside of 19.6% respectively. Only one scenario yields a potential downside, which further support a fundamental undervalued share price.

The sensitivity analysis demonstrates that a relatively large change in the underlying input factors is required in order to yield a weaker share price than the current value of NOK 582.8. The authors acknowledge that the recent and ongoing concerns regarding the pandemic naturally increase the overall uncertainty, which could make the base-case scenario too "kind".

10.1 Relative valuation approach

Relative valuation using multiples is usually a less complex and time-consuming valuation approach. Multiples can be derived from the present value approach, which means that they ideally yield equivalent estimates as the present value approaches. There is, however, several assumptions and requirements for this to hold true (Plenborg & Kinserdal, 2021. Similar accounting adjustments have been made for the peer groups' annual statements as for Salmar (see appendix 5-9). Table 28 illustrates the estimated multiples used in the valuation of Salmar as of April 26th, 2021.

Table 28: Multiples for SalMar and peer group

26/04/2021	EV/EBITDA	EV/IC	EV/Revenue	Price/Book
SALM	18,6512	4,2917	5,5640	6,0100
Mowi	18,7949	2,7027	3,4422	3,9340
LSG	14,2002	2,0560	2,2820	2,3259
GSF	20,6633	1,7816	2,7242	2,1988
NRS	29,2912	2,1750	1,9742	2,8009
Average	20,7374	2,1788	2,6057	2,8149
Harmonic mean	19,4022	2,1305	2,4964	2,6739
Median	19,7291	2,1155	2,5031	2,5634

Source: Authors own creation

There are relatively large variations within the EV/EBITDA multiple, while the other multiples show less diversity. Extreme values will impact the standard average and thus make the estimated multiple less accurate. This issue is avoided with the harmonic mean and the median. However, research suggest that the harmonic mean generate more accurate value estimates than the median (Plenborg & Kinserdal, 2021). The harmonic mean is thus used for all multiples in the valuation.

Table 29: Relative valuation estimates

26/04/2021	EBITDA	IC	Revenues	BVE
SalMar	3 847 797,00	16 721 996,00	12 898 337,00	10 986 902,00
	EV/EBITDA	**EV/IC**	**EV/Revenues**	**Price/Book**
Peer harmonic mean	19,4022	2,1305	2,4964	2,6739
Enterprise value	74 655 569,57	35 627 017,82	32 199 207,45	29 377 355,11
NIBL	5 735 091,00	5 735 091,00	5 735 091,00	5 735 091,00
MVE	**68 920 478,57**	**29 891 926,82**	**26 464 116,45**	**23 642 264,11**
Outstanding shares	113 299,30	113 299,30	113 299,30	113 299,30
Share price (Multiple)	608,30	263,83	233,58	208,67
Estimated share price	636,26	636,26	636,26	636,26
Diff	**- 27,95**	**- 372,42**	**- 402,68**	**- 427,58**
Difference in %	**-4,39%**	**-58,53%**	**-63,29%**	**-67,20%**
Overvalued/undervalued	Overvalued	Overvalued	Overvalued	Overvalued
Share price (Multiple)	608,30	263,83	233,58	208,67
Current share price	582,80	582,80	582,80	582,80
Diff	**25,50**	**- 318,97**	**- 349,22**	**- 374,13**
Difference in %	**4,38%**	**-54,73%**	**-59,92%**	**-64,20%**
Overvalued/undervalued	Undervalued	Overvalued	Overvalued	Overvalued

Source: Authors own creation

The relative valuation suggest that Salmar is highly overvalued compared to its peers using EV/IC, EV/Revenue, and P/B multiples. This is the case for both the present value estimate and the current price. However, the EV/EBITDA multiple demonstrate a share price value of NOK 608.30, which is 4.39% lower than the present value estimate and 4.38% higher than the current share price. Hence, the EV/EBITDA multiple represents the average of current value and present value estimate approximately.

The overall findings in the relative valuation suggest that Salmar is highly overvalued. However, the EV/EBITDA multiple suggest a value between the respective current value and present value estimate. Relative valuation rests on the assumption that the peer group share the same economic characteristics and outlook (Plenborg & Kinserdal, 2021). Even though the chosen peer group operate within the same sector as Salmar, some of them have operations within wild caught fisheries which gives them other characteristics (ref. Peer group chapter). Furthermore, differences in expected growth, cost of capital, and profitability will affect the multiples. Consequently, the authors acknowledge that the relative valuation approach may yield biased estimations.

11.0 Discussion

Financial theory offers numerous methods to valuate a company and using more than one approach is expected to improve the reliability of the results. However, on the one hand, the present value approach shows a potential upside to investors and indicate that the share price is undervalued. On the other, the result from the relative valuation provides a different story. Salmar's share price seems overvalued relative to its peers, which on a standalone basis could contribute to a recommendation to sell. Hence, a logical question to ask is why the results differ. This might indicate that the industry as a whole, or the relevant peers, are undervalued as well. It would therefore be interesting to apply other valuation techniques, such as an asset-based value approach, in order to investigate this gap further, and potentially improve the reliability of the results.

Net Asset Value (NAV) is an approach that uses market, or fair values of the company' assets in order to estimate the fair value of equity. According to Plenborg & Kinserdal (2021), this is typically ideal for capital-intensive industries. As previously discussed, the salmon farming industry is capital intensive, with large investments (e.g., facilities) required prior to operations. Hence, it is debatable whether this approach could be better suited for a salmon firm. On the other hand, the financial statements of a salmon farming company somewhat differ from other industries. Estimating the market value of some of the items is complicated. This includes the market value, or fair value of biomass and licenses. The fair value of biomass varies in line with the spot price at the day of accounting. The authors believe that this creates more confusion than transparency. The reason for this is that the spot price of salmon has proven to be very volatile, thus fluctuating substantially from time to time. As a result, the fair value of biomass is directly tied to the day of accounting. Moreover, estimating the market value of a license is challenging, because the value can in general be broken into two components. First, it provides value in terms of the right to use produce salmon, which is identical for all production sites. Second, a site with large growth is more valuable relative to a site with low growth rate. Other contributors include e.g., location, as some sites are located closer to market.

Based on the above context, the authors do not believe an asset-based approach would be useful for a salmon firm. Moreover, as the market value of specific assets are complicated to estimate, some ratios applied in the relative valuation becomes less reliable. For instance, the Price-to-Book ratio, which measures the market's valuation of a company relative to its book value, will to a large extent depend on the accounting date and the corresponding spot price of salmon. Moreover, the fair value of the company's licenses might differ substantially from the book value. Bearing this in mind, the relative valuation is considered to be less reliable than the fundamental present value approach. Hence, the

authors consider the fundamental valuation to be more reliable, which in turn provides the basis for our conclusion.

12.0 Conclusion

The purpose of this thesis was to determine the intrinsic value for SalMar ASA's shares as of April 26, 2021. The estimated value was obtained using two distinct valuation techniques: enterprise discounted cash flow and relative valuation.

The salmon aquaculture industry is highly complex and a thorough understanding of the value chain is essential. Further investigation of the strategic value drivers through well-known academic frameworks were conducted to determine internal- and external factors impacting the industry going forward. Additionally, a comprehensive analysis of historical financial performance for Salmar and peers was essential to obtain trends and company characteristics in order to reliably make assumptions on future performance. By thorough research, based on relevant theory, appropriate cost of capital was estimated to perform the present valuation approach. Uncertainty in applied assumption and fragile input factors was identified and run through a scenario analysis to test plausible outcomes. Lastly, a relative valuation was utilized to supplement the obtained fundamental value.

Macroeconomic factors are found to be favorable for Salmar in upcoming years. Especially considering population growth and increased standard of living in developing countries. Increased regulation in recent years, as a consequence of environmental issues, have restrained organic growth for traditional farming. These regulations are, however, set to ensure long-term sustainable growth and will yield further investments as one of Norway’s largest export products. Lastly, Salmar has shown capabilities to adapt and reconfigure resources to gain new knowledge. Resulting in positive economic implications and temporary competitive advantages in terms of a lean value chain, cost-efficiency, and offshore technology.

Salmar demonstrates their competitive capabilities through excellent cost-management and operating profitability. The financial analysis shows that Salmar is able to produce high profitability for its shareholders. Furthermore, a solid performance in 2020 illustrates that Salmar is able to overcome difficult periods and indicates a strong foundation for future growth. Moreover, the profitability analysis shows a strong correlation between operating profits and average salmon prices. Estimations of short-term salmon prices indicates an increase going into 2021, supported by positivism towards a reopening of the society. Fish Pool forward prices also indicates potential increases in salmon prices in the short-term horizon.

The forecasted estimates yield an intrinsic share price of NOK 630 as of April 26, 2021. The share price at the valuation date equaled NOK 582.8, implying a potential upside in the share value of 8.1%. The sensitivity analysis demonstrated potential changes in Salmar's enterprise value given 1% divergence in input factors. Various base-case scenarios yielded a lowest value of NOK 569.23 and highest of NOK 697.31, implying a potential downside of 2.3% and an improved upside of 19.6% respectively. The majority of scenarios supported a potential undervalued share price. However, the relative valuation provided vastly different indications. Salmar seems to be highly overpriced compared to its peers in three out of four multiples, strongly suggesting an overvalued share price. On the other hand, EV/EBITDA provided a result in between the estimated fundamental value and the current traded value. Based in previous discussion about possible mispricing using multiples, the relative valuation is interpreted with care.

The authors believe the intrinsic value estimate to be a credible estimation. This indicates an underestimation by the market of appx. 8.1%. As a result, the recommendation becomes a buy for potential investors.

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APPENDIX:

A 1. Supply-price regression

Year	Global supply growth	Change in avg. Price (EUR)
2001	15%	-25%
2002	8%	-3%
2003	7%	-11%
2004	6%	7%
2005	5%	23%
2006	1%	23%
2007	10%	-21%
2008	7%	1%
2009	2%	12%
2010	-4%	35%
2011	12%	-17%
2014	8%	-5%
2015	5%	-4%
2016	-4%	46%
2017	2%	-5%
2018	7%	-2%
2019	6%	-6%
2020	5%	-13%

SUMMARY OUTPUT

2001-2020 (2012-2013 removed from sample)

Regression Statistics	
Multiple R	0.8700
R Square	0.7569
Adjusted R Square	0.7417
Standard Error	0.0978
Observations	18

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.4768	0.4768	49.8199	0.0000027
Residual	16	0.1531	0.0096		
Total	17	0.6299			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.208	0.035	5.884	0.000023	0.133	0.282
Global supply growth	-3.459	0.490	-7.058	0.000003	-4.498	-2.420

SUMMARY OUTPUT
2000-2011

Regression Statistics	
Multiple R	0.926
R Square	0.858
Adjusted R Square	0.842
Standard Error	0.079
Observations	11.000

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1.0000	0.3355	0.3355	54.4445	0.000042
Residual	9.0000	0.0555	0.0062		
Total	10.0000	0.3910			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.2389	0.0378	6.3268	0.00014	0.1535	0.3243
Global supply growth	-3.4604	0.4690	-7.3787	0.00004	-4.5213	-2.3995

A 2: Historical economic events affecting Salmar's share price

2014: Russia has been a large market for Norwegian salmon for many years, and especially for Salmar (SalMar, 2021). In 2014, after disputes regarding the Crimean conflict, Russia implemented import restrictions of Western goods, including Norwegian Salmon. The ban essentially resulted in a shift in export towards the North American market. Although Salmar lost its market exposure in Russia, its share price did not seem to be noticeably affected. As of today, Russia still withholds its ban of Western goods.

2014-2016: Norwegian economy and Oslo exchange is heavily impacted by oil & gas companies and thus the oil price. From June 2014 until January 2016, one barrel of oil went from $115 to $30. The oil crisis led to lower growth in Norwegian BNP and increased unemployment. Oslo stock exchange index decreased during this period, whereas Salmar only experienced stagnation in the underlying growth.

2016: In June 2016, Great Britain voted yes for leaving the European Union, which was given the name Brexit. Later the same year, Donald Trump won the US presidential election. Both events brought major amounts of uncertainty into the global market. Looking at the price development, there seems to be a reaction right after the Brexit result, with a new reaction after Trump's victory. Also, during 2016, Ocean Farming AS (a subsidiary of Salmar ASA) was awarded the first eight development licenses for the development of an offshore-based pin. The news was publicly known in the start of 2016 which may explain some of the increase in Salmar's share price.

2017: The new offshore pin, Ocean Farm 1, arrived at Frohavet outside the coast of Trøndelag, Central Norway. Being the start of Salmar's new focus within offshore based farming. In addition, Salmar

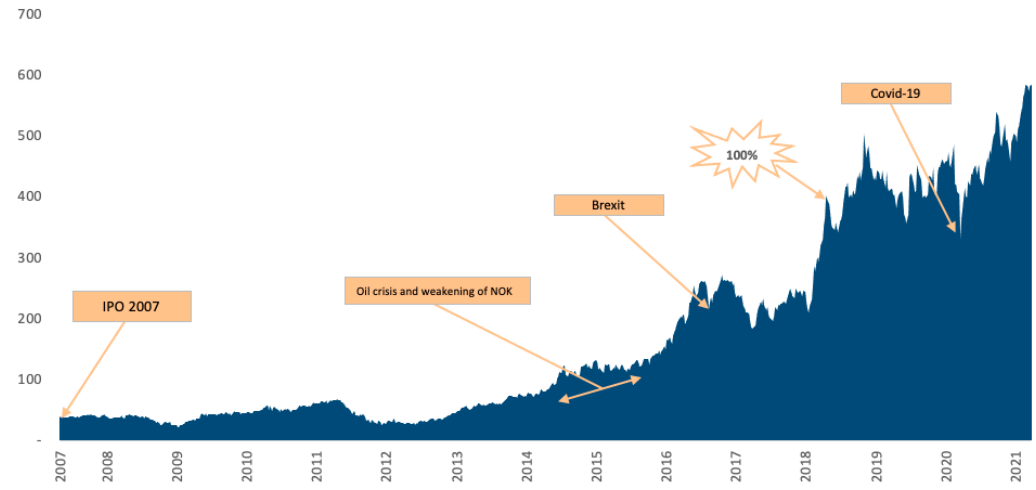
completed their construction of a new Smolt facility on Senja, Northern Norway. Salmar's stock price increased during this year and was almost back from the fall late in 2016/start of 2017.

2018: During 2018, the most noticeable economic event happened between USA and China. After winning the election in 2016, Trump went into a trade-war with China. Looking at the market movements, it did not seem to impact Norway and Salmar to a large extent. Salmar's stock price nearly increased by 100 percent during 2018, hitting an all-time high of appx. 500. Salmar finished their first production cycle of salmon from their new offshore farming pin, Ocean Farming 1.

2019: 2019 was a somewhat quiet year for Salmar. The stock price fell quite sharply in the start of the year but recovered at the end. The construction of a new harvesting and processing facility on Senja, InnovaNor, started. InnovaNor is going to be the harvesting and processing facility for Salmar's operations in Northern Norway.

2020: The world was hit with Covid-19 and experienced the first global pandemic. Full stop in the economy led to sharp decreases in the global market, which the graph clearly shows. In 2020, Salmar also started the expansion of their smolt facility on Senja, Northern Norway.

Figure: Salmar's share price development



Source: The authors creation

A 3: Executing management, board of directors and Group structure

Executive management and board of directors

Group CEO – Gustav Witzøe (1953)

Founder of Salmar ASA. Witzøe is educated as an engineer. Acquired extensive experience within the salmon farming since the star of Salmar ASA in 1991. Witzøe owns indirectly 93,02% of Kverva AS which owns 100% of Kverva Industrier AS, which in turn owns 52,46% of the shares in Salmar ASA. Witzøe has no RSU (restricted stock units) in Salmar.

Group CFO & COO – Trine Sæther Romuld (1968)

Acquired the position July 2019. Romuld has previous management experience within seafood, oil & gas, consulting and accounting. Romuld has education from NHH as government authorized accountant. She owns 4.219 shares and 5.086 RSU.

Group Director Farming – Roger Bekken (1967)

Bekken acquired the position June 2018. He has previous management experience, from competitors NRS among others, and has been working within the seafood industry since 1991. Bekken owns 14.245 shares in the company and has 4.778 RSU

Group Director Industry & Sales – Frode Arntsen (1970)

Acquired the position December 2017. He has a background from the Norwegian Armed Forces and is educated as an adjunct with leadership education. Arntsen has experience within the seafood industry since 2000 and has previously worked with competitor Lerøy. Arntsen owns 3.380 shares and 4.668 RSU in the company.

Group Director Business Support Economics & Strategy – Ulrik Steinvik (1974)

Steinvik has worked for Salmar since 2006 and been in his current position since August 2017. He has a degree as government authorized accountant from NHH and previous experience from accounting firms like Arthur Andersen and EY. Steinvik owns 137.184 shares and 4.107 RSU in the company. In addition, Steinvik owns 0,2% in Kverva AS through 100% ownership in Nordpilan AS.

Chairman – Atle Eide

Eide has been chairman of the board since June 2017. From 2003 to 2007, Eide was Group CEO of Marine Harvest ASA (Mowi ASA) and Pan Fish ASA. In addition, Eide has held various board positions in companies like Cermaq and NRS. Eide is considered a dependent representative.

Board Member and President Accounting- and Risk Committee – Margrethe Hauge

Hauge acquired the position June 2017. Holds a MSc in Economics with experience from various management positions. Hauge started her career as a Trainee with Hydro Seafood AS. Hauge is considered an independent representative.

Board Member – Leif Inge Nordhammer

Nordhammer acquired the position June 2020. Nordhammer held the position as Group CEO in Salmar from 1996 to 2016, with an absence between 2011 to 2014. He has extensive experience from other management positions and has been in the seafood industry since 1985. Through his 99,1% ownership in LIN AS, Nordhammer has direct and indirect ownership of 1,64% of the shares in Salmar ASA. He is considered as a dependent representative.

Board Member – Linda Litlekalsøy Aase

Litlekalsøy Aase acquired the position June 2020. She has over 20 years experience from various management positions. She holds a MSc degree in Materiar Technology from NTNU and studied Business Economics at NHH. She is considered an independent representative.

Board Member and Member Accounting- and Risk Committee – Tonje E. Foss

Foss Acquired the position June 2020. She has 19 years' experience from the Oil & Gas sector from various firms. Foss is considered as an independent representative.

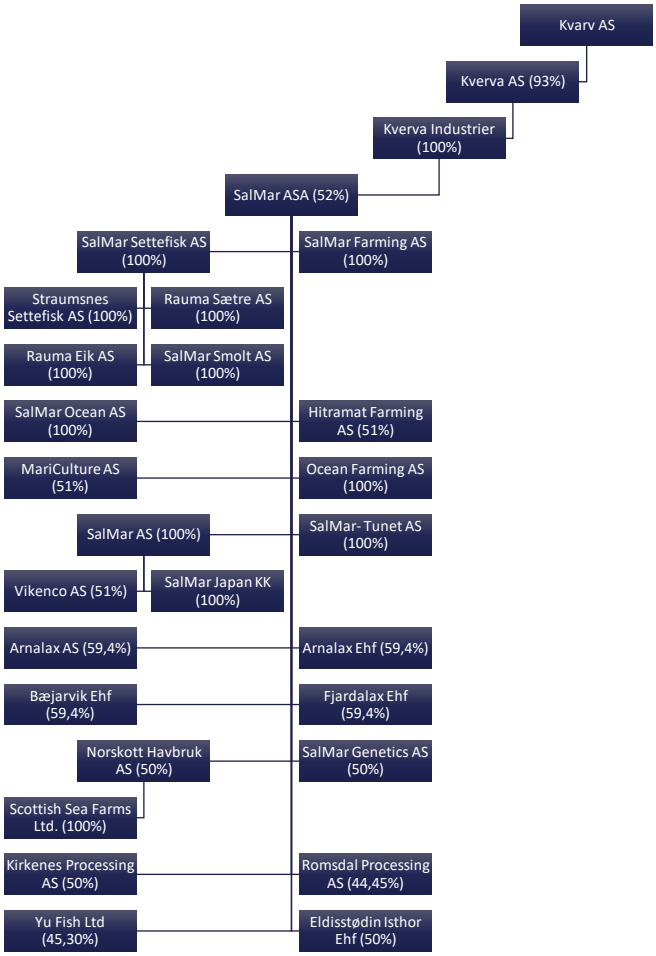
Employee Representative – Brit Elin Soleng

Soleng has worked in Salmar since 2013. She has previous experience from Marine Harvest ASA and Nutreco N.V.

Employee Representative – Jon Erick Rosvoll

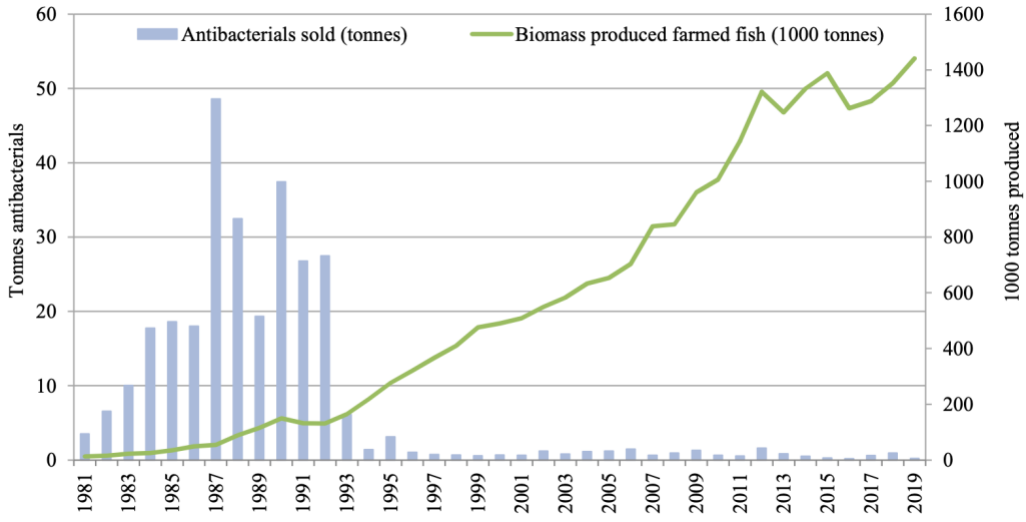
Rosvoll has worked for Salmar since June 2006, where he has been a shop steward since 2007.

Subsidiary Companies and Company Structure



Source: Own work based on Salmars' Annual Reports – Group Structure

A 4: Evolution of the use of antibiotics related to salmon farming in Norway



Source: NORM / NORM-VET 2019

A 5. Financial statements SalMAr

Balance Sheet SALM Group

Financial Year **All numbers in TNOK**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Assets						
Non-Current assets						
Intangible assets						
Licenses, Patents, etc.	2 466 171,00	2 464 332,00	2 478 510,00	2 957 486,00	4 295 467,00	6 385 101,00
Goodwill	447 372,00	446 465,00	446 465,00	446 465,00	446 465,00	441 130,00
Total Intangible assets	**2 913 543,00**	**2 910 797,00**	**2 924 975,00**	**3 403 951,00**	**4 741 932,00**	**6 826 231,00**
Tangible assets						
Land, buildings and other material property	617 182,00	882 066,00	1 030 052,00	1 100 269,00	4 369 921,00	5 554 028,00
Machines, plant & equipment	1 554 914,00	1 981 840,00	2 314 523,00	2 234 617,00	-	-
Vessels, vehicles, etc.	239 863,00	273 616,00	260 195,00	256 604,00	-	-
Right-of-use assets	-	-	-	-	569 700,00	848 767,00
Total Tangible Assets	**2 411 959,00**	**3 137 522,00**	**3 604 770,00**	**3 591 490,00**	**4 939 621,00**	**6 402 795,00**
Non-Current Financial assets						
Investments in associate companies	627 681,00	908 400,00	1 023 796,00	1 188 971,00	717 819,00	752 562,00
Investments in securities & shares	289,00	289,00	393,00	394,00	472,00	472,00
Pensions	1 397,00	1 379,00	1 379,00	7 324,00	1 510,00	7 217,00
Other long-term receivables	6 840,00	49 949,00	55 284,00	18 812,00	94 415,00	90 747,00
Total Non-Current Financial assets	**636 207,00**	**960 017,00**	**1 080 852,00**	**1 215 501,00**	**814 216,00**	**850 998,00**
Total Non-Current Financial assets	**636 207,00**	**960 017,00**	**1 080 852,00**	**1 215 501,00**	**814 216,00**	**850 998,00**
Total Non-Current assets	**5 961 709,00**	**7 008 336,00**	**7 610 597,00**	**8 210 942,00**	**10 495 769,00**	**14 080 024,00**
Current Assets						
Biological assets	3 306 052,00	4 997 001,00	4 135 523,00	5 305 616,00	5 720 810,00	5 988 790,00
Other inventory	328 216,00	224 783,00	259 050,00	459 934,00	468 728,00	680 999,00
Total inventory	**3 634 268,00**	**5 221 784,00**	**4 394 573,00**	**5 765 550,00**	**6 189 538,00**	**6 669 789,00**
Receivables						
Trade Receivables	815 540,00	595 773,00	501 112,00	630 061,00	739 429,00	588 989,00
Other short-term receivables	258 288,00	302 078,00	242 866,00	289 416,00	330 332,00	435 947,00
Total Receivables	**1 073 828,00**	**897 851,00**	**743 978,00**	**919 477,00**	**1 069 761,00**	**1 024 936,00**
Bank deposits , cash & cash equivalents	273 696,00	273 715,00	177 098,00	239 596,00	230 990,00	223 447,00
Total Currents assets	**4 981 792,00**	**6 393 350,00**	**5 315 649,00**	**6 924 623,00**	**7 490 289,00**	**7 918 172,00**
Total Assets	**10 943 501,00**	**13 401 686,00**	**12 926 246,00**	**15 135 565,00**	**17 986 058,00**	**21 998 196,00**
Equity and Liabilities						
Equity						
Paid-in Capital						
Share capital	28 325,00	28 325,00	28 325,00	28 325,00	28 325,00	28 325,00
Treasury shares	- 295,00	- 246,00	- 189,00	- 140,00	- 94,00	- 58,00
Share premium fund	415 286,00	415 286,00	415 286,00	415 286,00	415 286,00	415 286,00
Other paid-in equity	57 768,00	85 673,00	114 188,00	153 895,00	201 508,00	248 394,00
Total paid-in equity	**501 084,00**	**529 038,00**	**557 610,00**	**597 366,00**	**645 025,00**	**691 947,00**
Retained Earnings						
Distributable reserve	4 646 272,00	6 069 363,00	7 022 449,00	8 450 748,00	8 362 685,00	9 159 069,00
Total retained earnings	**4 646 272,00**	**6 069 363,00**	**7 022 449,00**	**8 450 748,00**	**8 362 685,00**	**9 159 069,00**
Non-controlling interests	79 684,00	82 432,00	88 069,00	91 729,00	732 391,00	1 135 886,00
Total Equity	**5 227 040,00**	**6 680 833,00**	**7 668 128,00**	**9 139 843,00**	**9 740 101,00**	**10 986 902,00**
Liabilities						
Non-Current Liablities						
Deferred tax expense	1 230 815,00	1 495 301,00	1 362 222,00	1 541 431,00	1 757 557,00	1 828 109,00
Debt to credit institutions long-term	2 371 338,00	2 079 001,00	811 027,00	689 927,00	2 751 570,00	3 677 627,00
Leasing and other long-term debt	381 849,00	360 556,00	344 972,00	329 190,00	488 871,00	769 128,00
Total Non-Current liabilites	**3 984 002,00**	**3 934 858,00**	**2 518 221,00**	**2 560 548,00**	**4 997 998,00**	**6 274 864,00**
Current liabilities						
Debt to credit institutions short-term	140 421,00	198 613,00	243 633,00	733 583,00	381 539,00	1 438 435,00
Short-term rental duties	-	-	-	14 604,00	140 733,00	164 567,00
Accounts payable	649 274,00	1 199 402,00	1 248 975,00	1 194 760,00	1 305 050,00	2 056 323,00
Tax Expenses	292 320,00	423 223,00	672 448,00	690 717,00	588 455,00	537 833,00
Public fees payable	153 262,00	189 136,00	170 716,00	300 591,00	218 923,00	110 839,00
Other short-term liabilites	488 996,00	775 622,00	404 125,00	500 919,00	613 258,00	428 430,00
Total Current Liabilites	**1 724 273,00**	**2 785 996,00**	**2 739 897,00**	**3 435 174,00**	**3 247 958,00**	**4 736 427,00**
Total Liabilites	**5 708 275,00**	**6 720 854,00**	**5 258 118,00**	**5 995 722,00**	**8 245 956,00**	**11 011 291,00**
Total Equity and Liabilities	**10 935 315,00**	**13 401 687,00**	**12 926 246,00**	**15 135 565,00**	**17 986 057,00**	**21 998 193,00**

Adjusted Analytical Balance Sheet SAML Group

Financial Year All numbers in TNOK	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Assets						
Operational Assets						
Non-interest bearing assets						
Licenses, Patents, etc.	2 363 597,00	2 363 597,00	2 381 597,00	2 835 188,00	4 127 803,00	6 172 183,00
Goodwill	447 372,00	446 465,00	446 465,00	446 465,00	446 465,00	441 130,00
Other Intangible Assets (R&D)	102 573,00	100 735,00	96 913,00	122 298,00	167 665,00	212 918,00
Land, buildings and other material property	1 941 098,00	2 719 157,00	3 247 589,00	3 275 863,00	4 369 921,00	5 554 028,00
Right-of-use assets	542 283,32	824 206,11	801 236,78	700 180,00	569 699,00	848 767,00
Investments in associate companies	627 681,00	908 400,00	1 023 796,00	1 188 971,00	717 819,00	752 562,00
Biological assets	3 306 052,00	4 997 001,00	4 135 523,00	5 305 616,00	5 720 810,00	5 988 790,00
Other inventory	328 216,00	224 783,00	259 050,00	459 934,00	468 728,00	680 999,00
Trade Receivables	815 540,00	595 773,00	501 112,00	630 061,00	739 429,00	588 989,00
Pensions	1 397,00	1 379,00	1 379,00	7 324,00	1 510,00	7 217,00
Other short-term receivables	258 288,00	302 078,00	242 866,00	289 416,00	330 332,00	435 947,00
Total Operational non-interest bearing assets	**10 734 097,32**	**13 483 574,11**	**13 137 526,78**	**15 261 316,00**	**17 660 181,00**	**21 683 530,00**
Operational Liabilities						
Non-interest bearing						
Deferred tax expense	1 230 815,00	1 495 301,00	1 362 222,00	1 541 431,00	1 757 557,00	1 828 109,00
Accounts payable	649 274,00	1 199 402,00	1 248 975,00	1 194 760,00	1 305 050,00	2 056 323,00
Tax Expenses	292 320,00	423 223,00	672 448,00	690 717,00	588 455,00	537 833,00
Public fees payable	153 262,00	189 136,00	170 716,00	300 591,00	218 923,00	110 839,00
Other short-term liabilites	488 996,00	775 622,00	404 125,00	500 919,00	613 258,00	428 430,00
Total Operational non-interest bearing liabilites	**2 814 667,00**	**4 082 684,00**	**3 858 486,00**	**4 228 418,00**	**4 483 243,00**	**4 961 534,00**
Net Operating Assets (Invested Capital)	**7 919 430,32**	**9 400 890,11**	**9 279 040,78**	**11 032 898,00**	**13 176 938,00**	**16 721 996,00**
Equity						
Total equity	**5 227 040,00**	**6 680 833,00**	**7 668 128,00**	**9 139 843,00**	**9 740 101,00**	**10 986 902,00**
Financial Liabilities						
Interest bearing liabilities						
Debt to credit institutions long-term	2 371 338,00	2 079 001,00	811 027,00	689 927,00	2 751 570,00	3 677 627,00
Leasing and other long-term debt	453 271,32	766 397,11	789 027,78	713 743,00	488 871,00	769 128,00
Debt to credit institutions short-term	140 421,00	198 613,00	243 633,00	733 583,00	381 539,00	1 438 435,00
Short-term rental duties	-	-	-	14 604,00	140 733,00	164 567,00
Total Financial interest bearing liabilities	**2 965 030,32**	**3 044 011,11**	**1 843 687,78**	**2 151 857,00**	**3 762 713,00**	**6 049 757,00**
Financial Assets						
Interest-bearing assets						
Investments in securities & shares	289,00	289,00	393,00	394,00	472,00	472,00
Other long-term receivables	6 840,00	49 949,00	55 284,00	18 812,00	94 415,00	90 747,00
Bank deposits , cash & cash equivalents	273 696,00	273 715,00	177 098,00	239 596,00	230 990,00	223 447,00
Total Financial interest bearing assets	**280 825,00**	**323 953,00**	**232 775,00**	**258 802,00**	**325 877,00**	**314 666,00**
Net Interest-bearing liabilities	**2 684 205,32**	**2 720 058,11**	**1 610 912,78**	**1 893 055,00**	**3 436 836,00**	**5 735 091,00**
Invested Capital (NIBL + Equity)	**7 911 245,32**	**9 400 891,11**	**9 279 040,78**	**11 032 898,00**	**13 176 937,00**	**16 721 993,00**

Income Statement SALM Group

Financial year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Operating Revenue	7 303 506,00	8 963 239,00	10 755 452,00	11 301 338,00	12 202 197,00	12 856 778,00
Other Operating Revenue	22 696,00	66 575,00	61 786,00	41 216,00	35 392,00	55 563,00
Total Operating Revenue	**7 326 202,00**	**9 029 814,00**	**10 817 238,00**	**11 342 554,00**	**12 237 589,00**	**12 912 341,00**
Change in stock of goods in progress and finished goods	- 246 712,00	- 395 871,00	-	-	-	
Cost of Goods Sold	3 809 523,00	4 396 689,00	4 722 474,00	4 585 491,00	5 770 027,00	5 870 577,00
Payroll Costs	765 881,00	861 534,00	929 100,00	1 040 438,00	1 202 494,00	1 319 961,00
Depreciation of intangible and tangible assets	307 280,00	358 020,00	414 686,00	487 778,00	716 807,00	780 972,00
Amortization of intangible and tangible assets	14 169,00	-	3 926,00	-	1 642,00	31 121,00
Other Operating costs	1 272 186,00	1 377 795,00	1 584 825,00	1 768 036,00	1 479 023,00	1 902 210,00
Total Operating costs	**5 922 327,00**	**6 598 167,00**	**7 655 011,00**	**7 881 743,00**	**9 169 993,00**	**9 904 841,00**
Net operations	**1 403 875,00**	**2 431 647,00**	**3 162 227,00**	**3 460 811,00**	**3 067 596,00**	**3 007 500,00**
Fair value adjustment	39 932,00	653 955,00	- 370 015,00	845 831,00	- 32 995,00	- 179 532,00
EBIT	**1 443 807,00**	**3 085 602,00**	**2 792 212,00**	**4 306 642,00**	**3 034 601,00**	**2 827 968,00**
Revenue from investments in associated companies	40 242,00	286 844,00	208 941,00	252 933,00	118 655,00	42 208,00
Financial Items						
Interest income	3 477,00	5 014,00	11 109,00	10 964,00	12 465,00	10 264,00
Financial income	685,00	78 142,00	-	34 347,00	236 926,00	1 321,00
Interest expenses	98 780,00	106 328,00	106 961,00	116 101,00	170 190,00	149 854,00
Financial expenses	5 744,00	7 193,00	49 100,00	36 218,00	74 093,00	160 261,00
Net Financial items	**- 100 362,00**	**- 30 365,00**	**- 144 952,00**	**- 107 008,00**	**5 108,00**	**- 298 530,00**
Profit before tax	**1 383 687,00**	**3 342 081,00**	**2 856 201,00**	**4 452 567,00**	**3 158 364,00**	**2 571 646,00**
Tax expense	254 891,00	691 090,00	558 402,00	873 343,00	613 877,00	563 355,00
Net profit	**1 128 796,00**	**2 650 991,00**	**2 297 799,00**	**3 579 224,00**	**2 544 487,00**	**2 008 291,00**

Adjusted Analytical Income statement SALM Group

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Total Operating Revenue	7 326 202,00	9 003 214,00	10 798 726,00	11 322 190,00	12 229 837,00	12 898 337,00
COGS	3 562 811,00	4 000 818,00	4 722 474,00	4 789 691,00	5 770 027,00	5 870 577,00
Gross profit	**3 763 391,00**	**5 002 396,00**	**6 076 252,00**	**6 532 499,00**	**6 459 810,00**	**7 027 760,00**
Payroll Costs	765 881,00	861 534,00	929 100,00	1 040 438,00	1 202 494,00	1 319 961,00
Other Operating costs	1 266 695,00	1 347 839,00	1 231 944,00	1 263 034,00	1 479 023,00	1 902 210,00
Revenue from investments in associated companies	40 242,00	286 844,00	208 941,00	252 933,00	118 655,00	42 208,00
EBITDA	**1 771 057,00**	**3 079 867,00**	**4 124 149,00**	**4 481 960,00**	**3 896 948,00**	**3 847 797,00**
Depreciation of Right-of-use assets	69 652,73	102 346,83	96 765,93	131 959,94	192 153,00	211 635,00
Depreciation of intangible and tangible assets	246 801,00	306 069,00	371 549,00	446 776,00	524 653,00	569 337,00
Amortization of Right-of-use assets	-	-	553,00	-	-	-
Amortization of intangible and tangible assets	14 169,00	-	3 926,00	-	1 642,00	31 121,00
EBIT	**1 440 434,27**	**2 671 451,17**	**3 651 355,07**	**3 903 224,06**	**3 178 500,00**	**3 035 704,00**
Tax expense	265 344,50	552 414,26	713 858,71	765 592,84	617 790,74	665 013,39
NOPAT	**1 175 089,78**	**2 119 036,91**	**2 937 496,36**	**3 137 631,22**	**2 560 709,26**	**2 370 690,61**
Net financial expenses	- 103 659,27	- 54 549,56	- 168 896,98	- 127 354,75	- 220 765,00	- 298 530,00
Tax expense (tax shield)	- 19 095,23	- 11 279,99	- 33 020,23	- 24 979,83	- 42 909,10	- 65 397,17
Net financial expenses after tax	**- 84 564,04**	**- 43 269,57**	**- 135 876,75**	**- 102 374,92**	**- 177 855,90**	**- 233 132,83**
Net profits	**1 090 525,73**	**2 075 767,35**	**2 801 619,61**	**3 035 256,31**	**2 382 853,36**	**2 137 557,78**

A 6. Financial Statements MOWI

Balance sheet Mowi ASA

Financial year **All numbers in 1000 EUR**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Assets						
Non-current assets						
Tangible assets						
Licenses	746 600,00	764 300,00	615 200,00	781 400,00	858 000,00	872 900,00
Goodwill	259 000,00	268 000,00	255 700,00	289 300,00	317 900,00	313 400,00
Deferred tax assets	11 500,00	2 600,00	13 100,00	22 900,00	19 900,00	26 100,00
Other tangible assets	27 600,00	32 400,00	26 100,00	26 200,00	24 800,00	24 100,00
Total Intangible assets	**1 044 700,00**	**1 067 300,00**	**910 100,00**	**1 119 800,00**	**1 220 600,00**	**1 236 500,00**
Property, plant and equipment	963 700,00	1 008 100,00	1 082 700,00	1 216 100,00	1 361 600,00	1 394 700,00
Right-of-use assets	-	-	-	-	386 800,00	536 400,00
Investments in associated companies and joint ventures	123 900,00	175 000,00	170 700,00	220 600,00	238 500,00	166 900,00
Other non-current financial assets	400,00	400,00	400,00	400,00	1 900,00	1 900,00
Other non-current assets	2 100,00	5 000,00	2 900,00	1 200,00	1 000,00	800,00
Total tangible assets	**1 090 100,00**	**1 188 500,00**	**1 256 700,00**	**1 438 300,00**	**1 989 800,00**	**2 100 700,00**
Total non-current assets	**2 134 800,00**	**2 255 800,00**	**2 166 800,00**	**2 558 100,00**	**3 210 400,00**	**3 337 200,00**
Current assets						
Inventory	277 700,00	248 200,00	306 900,00	285 500,00	320 700,00	334 100,00
Biological assets	1 140 200,00	1 573 800,00	1 200 500,00	1 559 300,00	1 522 400,00	1 416 600,00
Trade receivables	409 200,00	498 000,00	477 600,00	493 300,00	504 800,00	454 000,00
Other receivables	131 400,00	112 800,00	99 100,00	142 800,00	146 200,00	125 800,00
Other current financial assets	29 200,00	14 200,00	7 200,00	800,00	6 900,00	11 100,00
Restricted cash	11 600,00	15 900,00	12 600,00	11 400,00	11 100,00	6 900,00
Cash and cash equivalents	60 100,00	88 000,00	59 100,00	93 900,00	117 500,00	100 300,00
Total current assets	**2 059 400,00**	**2 550 900,00**	**2 163 000,00**	**2 587 000,00**	**2 629 600,00**	**2 448 800,00**
Assets held for sale	1 800,00	3 500,00	500,00	-	-	60 000,00
Total assets	**4 196 000,00**	**4 810 200,00**	**4 330 300,00**	**5 145 100,00**	**5 840 000,00**	**5 846 000,00**
Equity and Liabilities						
Equity						
Share capital	1 894 600,00	2 068 400,00	2 314 200,00	2 877 200,00	2 892 200,00	2 762 000,00
Non-controlling interests	900,00	900,00	1 200,00	1 700,00	400,00	2 100,00
Total equity	**1 895 500,00**	**2 069 300,00**	**2 315 400,00**	**2 878 900,00**	**2 892 600,00**	**2 764 100,00**
Non-current liabilities						
Deferred tax liabilities	391 800,00	453 500,00	353 900,00	413 600,00	436 000,00	392 200,00
Non-current interest-bearing debt	1 071 400,00	993 400,00	773 300,00	1 142 500,00	1 465 800,00	1 565 500,00
Non-current leasing liabilities	209 500,00	439 600,00	75 900,00	-	258 900,00	379 900,00
Other non-current liabilities	12 000,00	11 500,00	12 000,00	11 000,00	10 500,00	24 800,00
Total non-current liabilities	**1 684 700,00**	**1 898 000,00**	**1 215 100,00**	**1 567 100,00**	**2 171 200,00**	**2 362 400,00**
Current liabilities						
Current tax liabilities	72 600,00	142 600,00	90 800,00	120 100,00	99 600,00	26 300,00
Current interest-bearing debt	200,00	100,00	130 300,00	100,00	-	-
Current leasing liabilities	-	-	-	-	127 100,00	153 200,00
Trade payables	248 000,00	275 500,00	280 900,00	280 200,00	296 800,00	316 500,00
Other current financial liabilities	98 000,00	91 400,00	91 800,00	77 300,00	34 100,00	30 100,00
Provisions	45 900,00	153 700,00	9 400,00	13 000,00	18 700,00	25 400,00
Other current liabilities	151 200,00	179 800,00	196 500,00	208 500,00	199 900,00	167 900,00
Total current liabilities	**615 900,00**	**843 100,00**	**799 700,00**	**699 200,00**	**776 200,00**	**719 400,00**
Total liabilities	**2 300 600,00**	**2 741 100,00**	**2 014 800,00**	**2 266 300,00**	**2 947 400,00**	**3 081 800,00**
Total equity and liabilities	**4 196 100,00**	**4 810 400,00**	**4 330 200,00**	**5 145 200,00**	**5 840 000,00**	**5 845 900,00**

Adjusted Analytical Balance Sheet Mowi Group

Financial Year **All numbers in 1000EUR**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Assets						
Operational Assets						
Non-interest bearing assets						
Licenses	746 600,00	764 300,00	615 200,00	781 400,00	858 000,00	872 900,00
Goodwill	259 000,00	268 000,00	255 700,00	289 300,00	317 900,00	313 400,00
Deferred tax assets	11 500,00	2 600,00	13 100,00	22 900,00	19 900,00	26 100,00
Other tangible assets	27 600,00	32 400,00	26 100,00	26 200,00	24 800,00	24 100,00
Property, plant and equipment	634 000,00	561 000,00	524 300,00	631 400,00	1 361 600,00	1 394 700,00
Right-of-use assets	329 700,00	447 100,00	558 400,00	584 700,00	386 800,00	536 400,00
Investments in associated companies and joint ventures	123 900,00	175 000,00	170 700,00	220 600,00	238 500,00	166 900,00
Other non-current assets	2 100,00	5 000,00	2 900,00	1 200,00	1 000,00	800,00
Inventory	277 700,00	248 200,00	306 900,00	285 500,00	320 700,00	334 100,00
Biological assets	1 140 200,00	1 573 800,00	1 200 500,00	1 559 300,00	1 522 400,00	1 416 600,00
Trade receivables	409 200,00	498 000,00	477 600,00	493 300,00	504 800,00	454 000,00
Other receivables	131 400,00	112 800,00	99 100,00	142 800,00	146 200,00	125 800,00
Total non interest-bearing assets	**4 092 900,00**	**4 688 200,00**	**4 250 500,00**	**5 038 600,00**	**5 702 600,00**	**5 665 800,00**
Operational Liabilities						
Non-interest bearing						
Deferred tax liabilities	391 800,00	453 500,00	353 900,00	413 600,00	436 000,00	392 200,00
Current tax liabilities	72 600,00	142 600,00	90 800,00	120 100,00	99 600,00	26 300,00
Trade payables	248 000,00	275 500,00	280 900,00	280 200,00	296 800,00	316 500,00
Other current liabilities	151 200,00	179 800,00	196 500,00	208 500,00	199 900,00	167 900,00
Total Operational non interest-bearing liabilites	**863 600,00**	**1 051 400,00**	**922 100,00**	**1 022 400,00**	**1 032 300,00**	**902 900,00**
Net operating assets (Invested Caoital)	**3 229 300,00**	**3 636 800,00**	**3 328 400,00**	**4 016 200,00**	**4 670 300,00**	**4 762 900,00**
Equity						
Total equity	**1 895 500,00**	**2 069 300,00**	**2 315 400,00**	**2 878 900,00**	**2 892 600,00**	**2 764 100,00**
Financial Liabilities						
Interest bearing liabilities						
Non-current interest-bearing debt	1 071 400,00	993 400,00	773 300,00	1 142 500,00	1 465 800,00	1 565 500,00
Non-current leasing liabilities	209 500,00	439 600,00	75 900,00	-	258 900,00	379 900,00
Other non-current liabilities	12 000,00	11 500,00	12 000,00	11 000,00	10 500,00	24 800,00
Current interest-bearing debt	200,00	100,00	130 300,00	100,00	-	-
Current leasing liabilities	-	-	-	-	127 100,00	153 200,00
Other current financial liabilities	98 000,00	91 400,00	91 800,00	77 300,00	34 100,00	30 100,00
Provisions	45 900,00	153 700,00	9 400,00	13 000,00	18 700,00	25 400,00
Total Financial interest-bearing liabilities	**1 437 000,00**	**1 689 700,00**	**1 092 700,00**	**1 243 900,00**	**1 915 100,00**	**2 178 900,00**
Financial Assets						
Interest-bearing assets						
Other non-current financial assets	400,00	400,00	400,00	400,00	1 900,00	1 900,00
Other current financial assets	29 200,00	14 200,00	7 200,00	800,00	6 900,00	11 100,00
Restricted cash	11 600,00	15 900,00	12 600,00	11 400,00	11 100,00	6 900,00
Cash and cash equivalents	60 100,00	88 000,00	59 100,00	93 900,00	117 500,00	100 300,00
Assets held for sale	1 800,00	3 500,00	500,00	-	-	60 000,00
Total Financial interest bearing assets	**103 100,00**	**122 000,00**	**79 800,00**	**106 500,00**	**137 400,00**	**180 200,00**
Net Interest-bearing liabilities	**1 333 900,00**	**1 567 700,00**	**1 012 900,00**	**1 137 400,00**	**1 777 700,00**	**1 998 700,00**
Invested Capital (NIBL + Equity)	**3 229 400,00**	**3 637 000,00**	**3 328 300,00**	**4 016 300,00**	**4 670 300,00**	**4 762 800,00**

Mowi Financial Statement

Financial Year All numbers in 1000 EUR	2015	2016	2017	2018	2019	2020
Revenue	3 093 400,00	3 502 800,00	3 626 100,00	3 749 800,00	4 074 200,00	3 732 200,00
Other income	19 000,00	7 400,00	23 300,00	62 100,00	61 400,00	28 000,00
Total revenue and other income	**3 112 400,00**	**3 510 200,00**	**3 649 400,00**	**3 811 900,00**	**4 135 600,00**	**3 760 200,00**
Cost of materials	- 1 770 300,00	- 1 782 200,00	- 1 688 500,00	- 1 812 200,00	- 1 982 800,00	- 1 970 400,00
Net fair value adjustment biomass	10 100,00	386 200,00	340 300,00	146 400,00	- 127 500,00	- 145 600,00
Salary and personnel expenses	- 427 100,00	- 440 000,00	- 477 900,00	- 505 000,00	- 563 500,00	- 558 500,00
Other operating expenses	- 443 200,00	- 472 500,00	- 555 000,00	- 589 900,00	- 585 600,00	- 547 600,00
Depreciation and amortization	- 139 800,00	- 142 500,00	- 150 400,00	- 153 400,00	- 287 100,00	- 338 100,00
Onerous contracts provision	- 700,00	- 108 700,00	119 800,00	- 6 100,00	5 300,00	2 100,00
Restructuring costs	- 15 200,00	- 5 400,00	- 2 500,00	300,00	- 19 200,00	- 14 500,00
Other non-operational items	2 400,00	1 300,00	300,00	- 1 000,00	- 2 400,00	- 7 900,00
Income/loss from associated companies and joint ventures	23 400,00	62 600,00	33 700,00	45 500,00	48 700,00	21 800,00
Impairments losses	- 6 800,00	- 17 700,00	- 103 700,00	- 11 000,00	- 4 500,00	- 18 100,00
EBIT	**345 200,00**	**991 300,00**	**484 900,00**	**925 500,00**	**617 000,00**	**183 400,00**
Interest expenses	- 46 500,00	- 48 400,00	- 46 700,00	- 50 000,00	- 70 200,00	- 63 000,00
Net currency effects	4 200,00	26 900,00	- 8 800,00	- 17 700,00	31 600,00	- 12 900,00
Other financial items	- 52 900,00	- 210 500,00	93 200,00	- 125 500,00	29 000,00	13 000,00
EBT	**250 000,00**	**759 300,00**	**522 600,00**	**732 300,00**	**607 400,00**	**120 500,00**
Tax expenses	- 91 600,00	- 219 900,00	- 59 900,00	- 165 000,00	- 131 200,00	- 1 400,00
Net earnings from continuing operations	**158 400,00**	**539 400,00**	**462 700,00**	**567 300,00**	**476 200,00**	**119 100,00**
Profit after tax from discontinuing operations	- 200,00	-	-	-	-	-
Profit/loss for the year	**158 200,00**	**539 400,00**	**462 700,00**	**567 300,00**	**476 200,00**	**119 100,00**

Adjusted Analytical Income statement Mowi Group

Financial Year All numbers in 1000 EUR	2015	2016	2017	2018	2019	2019
Total Operating Revenue	3 066 000,00	3 487 500,00	3 626 600,00	3 793 100,00	4 107 100,00	3 739 600,00
COGS	- 1 770 300,00	- 1 782 200,00	- 1 688 500,00	- 1 812 200,00	- 1 982 800,00	- 1 970 400,00
Gross profit	**1 295 700,00**	**1 705 300,00**	**1 938 100,00**	**1 980 900,00**	**2 124 300,00**	**1 769 200,00**
Salary and personnel expenses	- 427 100,00	- 440 000,00	- 477 900,00	- 505 000,00	- 563 500,00	- 558 500,00
Other operating expenses	- 387 800,00	- 391 100,00	- 452 600,00	- 478 000,00	- 585 600,00	- 547 600,00
Income/loss from associated companies and joint ventures	23 400,00	62 600,00	33 700,00	45 500,00	48 700,00	21 800,00
EBITDA	**504 200,00**	**936 800,00**	**1 041 300,00**	**1 043 400,00**	**1 023 900,00**	**684 900,00**
Depreciation and amortization	- 146 600,00	- 160 200,00	- 254 100,00	- 164 400,00	- 166 800,00	- 150 900,00
Depreciation right-of-use assets	- 46 665,02	- 62 401,52	- 74 267,66	- 71 783,33	- 124 800,00	- 165 400,00
EBIT	**310 934,98**	**714 198,48**	**712 932,34**	**807 216,67**	**732 300,00**	**368 600,00**
Tax expense	- 113 926,58	- 206 838,20	- 81 715,74	- 181 880,04	- 158 178,73	- 4 282,49
NOPAT	**197 008,40**	**507 360,28**	**631 216,59**	**625 336,63**	**574 121,27**	**364 317,51**
Interest expenses	- 46 500,00	- 48 400,00	- 46 700,00	- 50 000,00	- 70 200,00	- 63 000,00
Net currency effects	4 200,00	26 900,00	- 8 800,00	- 17 700,00	31 600,00	- 12 900,00
Other financial items	- 52 900,00	- 210 500,00	93 200,00	- 125 500,00	29 000,00	13 000,00
Net financial items	**- 95 200,00**	**- 232 000,00**	**37 700,00**	**- 193 200,00**	**- 9 600,00**	**- 62 900,00**
Tax shield	34 881,28	67 189,25	- 4 321,14	43 531,34	2 073,63	730,79
Net financial expenses after tax	**- 60 318,72**	**- 164 810,75**	**33 378,86**	**- 149 668,66**	**- 7 526,37**	**- 62 169,21**
Net profits	**136 689,68**	**342 549,53**	**664 595,45**	**475 667,97**	**566 594,90**	**302 148,30**

A 7. Financial Statements LSG

Lerøy Balance sheet

Financial Year	2015	2016	2017	2018	2019	2020
All numbers in TNOK						
Assets						
Non-Current assets						
Deferred tax assets	41 536,00	31 059,00	28 852,00	14 311,00	2 932,00	18 110,00
Intangible assets	4 349 916,00	8 018 448,00	8 019 627,00	8 166 075,00	8 150 610,00	8 307 280,00
Right-of-use assets	-	-	-	-	2 378 102,00	2 429 037,00
Land, buildings and other material property	2 899 633,00	4 209 108,00	5 148 271,00	6 606 948,00	6 230 105,00	6 797 080,00
Investments in associated companies	670 952,00	730 875,00	960 587,00	1 015 556,00	950 017,00	1 055 463,00
Other investments	7 293,00	8 019,00	5 534,00	7 247,00	13 825,00	15 917,00
Long-term trade receivables	17 246,00	76 679,00	122 836,00	67 777,00	71 233,00	79 287,00
Total non-current assets	7 986 576,00	13 074 188,00	14 285 707,00	15 877 914,00	17 796 824,00	18 702 174,00
Current assets						
Biological assets	4 320 830,00	6 418 313,00	4 458 095,00	5 564 447,00	5 574 921,00	4 913 512,00
Other inventory	552 065,00	721 803,00	991 186,00	1 315 292,00	1 031 155,00	1 094 571,00
Trade receivables	1 568 820,00	2 209 281,00	1 972 438,00	2 152 414,00	2 244 348,00	1 867 505,00
Other receivables	307 798,00	421 302,00	436 590,00	426 511,00	511 131,00	618 928,00
Cash and cash equivalents	1 247 614,00	2 233 700,00	3 514 096,00	3 036 154,00	3 031 052,00	2 966 409,00
Total current assets	7 997 127,00	12 004 399,00	11 372 405,00	12 494 818,00	12 392 607,00	11 460 925,00
Total assets	15 983 703,00	25 078 587,00	25 658 112,00	28 372 732,00	30 189 431,00	30 163 099,00
Equity and Liabilities						
Equity						
Share capital	54 577,00	59 577,00	59 577,00	59 577,00	59 577,00	59 577,00
Treasury shares	- 330,00	- 30,00	- 30,00	- 30,00	- 30,00	- 30,00
Share premium fund	2 731 690,00	4 778 346,00	4 778 346,00	4 778 346,00	4 778 346,00	4 778 346,00
Total paid-in equity	2 785 937,00	4 837 893,00	4 837 893,00	4 837 893,00	4 837 893,00	4 837 893,00
Retained earnings	5 099 758,00	7 702 055,00	8 769 401,00	11 314 996,00	12 012 739,00	11 919 158,00
Non-controlling interests	878 357,00	935 478,00	874 828,00	981 401,00	912 674,00	875 718,00
Total equity	8 764 052,00	13 475 426,00	14 482 122,00	17 134 290,00	17 763 306,00	17 632 769,00
Non-current liabilities						
Pensions	3 765,00	5 219,00	3 113,00	3 566,00	2 689,00	2 670,00
Deferred tax liabilities	1 567 973,00	2 802 271,00	2 313 950,00	2 443 957,00	2 474 530,00	2 320 370,00
Leasing liabilities to credit institutions	-	-	-	754 970,00	838 270,00	1 041 812,00
Leasing liabilities to other credit institutions	-	-	-	-	1 041 322,00	858 164,00
Long-term debt to credit institutions	2 377 123,00	4 541 276,00	4 946 254,00	3 793 985,00	3 628 044,00	3 992 432,00
Other long-term liabilities	-	-	-	1 744,00	1 452,00	1 246,00
Other long-term obligations	126 674,00	121 958,00	96 202,00	62 843,00	30 854,00	34 176,00
Total non-current liabilities	4 075 535,00	7 470 724,00	7 359 519,00	7 061 065,00	8 017 161,00	8 250 870,00
Current liabilities						
Short-term debt of long-term liabilities	-	-	-	590 700,00	816 679,00	837 138,00
Short-term credit liabilities	1 465 144,00	1 094 089,00	830 009,00	441 168,00	585 128,00	815 120,00
Trade payables	915 981,00	1 366 634,00	1 310 098,00	1 486 119,00	1 554 071,00	1 194 471,00
Public fees payable	123 457,00	263 991,00	233 982,00	226 513,00	279 333,00	252 629,00
Tax expenses	200 151,00	477 842,00	819 884,00	678 075,00	448 813,00	349 562,00
Other short-term liabilities	439 383,00	929 880,00	622 498,00	754 803,00	724 941,00	830 540,00
Total current liabilities	3 144 116,00	4 132 436,00	3 816 471,00	4 177 378,00	4 408 965,00	4 279 460,00
Total Liabilities	7 219 651,00	11 603 160,00	11 175 990,00	11 238 443,00	12 426 126,00	12 530 330,00
Total equity and liabilities	15 983 703,00	25 078 586,00	25 658 112,00	28 372 733,00	30 189 432,00	30 163 099,00

Analytical Balance Sheet Lerøy Group

Financial Year All numbers in TNOK	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Assets						
Operational Assets						
Non-interest bearing assets						
Deferred tax assets	41 536,00	31 059,00	28 852,00	14 311,00	2 932,00	18 110,00
Intangible assets	4 330 441,00	7 926 474,00	7 818 631,00	5 732 921,00	8 150 610,00	8 307 280,00
Right-of-use assets	19 475,00	91 974,00	200 996,00	2 433 154,00	2 378 102,00	2 429 037,00
Land, buildings and other material property	2 899 633,00	4 209 108,00	5 148 271,00	6 606 948,00	6 230 105,00	6 797 080,00
Investments in associated companies	670 952,00	730 875,00	960 587,00	1 015 556,00	950 017,00	1 055 463,00
Biological assets	4 320 830,00	6 418 313,00	4 458 095,00	5 564 447,00	5 574 921,00	4 913 512,00
Other inventory	552 065,00	721 803,00	991 186,00	1 315 292,00	1 031 155,00	1 094 571,00
Trade receivables	1 568 820,00	2 209 281,00	1 972 438,00	2 152 414,00	2 244 348,00	1 867 505,00
Other receivables	307 798,00	421 302,00	436 590,00	426 511,00	511 131,00	618 928,00
Total Operational non-interest bearing assets	**14 711 550,00**	**22 760 189,00**	**22 015 646,00**	**25 261 554,00**	**27 073 321,00**	**27 101 486,00**
Operational Liabilities						
Non-interest bearing						
Deferred tax liabilities	1 567 973,00	2 802 271,00	2 313 950,00	2 443 957,00	2 474 530,00	2 320 370,00
Trade payables	915 981,00	1 366 634,00	1 310 098,00	1 486 119,00	1 554 071,00	1 194 471,00
Public fees payable	123 457,00	263 991,00	233 982,00	226 513,00	279 333,00	252 629,00
Tax expenses	200 151,00	477 842,00	819 884,00	678 075,00	448 813,00	349 562,00
Other short-term liabilities	439 383,00	929 880,00	622 498,00	754 803,00	724 941,00	830 540,00
Total Operational non-interest bearing liabilites	**3 246 945,00**	**5 840 618,00**	**5 300 412,00**	**5 589 467,00**	**5 481 688,00**	**4 947 572,00**
Net operating assets (Invested Capital)	**11 464 605,00**	**16 919 571,00**	**16 715 234,00**	**19 672 087,00**	**21 591 633,00**	**22 153 914,00**
Equity						
Total equity	**8 764 052,00**	**13 475 426,00**	**14 482 122,00**	**17 134 290,00**	**17 763 306,00**	**17 632 769,00**
Financial Liabilities						
Interest bearing liabilities						
Pensions	3 765,00	5 219,00	3 113,00	3 566,00	2 689,00	2 670,00
Leasing liabilities to credit institutions	-	-	-	754 970,00	838 270,00	1 041 812,00
Leasing liabilities to other credit institutions	-	-	-	-	1 041 322,00	858 164,00
Long-term debt to credit institutions	2 377 123,00	4 541 276,00	4 946 254,00	3 793 985,00	3 628 044,00	3 992 432,00
Other long-term liabilities	-	-	-	1 744,00	1 452,00	1 246,00
Other long-term obligations	126 674,00	121 958,00	96 202,00	62 843,00	30 854,00	34 176,00
Short-term debt of long-term liabilities	-	-	-	590 700,00	816 679,00	837 138,00
Short-term credit liabilities	1 465 144,00	1 094 089,00	830 009,00	441 168,00	585 128,00	815 120,00
Total Financial interest bearing liabilities	**3 972 706,00**	**5 762 542,00**	**5 875 578,00**	**5 648 976,00**	**6 944 438,00**	**7 582 758,00**
Financial Assets						
Interest-bearing assets						
Other investments	7 293,00	8 019,00	5 534,00	7 247,00	13 825,00	15 917,00
Long-term trade receivables	17 246,00	76 679,00	122 836,00	67 777,00	71 233,00	79 287,00
Cash and cash equivalents	1 247 614,00	2 233 700,00	3 514 096,00	3 036 154,00	3 031 052,00	2 966 409,00
Total Financial interest bearing assets	**1 264 860,00**	**2 310 379,00**	**3 636 932,00**	**3 103 931,00**	**3 102 285,00**	**3 045 696,00**
Net interest-bearing liabilities	**2 707 846,00**	**3 452 163,00**	**2 238 646,00**	**2 545 045,00**	**3 842 153,00**	**4 537 062,00**
Invested Capital (NIBL + Equity)	**11 471 898,00**	**16 927 589,00**	**16 720 768,00**	**19 679 335,00**	**21 605 459,00**	**22 169 831,00**

Lerøy Financial Statement

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Operating revenue	13 450 725,00	17 269 278,00	18 623 515,00	19 837 637,00	20 426 902,00	19 959 652,00
Other revenue or loss	34 206,00	457,00	- 3 927,00	42 341,00	27 245,00	6 569,00
Total revenue	**13 484 931,00**	**17 269 735,00**	**18 619 588,00**	**19 879 978,00**	**20 454 147,00**	**19 966 221,00**
COGS	9 278 374,00	10 561 407,00	9 916 876,00	11 008 753,00	11 284 327,00	11 344 160,00
Change in stock of goods	- 465 960,00	- 296 387,00	- 262 665,00	- 630 477,00	- 101 135,00	- 237 156,00
Payroll and administration costs	1 411 024,00	1 785 537,00	2 438 259,00	2 668 829,00	2 933 409,00	3 072 129,00
Other operating expenses	1 447 625,00	1 864 088,00	2 227 105,00	2 604 668,00	2 591 271,00	2 678 293,00
EBITDA	**1 813 868,00**	**3 355 090,00**	**4 300 013,00**	**4 228 205,00**	**3 746 275,00**	**3 108 795,00**
Depreciation	433 916,00	511 621,00	583 265,00	659 669,00	1 012 041,00	1 159 140,00
Fair value adjustments of biological assets	188 508,00	1 470 561,00	- 1 716 309,00	754 938,00	- 333 703,00	- 826 751,00
EBIT	**1 568 460,00**	**4 314 030,00**	**2 000 439,00**	**4 323 474,00**	**2 400 531,00**	**1 122 904,00**
Revenue form associated companies	61 376,00	262 783,00	302 651,00	286 573,00	179 749,00	105 359,00
Net financial expenses	- 128 728,00	- 131 491,00	- 209 623,00	- 161 087,00	- 214 799,00	- 241 378,00
EBT	**1 501 108,00**	**4 445 322,00**	**2 093 467,00**	**4 448 960,00**	**2 365 481,00**	**986 885,00**
Tax expense	- 268 226,00	- 926 691,00	- 343 984,00	- 851 002,00	- 495 743,00	- 196 674,00
Net profits	**1 232 882,00**	**3 518 631,00**	**1 749 483,00**	**3 597 958,00**	**1 869 738,00**	**790 211,00**

Analytical Income statement Lerøy Group

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Total Operating Revenue	13 440 506,00	17 266 065,00	18 622 799,00	19 836 541,00	20 426 803,00	19 959 652,00
COGS	8 812 414,00	10 265 020,00	9 654 211,00	10 378 276,00	11 183 192,00	11 107 004,00
Gross profit	**4 628 092,00**	**7 001 045,00**	**8 968 588,00**	**9 458 265,00**	**9 243 611,00**	**8 852 648,00**
Payroll and administration costs	1 411 024,00	1 785 537,00	2 438 259,00	2 668 829,00	2 933 409,00	3 072 129,00
Other operating expenses	1 441 040,00	1 838 293,00	2 176 536,00	2 324 970,00	2 591 271,00	2 678 293,00
Revenue form associated companies	61 376,00	262 783,00	302 651,00	286 573,00	179 749,00	105 359,00
EBITDA	**1 837 404,00**	**3 639 998,00**	**4 656 444,00**	**4 751 039,00**	**3 898 680,00**	**3 207 585,00**
Depreciation	433 916,00	511 621,00	583 265,00	659 669,00	585 387,00	700 938,00
Depreciation right-of-use assets	3 494,00	16 501,01	36 060,58	262 384,36	426 654,00	458 202,00
EBIT	**1 399 994,00**	**3 111 875,99**	**4 037 118,42**	**3 828 985,64**	**2 886 639,00**	**2 048 445,00**
Tax expense	291 227,81	954 102,18	378 427,80	881 814,90	540 759,26	244 777,66
NOPAT	**1 108 766,19**	**2 157 773,81**	**3 658 690,62**	**2 947 170,74**	**2 345 879,74**	**1 803 667,34**
Net financial expenses	**- 128 728,00**	**- 131 491,00**	**- 209 623,00**	**- 161 087,00**	**- 214 799,00**	**- 241 378,00**
Tax expense (tax shield)	23 001,81	27 411,18	34 443,80	30 812,90	45 016,26	48 103,66
Net financial expenses after tax	**- 105 726,19**	**- 104 079,82**	**- 175 179,20**	**- 130 274,10**	**- 169 782,74**	**- 193 274,34**
Net profits	**1 003 040,00**	**2 053 693,99**	**3 483 511,42**	**2 816 896,64**	**2 176 097,00**	**1 610 393,00**

A 8. Financial Statements GSF

Grieg Seafood Balance Sheet

Financial Year **All numbers in TNOK**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Assets						
Non-current assets						
Goodwill	110 647,00	108 595,00	109 038,00	109 013,00	109 526,00	638 019,00
Deferred taxes	10 317,00	-	3 574,00	1 718,00	998,00	29 293,00
Licenses	1 093 338,00	1 060 622,00	1 068 552,00	1 121 662,00	1 133 630,00	1 508 452,00
Other intangible assets	16 993,00	17 598,00	18 384,00	25 175,00	16 205,00	78 015,00
Property, plant and equipment incl. Right-of-use assets	1 534 770,00	1 510 379,00	1 871 804,00	2 292 912,00	2 957 942,00	3 033 154,00
Investments in associates	25 947,00	-	9 450,00	37 122,00	81 071,00	84 421,00
Equity instruments	1 426,00	1 445,00	1 150,00	1 160,00	1 053,00	-
Other non-current receivables	2 667,00	4 167,00	167,00	167,00	2 077,00	9 476,00
Total non-current assets	2 796 105,00	2 702 806,00	3 082 119,00	3 588 929,00	4 302 502,00	5 380 830,00
Current assets						
Inventories	90 867,00	89 164,00	92 262,00	126 092,00	177 847,00	78 001,00
Biological assets	1 929 115,00	2 459 625,00	2 698 352,00	3 195 142,00	3 437 948,00	2 545 903,00
Trade receivables	581 904,00	800 591,00	761 407,00	925 232,00	459 897,00	179 384,00
Other current receivables	145 767,00	163 246,00	198 527,00	166 432,00	334 625,00	133 069,00
Derivatives and other financial instruments	-	48 994,00	48 232,00	2 743,00	7 368,00	84 189,00
Cash and cash equivalents	392 020,00	503 613,00	271 715,00	137 920,00	214 497,00	275 427,00
Total current assets	3 139 673,00	4 065 233,00	4 070 495,00	4 553 561,00	4 632 182,00	3 295 973,00
Assets held for sale	-	-	-	-	-	1 972 725,00
Total assets	5 935 778,00	6 768 039,00	7 152 614,00	8 142 490,00	8 934 684,00	10 649 528,00
Equity and liabilities						
Equity						
Share capital	446 648,00	446 648,00	446 648,00	446 648,00	446 648,00	453 788,00
Treasury shares	- 5 000,00	- 5 000,00	- 5 000,00	- 4 914,00	- 4 855,00	- 4 686,00
Other equity	139 993,00	63 098,00	87 892,00	84 152,00	154 559,00	785 936,00
Retained earnings	1 625 521,00	2 645 935,00	2 774 824,00	3 308 166,00	3 487 859,00	3 135 880,00
Total controlling interests	2 207 162,00	3 150 681,00	3 304 364,00	3 834 052,00	4 084 211,00	4 370 918,00
Non-controlling interests	30 349,00	56 270,00	43 541,00	49 458,00	56 632,00	-
Total equity	2 237 511,00	3 206 951,00	3 347 905,00	3 883 510,00	4 140 843,00	4 370 918,00
Non-current liabilities						
Deferred tax liabilities	539 040,00	674 684,00	721 689,00	877 639,00	874 664,00	908 958,00
Pension obligations	109,00	-	-	-	-	491,00
Cash-settled share options	4 389,00	11 360,00	8 848,00	8 493,00	8 379,00	-
Borrowings	1 518 261,00	979 874,00	1 191 688,00	1 298 713,00	1 563 935,00	3 376 178,00
Other non-current borrowings	21 425,00	15 963,00	15 353,00	14 047,00	13 240,00	-
Lease liabilities	272 968,00	250 452,00	201 899,00	292 358,00	632 666,00	531 644,00
Total non-current liabilities	2 356 192,00	1 932 333,00	2 139 477,00	2 491 250,00	3 092 884,00	4 817 271,00
Current liabilities						
Overdraft facility	-	-	-	46 597,00	-	
Current portion of long-term borrowings	101 922,00	98 490,00	98 873,00	107 109,00	98 212,00	104 435,00
Current portions of finance lease liabilities	61 008,00	67 116,00	58 353,00	68 083,00	199 327,00	153 195,00
Factoring liabilities	338 231,00	502 535,00	500 976,00	573 377,00	86 122,00	-
Cash-settled share options	1 250,00	-	6 746,00	9 010,00	11 270,00	2 411,00
Trade payables	653 083,00	493 534,00	585 378,00	649 352,00	855 061,00	562 848,00
Tax payable	24 545,00	172 057,00	157 244,00	130 287,00	211 569,00	14 791,00
Public tax payable	12 134,00	48 819,00	16 486,00	29 346,00	50 570,00	21 867,00
Derivatives and other financial instruments	27 104,00	23 990,00	28 462,00	5 905,00	9 321,00	14 346,00
Other current liabilities	122 795,00	222 213,00	212 717,00	148 663,00	179 507,00	94 616,00
Total current liabilities	1 342 072,00	1 628 754,00	1 665 235,00	1 767 729,00	1 700 959,00	968 509,00
Liabilities directly associated with the assets held for sale	-	-	-	-	-	492 829,00
Total liabilities	3 698 264,00	3 561 087,00	3 804 712,00	4 258 979,00	4 793 843,00	6 278 609,00
Total equity and liabilities	5 935 775,00	6 768 038,00	7 152 617,00	8 142 489,00	8 934 686,00	10 649 527,00

Analytical Balance Sheet Grieg Group

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Assets						
Operational Assets						
Non-interest bearing assets						
Goodwill	110 647,00	108 595,00	109 038,00	109 013,00	109 526,00	638 019,00
Deferred taxes	10 317,00	-	3 574,00	1 718,00	998,00	29 293,00
Licenses	1 093 338,00	1 060 622,00	1 068 552,00	1 121 662,00	1 133 630,00	1 508 452,00
Other intangible assets	16 993,00	17 598,00	18 384,00	25 175,00	16 205,00	78 015,00
Property, plant and equipment	1 417 531,00	1 089 528,00	1 349 785,00	1 844 173,00	2 092 435,00	2 291 700,00
Right-of-use assets	117 239,00	420 851,00	522 019,00	448 739,00	865 507,00	741 454,00
Investments in associates	25 947,00	-	9 450,00	37 122,00	81 071,00	84 421,00
Inventories	90 867,00	89 164,00	92 262,00	126 092,00	177 847,00	78 001,00
Biological assets	1 929 115,00	2 459 625,00	2 698 352,00	3 195 142,00	3 437 948,00	2 545 903,00
Trade receivables	581 904,00	800 591,00	761 407,00	925 232,00	459 897,00	179 384,00
Other current receivables	145 767,00	163 246,00	198 527,00	166 432,00	334 625,00	133 069,00
Total Operational non-interest bearing assets	**5 539 665,00**	**6 209 820,00**	**6 831 350,00**	**8 000 500,00**	**8 709 689,00**	**8 307 711,00**
Operational Liabilities						
Non-interest bearing						
Deferred tax liabilities	539 040,00	674 684,00	721 689,00	877 639,00	874 664,00	908 958,00
Pension obligations	109,00	-	-	-	-	491,00
Trade payables	653 083,00	493 534,00	585 378,00	649 352,00	855 061,00	562 848,00
Tax payable	24 545,00	172 057,00	157 244,00	130 287,00	211 569,00	14 791,00
Public tax payable	12 134,00	48 819,00	16 486,00	29 346,00	50 570,00	21 867,00
Other current liabilities	122 795,00	222 213,00	212 717,00	148 663,00	179 507,00	94 616,00
Total Operational non-interest bearing liabilites	**1 351 706,00**	**1 611 307,00**	**1 693 514,00**	**1 835 287,00**	**2 171 371,00**	**1 603 571,00**
Net operating assets (Invested Capital)	**4 187 959,00**	**4 598 513,00**	**5 137 836,00**	**6 165 213,00**	**6 538 318,00**	**6 704 140,00**
Equity						
Total equity	**2 237 511,00**	**3 206 951,00**	**3 347 905,00**	**3 883 510,00**	**4 140 843,00**	**4 370 918,00**
Financial Liabilities						
Interest bearing liabilities						
Cash-settled share options	4 389,00	11 360,00	8 848,00	8 493,00	8 379,00	-
Borrowings	1 518 261,00	979 874,00	1 191 688,00	1 298 713,00	1 563 935,00	3 376 178,00
Other non-current borrowings	21 425,00	15 963,00	15 353,00	14 047,00	13 240,00	-
Lease liabilities	272 968,00	250 452,00	201 899,00	292 358,00	632 666,00	531 644,00
Overdraft facility	-	-	-	46 597,00	-	-
Current portion of long-term borrowings	101 922,00	98 490,00	98 873,00	107 109,00	98 212,00	104 435,00
Current portions of finance lease liabilities	61 008,00	67 116,00	58 353,00	68 083,00	199 327,00	153 195,00
Factoring liabilities	338 231,00	502 535,00	500 976,00	573 377,00	86 122,00	-
Cash-settled share options	1 250,00	-	6 746,00	9 010,00	11 270,00	2 411,00
Derivatives and other financial instruments	27 104,00	23 990,00	28 462,00	5 905,00	9 321,00	14 346,00
Liabilities directly associated with the assets held for sale	-	-	-	-	-	492 829,00
Total Financial interest bearing liabilities	**2 346 558,00**	**1 949 780,00**	**2 111 198,00**	**2 423 692,00**	**2 622 472,00**	**4 675 038,00**
Financial Assets						
Interest-bearing assets						
Equity instruments	1 426,00	1 445,00	1 150,00	1 160,00	1 053,00	-
Other non-current receivables	2 667,00	4 167,00	167,00	167,00	2 077,00	9 476,00
Derivatives and other financial instruments	-	48 994,00	48 232,00	2 743,00	7 368,00	84 189,00
Cash and cash equivalents	392 020,00	503 613,00	271 715,00	137 920,00	214 497,00	275 427,00
Assets held for sale	-	-	-	-	-	1 972 725,00
Total Financial interest bearing assets	**396 113,00**	**558 219,00**	**321 264,00**	**141 990,00**	**224 995,00**	**2 341 817,00**
Net interest-bearing liabilities	**1 950 445,00**	**1 391 561,00**	**1 789 934,00**	**2 281 702,00**	**2 397 477,00**	**2 333 221,00**
Invested Capital (NIBL + Equity)	**4 187 956,00**	**4 598 512,00**	**5 137 839,00**	**6 165 212,00**	**6 538 320,00**	**6 704 139,00**

Grieg Seafood Financial Statement

Financial Year **All numbers in TNOK**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Sales revenue	4 608 667,00	6 545 187,00	7 017 456,00	7 500 316,00	8 273 592,00	4 384 357,00
Other income	44 921,00	41 019,00	21 771,00	25 853,00	26 519,00	28 688,00
Other gains and losses	- 15 218,00	17 386,00	- 1 514,00	26 157,00	3 612,00	- 4 786,00
Share of profit from associated companies	6 994,00	569,00	- 550,00	- 2 328,00	211,00	3 350,00
Total income	**4 645 364,00**	**6 604 161,00**	**7 037 163,00**	**7 549 998,00**	**8 303 934,00**	**4 411 609,00**
COGS	- 2 738 926,00	- 3 287 159,00	- 3 724 200,00	- 3 852 855,00	- 4 181 971,00	- 1 717 279,00
Salaries and personnel expenses	- 409 432,00	- 483 473,00	- 482 827,00	- 541 047,00	- 610 803,00	- 499 546,00
Other operating expenses	- 1 235 695,00	- 1 491 867,00	- 1 724 604,00	- 1 821 623,00	- 2 013 002,00	- 1 592 852,00
EBITDA	**261 311,00**	**1 341 662,00**	**1 105 532,00**	**1 334 473,00**	**1 498 158,00**	**601 932,00**
Depreciation	- 162 211,00	- 175 352,00	- 196 237,00	- 230 262,00	- 404 895,00	- 360 178,00
Amortization	- 5 163,00	- 5 036,00	- 4 895,00	- 5 393,00	- 5 688,00	- 8 696,00
Reversals/impairments losses pp&e	- 46 195,00	6 472,00	-	-	-	-
Fair value adjustments	33 209,00	515 741,00	- 91 463,00	256 097,00	- 220 714,00	- 289 705,00
EBIT	**80 951,00**	**1 683 487,00**	**812 937,00**	**1 354 915,00**	**866 861,00**	**- 56 647,00**
Profit/loss from associates	3 142,00	12 083,00	-	-	-	-
Financial income	38 056,00	20 479,00	42 333,00	18 874,00	51 309,00	103,00
Financial expenses	- 131 357,00	- 155 213,00	- 56 789,00	- 96 865,00	- 77 542,00	- 247 895,00
Net financial expenses	**- 93 301,00**	**- 134 734,00**	**- 14 456,00**	**- 77 991,00**	**- 26 233,00**	**- 247 792,00**
EBT	**- 9 208,00**	**1 560 836,00**	**798 481,00**	**1 276 924,00**	**840 628,00**	**- 304 439,00**
Tax expense	13 574,00	- 338 505,00	- 197 581,00	- 279 805,00	- 195 718,00	- 11 557,00
Net profits	**4 366,00**	**1 222 331,00**	**600 900,00**	**997 119,00**	**644 910,00**	**- 315 996,00**

Analytical Income statement Grieg Group

Financial Year **All numbers in TNOK**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Total Operating Revenue	4 608 667,00	6 545 187,00	7 017 456,00	7 500 316,00	8 273 592,00	4 384 357,00
COGS	- 2 738 926,00	- 3 287 159,00	- 3 724 200,00	- 3 852 855,00	- 4 181 971,00	- 1 717 279,00
Gross profit	**1 869 741,00**	**3 258 028,00**	**3 293 256,00**	**3 647 461,00**	**4 091 621,00**	**2 667 078,00**
Profit/loss from associates	10 136,00	12 652,00	- 550,00	2 328,00	211,00	3 350,00
Salaries and personnel expenses	- 409 432,00	- 483 473,00	- 482 827,00	- 541 047,00	- 610 803,00	- 499 546,00
Other operating expenses	- 1 203 434,00	- 1 439 207,00	- 1 555 543,00	- 1 625 838,00	- 2 013 002,00	- 1 592 852,00
EBITDA	**267 011,00**	**1 348 000,00**	**1 254 336,00**	**1 478 248,00**	**1 468 027,00**	**578 030,00**
Depreciation	- 162 211,00	- 175 352,00	- 196 237,00	- 230 262,00	- 241 255,00	- 211 867,00
Depreciation right-of-use assets	- 6 271,99	- 49 223,18	- 63 581,65	- 42 317,15	- 163 640,00	- 148 311,00
Amortization	- 51 358,00	- 1 436,00	- 4 895,00	- 5 393,00	- 5 688,00	- 8 696,00
EBIT	**47 170,01**	**1 124 860,82**	**989 622,35**	**1 200 275,85**	**1 057 444,00**	**209 156,00**
Tax expense	- 12 735,90	- 281 215,20	- 237 509,36	- 276 063,44	- 232 637,68	- 46 014,32
NOPAT	**34 434,11**	**843 645,61**	**752 112,99**	**924 212,40**	**824 806,32**	**163 141,68**
Financial income	38 056,00	20 479,00	42 333,00	18 874,00	51 309,00	103,00
Financial expenses	- 131 357,00	- 155 213,00	- 56 789,00	- 96 865,00	- 77 542,00	- 247 895,00
Net financial items	**- 93 301,00**	**- 134 734,00**	**- 14 456,00**	**- 77 991,00**	**- 26 233,00**	**- 247 792,00**
Tax shield	25 191,27	33 683,50	3 469,44	17 937,93	5 771,26	54 514,24
Net financial items, after tax	**- 68 109,73**	**- 101 050,50**	**- 10 986,56**	**- 60 053,07**	**- 20 461,74**	**- 193 277,76**
Net profits	**- 33 675,62**	**742 595,11**	**741 126,43**	**864 159,33**	**804 344,58**	**- 30 136,08**

A 9. Financial Statements NRS

Norway Royal Salmon Balance Sheet

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Assets						
Non-current assets						
Intangible assets						
Licenses	648 887,00	648 887,00	648 887,00	846 807,00	713 947,00	948 616,00
Total intangible assets	**648 887,00**	**648 887,00**	**648 887,00**	**846 807,00**	**713 947,00**	**948 616,00**
Tangible assets						
Land, buildings and other material property	12 866,00	19 579,00	30 624,00	37 780,00	55 085,00	71 116,00
Machines, plant & equipment	168 641,00	182 110,00	224 770,00	313 584,00	799 625,00	1 966 743,00
Boats, vessels, etc.	163 698,00	197 285,00	270 845,00	299 614,00	302 586,00	299 404,00
Other operational assets	12 742,00	18 521,00	17 767,00	21 599,00	18 272,00	14 497,00
Total tangible assets	**357 947,00**	**417 495,00**	**544 006,00**	**672 577,00**	**1 175 568,00**	**2 351 760,00**
Financial non-current assets						
Investments in associated companies	169 991,00	531 504,00	580 510,00	568 443,00	607 886,00	721 856,00
Financial assets available for sale	395,00	395,00	367,00	367,00	463,00	3 999,00
Other long-term receivables	20 000,00	16 000,00	32 640,00	87 191,00	68 374,00	46 904,00
Total financial non-current assets	**190 386,00**	**547 899,00**	**613 517,00**	**656 001,00**	**676 723,00**	**772 759,00**
Total non-current assets	**1 197 220,00**	**1 614 281,00**	**1 806 410,00**	**2 175 385,00**	**2 566 238,00**	**4 073 135,00**
Current assets						
Inventory	40 630,00	101 635,00	99 326,00	81 376,00	80 123,00	104 257,00
Biological assets	829 928,00	1 205 399,00	1 177 678,00	1 240 393,00	1 231 662,00	1 282 006,00
Trade receivables	500 689,00	478 214,00	546 082,00	369 030,00	416 910,00	150 539,00
Other short-term receivables	100 438,00	244 596,00	73 888,00	68 997,00	233 289,00	166 002,00
Cash and cash equivalent	201 339,00	69 257,00	151 779,00	155 653,00	152 317,00	38 753,00
Total current assets	**1 673 024,00**	**2 099 101,00**	**2 048 753,00**	**1 915 449,00**	**2 114 301,00**	**1 741 557,00**
Total assets	**2 870 244,00**	**3 713 382,00**	**3 855 163,00**	**4 090 834,00**	**4 680 539,00**	**5 814 692,00**
Equity and liabilities						
Equity						
Share capital	43 572,00	43 572,00	43 572,00	43 572,00	43 572,00	43 572,00
Treasury shares	- 71,00	- 98,00	- 82,00	- 58,00	- 141,00	- 653,00
Other paid-in equity and retained earnings	1 070 287,00	1 970 509,00	1 769 778,00	2 235 729,00	3 267 659,00	3 048 177,00
Total controlling interests	**1 113 788,00**	**2 013 983,00**	**1 813 268,00**	**2 279 243,00**	**3 311 090,00**	**3 091 096,00**
Non-controlling interests	72 730,00	33 034,00	37 762,00	41 542,00	45 949,00	39 596,00
Total equity	**1 186 518,00**	**2 047 017,00**	**1 851 030,00**	**2 320 785,00**	**3 357 039,00**	**3 130 692,00**
Non-current liabilities						
Pensions	12 480,00	11 383,00	16 728,00	19 005,00	27 638,00	23 703,00
Deferred tax liabilities	303 485,00	394 786,00	346 557,00	385 754,00	358 208,00	365 569,00
Long-term interest-bearing liabilities	653 361,00	303 781,00	461 241,00	551 054,00	200 933,00	1 200 000,00
Total non-current liabilities	**969 326,00**	**709 950,00**	**824 526,00**	**955 813,00**	**586 779,00**	**1 589 272,00**
Current liabilities						
Short-term interest-bearing liabilities	46 519,00	47 635,00	342 617,00	102 514,00	47 927,00	226 819,00
Trade payables	530 430,00	646 515,00	549 526,00	446 993,00	575 895,00	617 937,00
Tax expenses	3 180,00	79 350,00	113 485,00	134 777,00	42 537,00	3 752,00
Other short-term liabilities	134 271,00	182 916,00	155 980,00	129 952,00	70 359,00	67 723,00
Total current liabilities	**714 400,00**	**956 416,00**	**1 161 608,00**	**814 236,00**	**736 718,00**	**916 231,00**
Total liabilities	**1 683 726,00**	**1 666 366,00**	**1 986 134,00**	**1 770 049,00**	**1 323 497,00**	**2 505 503,00**
Total equity and liabilities	**2 870 244,00**	**3 713 383,00**	**3 837 164,00**	**4 090 834,00**	**4 680 536,00**	**5 636 195,00**

Analytical Balance Sheet NRS Group

Financial Year **All numbers in TNOK**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Assets						
Operational Assets						
Non-interest bearing assets						
Licenses	648 887,00	648 887,00	648 887,00	846 807,00	713 947,00	948 616,00
Land, buildings and other material property	116 835,00	166 226,00	212 983,00	350 586,00	858 567,00	2 042 888,00
Right-of-use assets	241 112,00	251 269,00	331 023,00	321 991,00	317 001,00	308 872,00
Inventory	40 630,00	101 635,00	99 326,00	81 376,00	80 123,00	104 257,00
Biological assets	829 928,00	1 205 399,00	1 177 678,00	1 240 393,00	1 231 662,00	1 282 006,00
Trade receivables	500 689,00	478 214,00	546 082,00	369 030,00	416 910,00	150 539,00
Other short-term receivables	100 438,00	244 596,00	73 888,00	68 997,00	233 289,00	166 002,00
Investments in associated companies	169 991,00	531 504,00	580 510,00	568 443,00	607 886,00	721 856,00
Total Operational non-interest bearing assets	**2 648 510,00**	**3 627 730,00**	**3 670 377,00**	**3 847 623,00**	**4 459 385,00**	**5 725 036,00**
Operational Liabilities						
Non-interest bearing						
Pensions	12 480,00	11 383,00	16 728,00	19 005,00	27 638,00	23 703,00
Deferred tax liabilities	303 485,00	394 786,00	346 557,00	385 754,00	358 208,00	365 569,00
Trade payables	530 430,00	646 515,00	549 526,00	446 993,00	575 895,00	617 937,00
Tax expenses	3 180,00	79 350,00	113 485,00	134 777,00	42 537,00	3 752,00
Other short-term liabilities	134 271,00	182 916,00	155 980,00	129 952,00	70 359,00	67 723,00
Total Operational non-interest bearing liabilites	**983 846,00**	**1 314 950,00**	**1 182 276,00**	**1 116 481,00**	**1 074 637,00**	**1 078 684,00**
Net operating assets (Invested Capital)	**1 664 664,00**	**2 312 780,00**	**2 488 101,00**	**2 731 142,00**	**3 384 748,00**	**4 646 352,00**
Equity						
Total equity	**1 186 518,00**	**2 047 017,00**	**1 851 030,00**	**2 320 785,00**	**3 357 039,00**	**3 130 692,00**
Financial Liabilities						
Interest bearing liabilities						
Long-term interest-bearing liabilities	653 361,00	303 781,00	461 241,00	551 054,00	200 933,00	1 200 000,00
Short-term interest-bearing liabilities	46 519,00	47 635,00	342 617,00	102 514,00	47 927,00	226 819,00
Total Financial interest bearing liabilities	**699 880,00**	**351 416,00**	**803 858,00**	**653 568,00**	**248 860,00**	**1 426 819,00**
Financial Assets						
Interest-bearing assets						
Financial assets available for sale	395,00	395,00	367,00	367,00	463,00	3 999,00
Other long-term receivables	20 000,00	16 000,00	32 640,00	87 191,00	68 374,00	46 904,00
Cash and cash equivalent	201 339,00	69 257,00	151 779,00	155 653,00	152 317,00	38 753,00
Total Financial interest bearing assets	**221 734,00**	**85 652,00**	**184 786,00**	**243 211,00**	**221 154,00**	**89 656,00**
Net interest-bearing liabilities	**478 146,00**	**265 764,00**	**619 072,00**	**410 357,00**	**27 706,00**	**1 337 163,00**
Invested Capital (NIBL + Equity)	**1 664 664,00**	**2 312 781,00**	**2 470 102,00**	**2 731 142,00**	**3 384 745,00**	**4 467 855,00**

Norwegian Royal Salmon Financial Statement

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Operating revenue	3 210 548,00	4 224 340,00	4 937 798,00	5 080 806,00	5 586 670,00	5 118 867,00
COGS	2 707 071,00	3 230 927,00	3 889 102,00	4 132 850,00	4 586 500,00	4 393 881,00
Payroll and administration costs	113 268,00	155 468,00	138 596,00	139 279,00	154 466,00	166 995,00
Depreciation	53 697,00	61 063,00	82 063,00	76 550,00	86 804,00	100 747,00
Other operating expenses	134 618,00	136 269,00	200 178,00	167 790,00	216 098,00	210 992,00
Total operating costs	**3 008 654,00**	**3 583 727,00**	**4 309 939,00**	**4 516 469,00**	**5 043 868,00**	**4 872 615,00**
Operating profit	**201 894,00**	**640 613,00**	**627 859,00**	**564 337,00**	**542 802,00**	**246 252,00**
Fair value adjustments	24 416,00	164 151,00	- 194 799,00	176 851,00	- 132 023,00	- 136 657,00
Amortization of tangible assets	-	-	-	-	- 4 379,00	-
Profit/loss from associated companies	22 754,00	71 865,00	52 657,00	14 713,00	16 901,00	- 1 985,00
EBIT	**249 064,00**	**876 629,00**	**485 717,00**	**755 901,00**	**423 301,00**	**107 610,00**
Financial income	48 312,00	313 121,00	- 142 252,00	82 030,00	78 375,00	- 8 165,00
Financial expenses	- 24 859,00	- 16 217,00	- 19 568,00	- 13 992,00	- 17 986,00	- 13 276,00
Net other financial expenses	- 2 436,00	- 1 112,00	- 1 303,00	- 5 368,00	- 8 915,00	- 13 198,00
Net financial items	**21 017,00**	**295 792,00**	**- 163 123,00**	**62 670,00**	**51 474,00**	**- 34 639,00**
EBT	**270 081,00**	**1 172 421,00**	**322 594,00**	**818 571,00**	**474 775,00**	**72 971,00**
Tax expense	- 32 498,00	- 167 707,00	- 86 180,00	- 149 398,00	- 84 278,00	- 1 717,00
Net profit from operations	**237 583,00**	**1 004 714,00**	**236 414,00**	**669 173,00**	**390 497,00**	**71 254,00**

Adjusted Analytical Income statement NRS Group

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Total Operating Revenue	3 210 548,00	4 224 340,00	4 937 798,00	5 080 806,00	5 586 670,00	5 118 867,00
COGS	2 707 071,00	3 230 927,00	3 889 102,00	4 132 850,00	4 586 500,00	4 393 881,00
Gross profit	**503 477,00**	**993 413,00**	**1 048 696,00**	**947 956,00**	**1 000 170,00**	**724 986,00**
Payroll and administration costs	113 268,00	155 468,00	138 596,00	139 279,00	154 466,00	166 995,00
Other operating expenses	113 108,00	111 915,00	162 841,00	116 828,00	216 098,00	210 992,00
Profit/loss from associated companies	22 754,00	71 865,00	52 657,00	14 713,00	16 901,00	- 1 985,00
EBITDA	**299 855,00**	**797 895,00**	**799 916,00**	**706 562,00**	**646 507,00**	**345 014,00**
Depreciation	53 697,00	61 063,00	77 732,00	76 550,00	86 804,00	69 280,00
Depreciation right-of-use assets	29 345,00	28 787,00	30 042,00	26 677,00	49 132,00	31 467,00
Amortization of tangible assets	-	-	4 331,00	-	- 4 379,00	-
EBIT	**216 813,00**	**708 045,00**	**687 811,00**	**603 335,00**	**514 950,00**	**244 267,00**
Tax expense	- 26 088,43	- 101 281,11	- 183 746,60	- 110 115,12	- 91 409,52	- 5 747,58
NOPAT	**190 724,57**	**606 763,89**	**504 064,40**	**493 219,88**	**423 540,48**	**238 519,42**
Financial income	48 312,00	313 121,00	- 142 252,00	82 030,00	78 375,00	- 8 165,00
Financial expenses	- 24 859,00	- 16 217,00	- 19 568,00	- 13 992,00	- 17 986,00	- 13 276,00
Net other financial expenses	- 2 436,00	- 1 112,00	- 1 303,00	- 5 368,00	- 8 915,00	- 13 198,00
Net financial items	**21 017,00**	**295 792,00**	**- 163 123,00**	**62 670,00**	**51 474,00**	**- 34 639,00**
Tax shield	2 528,91	- 42 311,07	- 43 577,81	11 437,95	9 137,22	- 815,05
Net financial items, after tax	**18 488,09**	**253 480,93**	**- 119 545,19**	**51 232,05**	**42 336,78**	**- 33 823,95**
Net profits	**237 583,00**	**1 004 714,00**	**236 414,00**	**669 173,00**	**390 497,00**	**71 254,00**

A 10. Complete Pro forma statement Salmar

Income statement	2015	2016	2017	2018	2019	2020
Total Operating Revenue	7 326 202,00	9 003 214,00	10 798 726,00	11 322 190,00	12 229 837,00	12 898 337,00
Operating expenses		5 923 347,00	6 674 577,00	6 840 230,00	8 332 889,00	9 050 540,00
EBITDA		**3 079 867,00**	**4 124 149,00**	**4 481 960,00**	**3 896 948,00**	**3 847 797,00**
Depreciation		386 732,38	487 981,63	522 517,35	726 582,90	1 056 717,43
Production tax		-	-	-	-	-
EBIT		**2 693 134,62**	**3 636 167,37**	**3 959 442,65**	**3 170 365,10**	**2 791 079,57**
Tax expenses		556 898,05	710 889,44	776 619,76	616 209,60	611 424,99
NOPAT		**2 136 236,56**	**2 925 277,93**	**3 182 822,89**	**2 554 155,50**	**2 179 654,58**
Net financial expenses, bfore tax		43 269,57	135 876,75	102 374,92	177 855,90	233 132,83
Tax shield		9 519,30	29 892,89	22 522,48	39 128,30	51 289,22
Net earnings		**2 102 486,30**	**2 819 294,07**	**3 102 970,45**	**2 415 427,89**	**1 997 810,97**

Balance Sheet						
Assets						
Intangible assets and tangible assets	6 024 604,32	7 362 560,11	7 997 596,78	8 568 965,00	10 399 372,00	13 981 588,00
Net working capital	1 894 826,00	2 038 330,00	1 281 444,00	2 463 933,00	2 777 566,00	2 740 408,00
Invested Capital	**7 919 430,32**	**9 400 890,11**	**9 279 040,78**	**11 032 898,00**	**13 176 938,00**	**16 721 996,00**
Equity and liabilities						
Equity, beginning of period		5 227 040,00	6 680 833,00	7 668 128,00	9 139 843,00	9 740 101,00
Net earnings		2 102 486,30	2 819 294,07	3 102 970,45	2 415 427,89	1 997 810,97
Dividends		656 879,30	1 831 998,07	1 631 255,45	1 815 168,89	751 007,97
Equity, end of period		6 672 647,00	7 668 129,00	9 139 843,00	9 740 102,00	10 986 904,00
NIBL	2 684 205,32	2 720 058,11	1 610 912,78	1 893 055,00	3 436 836,00	5 735 091,00
Invested Capital		**9 392 705,11**	**9 279 041,78**	**11 032 898,00**	**13 176 938,00**	**16 721 995,00**

Cash flow Statement					
NOPAT	2 136 236,56	2 925 277,93	3 182 822,89	2 554 155,50	2 179 654,58
+ Depreciation	386 732,38	487 981,63	522 517,35	726 582,90	1 056 717,43
- Change in NWC	143 504,00	- 756 886,00	1 182 489,00	313 633,00	- 37 158,00
- Net investments (CAPEX)	1 724 688,18	1 123 018,29	1 093 885,57	2 556 989,90	4 638 933,43
= FCFF	**654 776,77**	**3 047 127,27**	**1 428 965,67**	**410 115,50**	**- 1 365 403,42**
+ Change in NIBL	35 852,80	- 1 109 145,34	282 142,22	1 543 781,00	2 298 255,00
- Net financial expenses, after tax	33 750,26	105 983,87	79 852,44	138 727,60	181 843,61
= FCFE	**656 879,30**	**1 831 998,07**	**1 631 255,45**	**1 815 168,89**	**751 007,97**
- Dividends	656 879,30	1 831 998,07	1 631 255,45	1 815 168,89	751 007,97
= Cash Sureplus	**-**	**-**	**-**	**-**	**-**

Income statement	2021E	2022E	2023E	2024E	2025E	TV
Total Operating Revenue	14 509 527,46	14 828 537,45	15 995 115,61	17 253 361,36	18 610 469,82	18 982 679,22
Operating expenses	9 979 117,18	10 312 358,45	11 123 545,55	11 998 281,30	12 941 538,04	13 200 368,81
EBITDA	**4 530 410,29**	**4 516 179,00**	**4 871 570,06**	**5 255 080,06**	**5 668 931,78**	**5 782 310,41**
Depreciation	1 107 942,38	1 131 714,45	1 218 645,80	1 312 408,07	1 413 537,40	1 441 808,15
Production tax	76 340,00	80 157,00	83 734,24	87 471,12	91 374,77	93 202,26
EBIT	**3 346 127,91**	**3 304 307,56**	**3 569 190,02**	**3 855 200,87**	**4 164 019,61**	**4 247 300,00**
Tax expenses	736 148,14	726 947,66	785 221,81	848 144,19	916 084,31	934 406,00
NOPAT	**2 609 979,77**	**2 577 359,89**	**2 783 968,22**	**3 007 056,68**	**3 247 935,29**	**3 312 894,00**
Net financial expenses, bfore tax	277 837,91	298 984,17	308 665,08	324 466,57	341 509,65	392 123,76
Tax shield	61 124,34	65 776,52	67 906,32	71 382,64	75 132,12	86 267,23
Net earnings	**2 393 266,19**	**2 344 152,24**	**2 543 209,46**	**2 753 972,76**	**2 981 557,76**	**3 007 037,46**

Balance Sheet						
Assets						
Intangible assets and tangible assets	15 751 588,00	15 947 823,06	16 665 429,24	17 439 423,61	18 274 232,15	18 639 716,79
Net working capital	3 049 175,27	3 116 215,17	3 361 371,42	3 625 791,60	3 910 987,76	3 989 207,51
Invested Capital	**18 800 763,27**	**19 064 038,24**	**20 026 800,66**	**21 065 215,20**	**22 185 219,91**	**22 628 924,31**
Equity and liabilities						
Equity, beginning of period	10 986 904,00	12 220 495,12	12 391 623,85	13 017 419,43	13 692 388,88	14 420 391,94
Net earnings	2 393 266,19	2 344 152,24	2 543 209,46	2 753 972,76	2 981 557,76	3 007 037,46
Dividends	1 159 675,07	2 173 023,51	1 917 413,88	2 079 003,31	2 253 554,70	2 718 629,61
Equity, end of period	12 220 495,12	12 391 623,85	13 017 419,43	13 692 388,88	14 420 391,94	14 708 799,80
NIBL	6 580 267,14	6 672 413,38	7 009 380,23	7 372 825,32	7 764 826,97	7 920 123,51
Invested Capital	**18 800 762,27**	**19 064 037,24**	**20 026 799,66**	**21 065 214,20**	**22 185 218,91**	**22 628 923,31**

Cash flow Statement						
NOPAT	2 609 979,77	2 577 359,89	2 783 968,22	3 007 056,68	3 247 935,29	3 312 894,00
+ Depreciation	1 107 942,38	1 131 714,45	1 218 645,80	1 312 408,07	1 413 537,40	1 441 808,15
- Change in NWC	308 767,27	67 039,91	245 156,24	264 420,18	285 196,16	78 219,76
- Net investments (CAPEX)	2 877 942,38	1 327 949,51	1 936 251,98	2 086 402,43	2 248 345,95	1 807 292,80
= FCFF	**531 212,50**	**2 314 084,92**	**1 821 205,80**	**1 968 642,14**	**2 127 930,59**	**2 869 189,60**
+ Change in NIBL	845 176,14	92 146,24	336 966,85	363 445,09	392 001,65	155 296,54
- Net financial expenses, after tax	216 713,57	233 207,65	240 758,76	253 083,92	266 377,53	305 856,53
= FCFE	**1 159 675,07**	**2 173 023,51**	**1 917 413,88**	**2 079 003,31**	**2 253 554,70**	**2 718 629,61**
- Dividends	1 159 675,07	2 173 023,51	1 917 413,88	2 079 003,31	2 253 554,70	2 718 629,61
= Cash Sureplus	-	-	-	-	-	-

A 11. Holt Winter's forecast

The Holt-Winters model (Holt, 2004; Winters, 1960) was developed to predict trends and seasonality from exponentially weighted averages. The model accounts for trend, level, and seasonality, which is necessary for the data in the applied time series. Nevertheless, the model is generally divided into an additive and a multiplicative version, depending on the type of seasonality. The additive version is preferred when seasonal variations are roughly constant throughout the time series, while the multiplicative method is preferred when the seasonal variations are changing proportional to the level of the series. Both versions were applied and tested. The multiplicative version, however, proved to be more accurate and is thus the version presented in this paper. The multiplicative version of the model is as follows:

$$\text{Level:} \quad L_t = \alpha\left(\frac{Y_t}{S_{t-M}}\right) + (1-\alpha) \times (L_{t-1} + T_{t-1})$$

$$\text{Trend:} \quad T_t = \beta(L_t - L_{t-1}) + (1-\beta) \times T_{t-1}$$

$$\text{Seasonal factor:} \quad S_t = \gamma\left(\frac{y_t}{L_t}\right) + (1-\gamma)S_{t-M}$$

$$\text{In sample forecast:} \quad F_{t+1} = (L_t + T_t) \times S_{t-M+1}$$

$$t = M+1 \ , M+2 \ , \ldots$$

The alpha (α), beta (β), and gamma (γ) are smoothing constants with a value between 0 and 1. L_t is the smoothed level at time $_t$, T_t is the trend change at time $_t$, S_t is the seasonal factor at time t, while F_{t+1} is the one step ahead forecasted values, and M is the number of periods in the season (12). Moreover, in order to get all the values needed for the equations above, it was necessary to calculate some initial values for the model. First data from 2012 were used to establish an initial seasonal component necessary to compute the initial values of trend (T_{13}) and level (L_{13}):

$$S_t = \frac{Y_t}{\text{Average}(y_1, y_2, y_3, \ldots y_{12})}$$

$$L_{13} = \frac{Y_{13}}{S_t}$$

$$T_{13} = L_{13} - \frac{Y_{12}}{S_{12}}$$

The forecasting precision of the model were evaluated hereafter evaluated by using data from 2013-March 2021. The constants, or smoothing parameters were evaluated and chosen using solver, by the technique of minimizing the root mean squared prediction error (RMSE) on the sample data. From the definition of RMSE, it can be seen that if it is minimized with respect to the error term (i.e., the difference between the predicted and actual values, $(F_t - S_t)$, solver will select the optimal parameters for the model, i.e the alpha (α), beta (β), and gamma (γ):

$$\text{RMSE} = \sqrt{\sum_{t=1}^{M} \frac{(F_t - S_t)^2}{M}}$$

The optimal parameters are presented below:

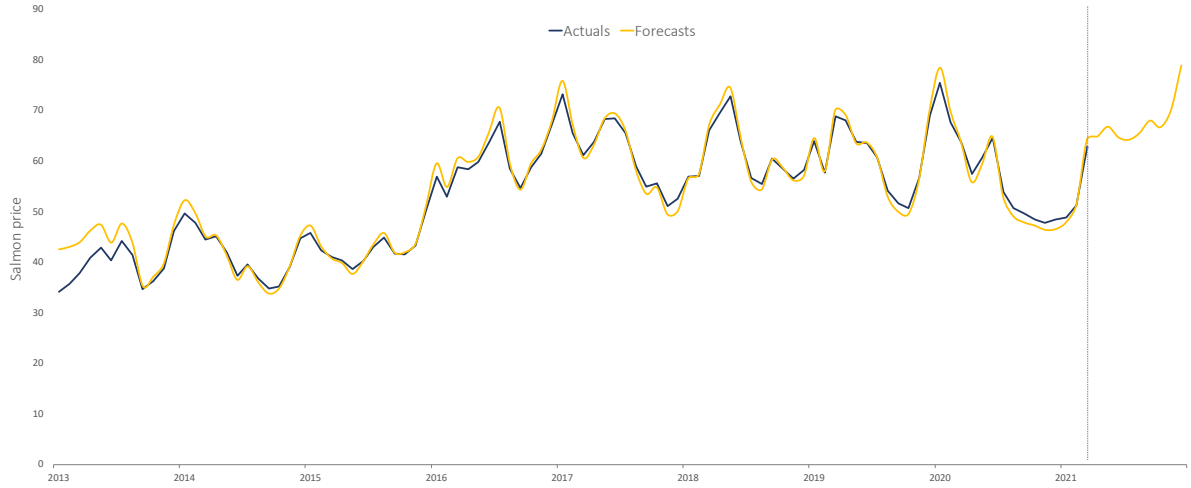
RMSE	Alpha	Beta	Gamma
1.95	0.96	0.21	1.00

Hereafter, the out-of-sample values were forecasted using the following equation:

$$F_{t+k} = (L_t + k \times T_t) \times S_{t+k-s}$$

Where k equals the forecasted period, ranging between 1 and 9, depending on the month.

Figure: Holt Winters forecast



Source: The authors own creation

A 12. Index and Common-size SALMAR

Adjusted Analytical Balance Sheet SAML Group

Financial Year **Common-size analysis (Invested Capital)**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**
Assets							
Operational Assets							
Non-interest bearing assets							
Licenses, Patents, etc.	30%	25%	26%	26%	31%	37%	29%
Goodwill	6%	5%	5%	4%	3%	3%	4%
Other Intangible Assets (R&D)	1%	1%	1%	1%	1%	1%	1%
Land, buildings and other material property	25%	29%	35%	30%	33%	33%	31%
Right-of-use assets	7%	9%	9%	6%	4%	5%	7%
Investments in associate companies	8%	10%	11%	11%	5%	5%	8%
Biological assets	42%	53%	45%	48%	43%	36%	44%
Other inventory	4%	2%	3%	4%	4%	4%	4%
Trade Receivables	10%	6%	5%	6%	6%	4%	6%
Pensions	0%	0%	0%	0%	0%	0%	0%
Other short-term receivables	3%	3%	3%	3%	3%	3%	3%
Total operational non-interest bearing assets	**136%**	**143%**	**142%**	**138%**	**134%**	**130%**	**137%**
Operational Liabilities							
Non-interest bearing							
Deferred tax expense	16%	16%	15%	14%	13%	11%	14%
Accounts payable	8%	13%	13%	11%	10%	12%	11%
Tax Expenses	4%	5%	7%	6%	4%	3%	5%
Public fees payable	2%	2%	2%	3%	2%	1%	2%
Other short-term liabilites	6%	8%	4%	5%	5%	3%	5%
Total Operational non-interest bearing liabilites	**36%**	**43%**	**42%**	**38%**	**34%**	**30%**	**37%**
Net Operating Assets (Invested Capital)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Equity							
Total equity	**66%**	**71%**	**83%**	**83%**	**74%**	**66%**	**74%**
Financial Liabilities							
Interest bearing liabilities							
Debt to credit institutions long-term	30%	22%	9%	6%	21%	22%	18%
Leasing and other long-term debt	6%	8%	9%	6%	4%	5%	6%
Debt to credit institutions short-term	2%	2%	3%	7%	3%	9%	4%
Short-term rental duties	0%	0%	0%	0%	1%	1%	0%
Total Financial interest bearing liabilities	**37%**	**32%**	**20%**	**20%**	**29%**	**36%**	**29%**
Financial Assets							
Interest-bearing assets							
Investments in securities & shares	0%	0%	0%	0%	0%	0%	0%
Other long-term receivables	0%	1%	1%	0%	1%	1%	0%
Bank deposits , cash & cash equivalents	3%	3%	2%	2%	2%	1%	2%
Total Financial interest bearing assets	**4%**	**3%**	**3%**	**2%**	**2%**	**2%**	**3%**
Net interest-bearing liabilites	**34%**	**29%**	**17%**	**17%**	**26%**	**34%**	**26%**
Invested Capital (NIBL + Equity)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Adjusted Analytical Balance Sheet SAML Group

Financial Year **Index Analysis**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**CAGR**
Assets							
Operational Assets							
Non-interest bearing assets							
Licenses, Patents, etc.	100	100	101	120	175	261	21%
Goodwill	100	100	100	100	100	99	0%
Other Intangible Assets (R&D)	100	98	94	119	163	208	16%
Land, buildings and other material property	100	140	167	169	225	286	23%
Right-of-use assets	100	152	148	129	105	157	9%
Investments in associate companies	100	145	163	189	114	120	4%
Biological assets	100	151	125	160	173	181	13%
Other inventory	100	68	79	140	143	207	16%
Trade Receivables	100	73	61	77	91	72	-6%
Pensions	100	99	99	524	108	517	39%
Other short-term receivables	100	117	94	112	128	169	11%
Total operational non-interest bearing assets	100	126	122	142	165	202	15%
Operational Liabilities							
Non-interest bearing							
Deferred tax expense	100	121	111	125	143	149	8%
Accounts payable	100	185	192	184	201	317	26%
Tax Expenses	100	145	230	236	201	184	13%
Public fees payable	100	123	111	196	143	72	-6%
Other short-term liabilites	100	159	83	102	125	88	-3%
Total Operational non-interest bearing liabilites	100	145	137	150	159	176	12%
Net Operating Assets (Invested Capital)	100	119	117	139	166	211	16%
Equity							
Total equity	100	128	147	175	186	210	16%
Financial Liabilities							
Interest bearing liabilities							
Debt to credit institutions long-term	100	88	34	29	116	155	9%
Leasing and other long-term debt	100	169	174	157	108	170	11%
Debt to credit institutions short-term	100	141	174	522	272	1 024	59%
Short-term rental duties	-	-	-	-	964	1 127	236%
Total Financial interest bearing liabilities	100	103	62	73	127	204	15%
Financial Assets							
Interest-bearing assets							
Investments in securities & shares	100	100	136	136	163	163	10%
Other long-term receivables	100	730	808	275	1 380	1 327	68%
Bank deposits , cash & cash equivalents	100	100	65	88	84	82	-4%
Total Financial interest bearing assets	100	115	83	92	116	112	2%
Net interest-bearing liabilites	100	101	60	71	128	214	16%
Invested Capital (NIBL + Equity)	100	119	117	139	167	211	16%

Adjusted Analytical Income statement SALM Group
Common-size Analysis (Revenue)

Financial Year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**
All numbers in TNOK							
Total Operating Revenue	100%	100%	100%	100%	100%	100%	100%
COGS	49%	44%	44%	42%	47%	46%	45%
Gross profit	**51%**	**56%**	**56%**	**58%**	**53%**	**54%**	**55%**
Payroll Costs	10%	10%	9%	9%	10%	10%	**10%**
Other Operating costs	17%	15%	11%	11%	12%	15%	**13%**
Revenue from investments in associated companies	1%	3%	2%	2%	1%	0%	**2%**
EBITDA	**24%**	**34%**	**38%**	**40%**	**32%**	**30%**	**34%**
EBIT	**20%**	**30%**	**34%**	**34%**	**26%**	**24%**	**29%**
NOPAT	**16%**	**24%**	**27%**	**28%**	**21%**	**18%**	**23%**
Net financial expenses after tax	**1%**	**0%**	**1%**	**1%**	**1%**	**2%**	**1%**
Net profits	**15%**	**23%**	**26%**	**27%**	**19%**	**17%**	**22%**

Adjusted Analytical Income statement SALM Group
Growth Y/Y

Financial Year	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**	**CAGR**
All numbers in TNOK							
Total Operating Revenue	23%	20%	5%	8%	5%	**12%**	12%
COGS	12%	18%	1%	20%	2%	**11%**	11%
Gross profit	**33%**	**21%**	**8%**	**-1%**	**9%**	**14%**	13%
Payroll Costs	12%	8%	12%	16%	10%	**12%**	12%
Other Operating costs	6%	-9%	3%	17%	29%	**9%**	8%
Revenue from investments in associated companies	613%	-27%	21%	-53%	-64%	**98%**	1%
EBITDA	**74%**	**34%**	**9%**	**-13%**	**-1%**	**20%**	17%
EBIT	**85%**	**37%**	**7%**	**-19%**	**-4%**	**21%**	16%
NOPAT	**80%**	**39%**	**7%**	**-18%**	**-7%**	**20%**	15%
Net financial expenses after tax	**-49%**	**214%**	**-25%**	**74%**	**31%**	**49%**	22%
Net profits	**90%**	**35%**	**8%**	**-21%**	**-10%**	**20%**	14%

Adjusted Analytical Income statement SALM Group
Indexing Analysis

Financial Year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
All numbers in TNOK						
Total Operating Revenue	100	123	147	155	167	176
COGS	100	112	133	134	162	165
Gross profit	**100**	**133**	**161**	**174**	**172**	**187**
Payroll Costs	100	112	121	136	157	172
Other Operating costs	100	106	97	100	117	150
Revenue from investments in associated companies	100	713	519	629	295	105
EBITDA	**100**	**174**	**233**	**253**	**220**	**217**
EBIT	**100**	**185**	**253**	**271**	**221**	**211**
NOPAT	**100**	**180**	**250**	**267**	**218**	**202**
Net financial expenses after tax	**100**	**51**	**161**	**121**	**210**	**276**
Net profits	**100**	**190**	**257**	**278**	**219**	**196**

A 13. Index and Common-size MOWI

Adjusted Analytical Balance Sheet Mowi Group

Financial Year **Common-size analysis (Invested Capital)**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**
Assets							
Operational Assets							
Non-interest bearing assets							
Licenses	23%	21%	18%	19%	18%	18%	20%
Goodwill	8%	7%	8%	7%	7%	7%	7%
Deferred tax assets	0%	0%	0%	1%	0%	1%	0%
Other tangible assets	1%	1%	1%	1%	1%	1%	1%
Property, plant and equipment	20%	15%	16%	16%	29%	29%	21%
Right-of-use assets	10%	12%	17%	15%	8%	11%	12%
Investments in associated companies and joint ventures	4%	5%	5%	5%	5%	4%	5%
Other non-current assets	0%	0%	0%	0%	0%	0%	0%
Inventory	9%	7%	9%	7%	7%	7%	8%
Biological assets	35%	43%	36%	39%	33%	30%	36%
Trade receivables	13%	14%	14%	12%	11%	10%	12%
Other receivables	4%	3%	3%	4%	3%	3%	3%
Total non interest-bearing assets	**127%**	**129%**	**128%**	**125%**	**122%**	**119%**	**125%**
Operational Liabilities							
Non-interest bearing							
Deferred tax liabilities	12%	12%	11%	10%	9%	8%	11%
Current tax liabilities	2%	4%	3%	3%	2%	1%	2%
Trade payables	8%	8%	8%	7%	6%	7%	7%
Other current liabilities	5%	5%	6%	5%	4%	4%	5%
Total Operational non interest-bearing liabilites	**27%**	**29%**	**28%**	**25%**	**22%**	**19%**	**25%**
Net operating Assets (Invested Capital)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Equity							
Total equity	**59%**	**57%**	**70%**	**72%**	**62%**	**58%**	**63%**
Financial Liabilities							
Interest bearing liabilities							
Non-current interest-bearing debt	33%	27%	23%	28%	31%	33%	29%
Non-current leasing liabilities	6%	12%	2%	0%	6%	8%	6%
Other non-current liabilities	0%	0%	0%	0%	0%	1%	0%
Current interest-bearing debt	0%	0%	4%	0%	0%	0%	1%
Current leasing liabilities	0%	0%	0%	0%	3%	3%	1%
Other current financial liabilities	3%	3%	3%	2%	1%	1%	2%
Provisions	1%	4%	0%	0%	0%	1%	1%
Total Financial interest-bearing liabilities	**44%**	**46%**	**33%**	**31%**	**41%**	**46%**	**40%**
Financial Assets							
Interest-bearing assets							
Other non-current financial assets	0%	0%	0%	0%	0%	0%	0%
Other current financial assets	1%	0%	0%	0%	0%	0%	0%
Restricted cash	0%	0%	0%	0%	0%	0%	0%
Cash and cash equivalents	2%	2%	2%	2%	3%	2%	2%
Assets held for sale	0%	0%	0%	0%	0%	1%	0%
Total Financial interest bearing assets	**3%**	**3%**	**2%**	**3%**	**3%**	**4%**	**3%**
Net interest-bearing liabilities	**41%**	**43%**	**30%**	**28%**	**38%**	**42%**	**37%**
Invested Capital (NIBL + Equity)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Adjusted Analytical Balance Sheet Mowi Group

Financial Year **Index-analysis**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**CAGR**
Assets							
Operational Assets							
Non-interest bearing assets							
Licenses	100	102	82	105	115	117	3%
Goodwill	100	103	99	112	123	121	4%
Deferred tax assets	100	23	114	199	173	227	18%
Other tangible assets	100	117	95	95	90	87	-3%
Property, plant and equipment	100	88	83	100	215	220	17%
Right-of-use assets	100	136	169	177	117	163	10%
Investments in associated companies and joint ventures	100	141	138	178	192	135	6%
Other non-current assets	100	238	138	57	48	38	-18%
Inventory	100	89	111	103	115	120	4%
Biological assets	100	138	105	137	134	124	4%
Trade receivables	100	122	117	121	123	111	2%
Other receivables	100	86	75	109	111	96	-1%
Total non interest-bearing assets	**100**	**115**	**104**	**123**	**139**	**138**	**7%**
Operational Liabilities							
Non-interest bearing							
Deferred tax liabilities	100	116	90	106	111	100	0%
Other non-current liabilities	100	96	100	92	88	207	-18%
Current tax liabilities	100	196	125	165	137	36	5%
Trade payables	100	111	113	113	120	128	2%
Other current liabilities	100	119	130	138	132	111	1%
Total Operational non interest-bearing liabilites	**100**	**122**	**107**	**118**	**120**	**105**	**1%**
Net operating Assets (Invested Capital)	**100**	**113**	**103**	**124**	**145**	**147**	**8%**
Equity							
Total equity	**100**	**109**	**122**	**152**	**153**	**146**	**8%**
Financial Liabilities							
Interest bearing liabilities							
Non-current interest-bearing debt	100	93	72	107	137	146	13%
Non-current leasing liabilities	100	210	36	-	124	181	16%
Current interest-bearing debt	100	50	65 150	50	-	-	-100%
Current leasing liabilities							21%
Other current financial liabilities	100	93	94	79	35	31	-21%
Provisions	100	335	20	28	41	55	-11%
Total Financial interest-bearing liabilities	**100**	**118**	**76**	**87**	**133**	**152**	**9%**
Financial Assets							
Interest-bearing assets							
Other non-current financial assets	100	100	100	100	475	475	37%
Other current financial assets	100	49	25	3	24	38	-18%
Restricted cash	100	137	109	98	96	59	-10%
Cash and cash equivalents	100	146	98	156	196	167	11%
Assets held for sale	100	194	28	-	-	3 333	102%
Total Financial interest bearing assets	**100**	**118**	**77**	**103**	**133**	**175**	**12%**
Net interest-bearing liabilities	**100**	**118**	**76**	**85**	**133**	**150**	**8%**
Invested Capital (NIBL + Equity)	**100**	**113**	**103**	**124**	**145**	**147**	**8%**

Analytical Income statement Mowi Group

Financial Year Common-size Analysis (Revenue)	2015	2016	2017	2018	2019	2020	Average
Operating Revenue	100%	100%	100%	100%	100%	100%	100%
COGS	-58%	-51%	-47%	-48%	-48%	-53%	-51%
Gross profit	**42%**	**49%**	**53%**	**52%**	**52%**	**47%**	**49%**
Salary and personnel expenses	-14%	-13%	-13%	-13%	-14%	-15%	-14%
Other operating expenses	-13%	-11%	-12%	-13%	-14%	-15%	-13%
Income/loss from associated companies and joint ventures	1%	2%	1%	1%	1%	1%	1%
EBITDA	**16%**	**27%**	**29%**	**28%**	**25%**	**18%**	**24%**
EBIT	**10%**	**20%**	**20%**	**21%**	**18%**	**10%**	**17%**
NOPAT	**6%**	**15%**	**17%**	**16%**	**14%**	**10%**	**13%**
Net financial expenses after tax	**-3%**	**-7%**	**1%**	**-5%**	**0%**	**-2%**	**-3%**
Net profits	**4%**	**10%**	**18%**	**13%**	**14%**	**8%**	**11%**

Analytical Income statement Mowi Group

Financial Year Y/Y growth	2016	2017	2018	2019	2020	Average	CAGR
Total Operating Revenue	14%	4%	5%	8%	-9%	4%	4%
COGS	1%	-5%	7%	9%	-1%	2%	2%
Gross profit	**32%**	**14%**	**2%**	**7%**	**-17%**	**8%**	**6%**
Salary and personnel expenses	3%	9%	6%	12%	-1%	6%	6%
Other operating expenses	1%	16%	6%	23%	-6%	8%	7%
Income/loss from associated companies and joint ventures	168%	-46%	35%	7%	-55%	22%	-1%
EBITDA	**86%**	**11%**	**0%**	**-2%**	**-33%**	**12%**	**6%**
EBIT	**130%**	**0%**	**13%**	**-9%**	**-50%**	**17%**	**3%**
NOPAT	**158%**	**24%**	**-1%**	**-8%**	**-37%**	**27%**	**13%**
Net financial expenses after tax	**173%**	**-120%**	**-548%**	**-95%**	**726%**	**27%**	**1%**
Net profits	**151%**	**94%**	**-28%**	**19%**	**-47%**	**38%**	**17%**

Analytical Income statement Mowi Group

Financial Year Indexing Analysis	2015	2016	2017	2018	2019	2020
Total Operating Revenue	100	114	118	124	134	122
COGS	100	101	95	102	112	111
Gross profit	**100**	**132**	**150**	**153**	**164**	**137**
Salary and personnel expenses	100	103	112	118	132	131
Other operating expenses	100	101	117	123	151	141
Income/loss from associated companies and joint ventures	100	268	144	194	208	93
EBITDA	**100**	**186**	**207**	**207**	**203**	**136**
EBIT	**100**	**230**	**229**	**260**	**236**	**119**
NOPAT	**100**	**258**	**320**	**317**	**291**	**185**
Net financial expenses after tax	**100**	**273**	**-**	**55**	**248**	**12**	**103**
Net profits	**100**	**251**	**486**	**348**	**415**	**221**

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Analytical Balance Sheet Lerøy Group

Financial Year **Common-size analysis (Invested Capital)**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**
Assets							
Operational Assets							
Non-interest bearing assets							
Deferred tax assets	0%	0%	0%	0%	0%	0%	0%
Intangible assets	38%	47%	47%	29%	38%	37%	39%
Right-of-use assets	0%	1%	1%	12%	11%	11%	6%
Land, buildings and other material property	25%	25%	31%	34%	29%	31%	29%
Investments in associated companies	6%	4%	6%	5%	4%	5%	5%
Biological assets	38%	38%	27%	28%	26%	22%	30%
Other inventory	5%	4%	6%	7%	5%	5%	5%
Trade receivables	14%	13%	12%	11%	10%	8%	11%
Other receivables	3%	2%	3%	2%	2%	3%	3%
Total Operational non-interest bearing as	**128%**	**135%**	**132%**	**128%**	**125%**	**122%**	**128%**
Operational Liabilities							
Non-interest bearing							
Deferred tax liabilities	14%	17%	14%	12%	11%	10%	13%
Trade payables	8%	8%	8%	8%	7%	5%	7%
Public fees payable	1%	2%	1%	1%	1%	1%	1%
Tax expenses	2%	3%	5%	3%	2%	2%	3%
Other short-term liabilities	4%	5%	4%	4%	3%	4%	4%
Total Operational non-interest bearing lia	**28%**	**35%**	**32%**	**28%**	**25%**	**22%**	**28%**
Net operating assets (Invested Capital)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Equity							
Total equity	**76%**	**80%**	**87%**	**87%**	**82%**	**80%**	**82%**
Financial Liabilities							
Interest bearing liabilities							
Pensions	0%	0%	0%	0%	0%	0%	0%
Leasing liabilities to credit institutions	0%	0%	0%	4%	4%	5%	2%
Leasing liabilities to other credit institutions	0%	0%	0%	0%	5%	4%	1%
Long-term debt to credit institutions	21%	27%	30%	19%	17%	18%	22%
Other long-term liabilities	0%	0%	0%	0%	0%	0%	0%
Other long-term obligations	1%	1%	1%	0%	0%	0%	1%
Short-term debt of long-term liabilities	0%	0%	0%	3%	4%	4%	2%
Short-term credit liabilities	13%	6%	5%	2%	3%	4%	5%
Total Financial interest bearing liabilities	**35%**	**34%**	**35%**	**29%**	**32%**	**34%**	**33%**
Financial Assets							
Interest-bearing assets							
Other investments	0%	0%	0%	0%	0%	0%	0%
Long-term trade receivables	0%	0%	1%	0%	0%	0%	0%
Cash and cash equivalents	11%	13%	21%	15%	14%	13%	15%
Total Financial interest bearing assets	**11%**	**14%**	**22%**	**16%**	**14%**	**14%**	**15%**
Net interest-bearing liabilities	**24%**	**20%**	**13%**	**13%**	**18%**	**20%**	**18%**
Invested Capital (NIBL + Equity)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Analytical Balance Sheet Lerøy Group

Financial Year **Indexing analysis**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**CAGR**
Assets							
Operational Assets							
Non-interest bearing assets							
Deferred tax assets	100	75	69	34	7	44	-15%
Intangible assets	100	183	181	132	188	192	14%
Right-of-use assets	100	472	1 032	12 494	12 211	12 473	163%
Land, buildings and other material property	100	145	178	228	215	234	19%
Investments in associated companies	100	109	143	151	142	157	9%
Biological assets	100	149	103	129	129	114	3%
Other inventory	100	131	180	238	187	198	15%
Trade receivables	100	141	126	137	143	119	4%
Other receivables	100	137	142	139	166	201	15%
Total Operational non-interest bearing assets	**100**	**155**	**150**	**172**	**184**	**184**	13%
Operational Liabilities							
Non-interest bearing							
Deferred tax liabilities	100	179	148	156	158	148	8%
Trade payables	100	149	143	162	170	130	5%
Public fees payable	100	214	190	183	226	205	15%
Tax expenses	100	239	410	339	224	175	12%
Other short-term liabilities	100	212	142	172	165	189	14%
Total Operational non-interest bearing liabilites	**100**	**180**	**163**	**172**	**169**	**152**	9%
Net operating assets (Invested Capital)	**100**	**148**	**146**	**172**	**188**	**193**	14%
Equity							
Total equity	**100**	**154**	**165**	**196**	**203**	**201**	15%
Financial Liabilities							
Interest bearing liabilities							
Pensions	100	139	83	95	71	71	-7%
Leasing liabilities to credit institutions	-	-	-	100	111	138	17%
Leasing liabilities to other credit institutions	-	-	-	-	100	82	-18%
Long-term debt to credit institutions	100	191	208	160	153	168	11%
Other long-term liabilities	-	-	-	100	100	86	-15%
Other long-term obligations	100	96	76	50	24	27	-23%
Short-term debt of long-term liabilities	-	-	-	100	138	142	19%
Short-term credit liabilities	100	75	57	30	40	56	-11%
Total Financial interest bearing liabilities	**100**	**145**	**148**	**142**	**175**	**191**	14%
Financial Assets							
Interest-bearing assets							
Other investments	100	110	76	99	190	218	14%
Long-term trade receivables	100	445	712	393	413	460	29%
Cash and cash equivalents	100	179	282	243	243	238	16%
Total Financial interest bearing assets	**100**	**183**	**288**	**245**	**245**	**241**	16%
Net interest-bearing liabilities	**100**	**127**	**83**	**94**	**142**	**168**	11%
Invested Capital (NIBL + Equity)	**100**	**148**	**146**	**172**	**188**	**193**	14%

Analytical Income statement Lerøy Group
Common-size Analysis (Revenue)

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020	Average
Total Operating Revenue	100%	100%	100%	100%	100%	100%	100%
COGS	66%	59%	52%	52%	55%	56%	57%
Gross profit	34%	41%	48%	48%	45%	44%	43%
Payroll and administration costs	10%	10%	13%	13%	14%	15%	13%
Other operating expenses	11%	11%	12%	12%	13%	13%	12%
Revenue form associated companies	0%	2%	2%	1%	1%	1%	1%
EBITDA	**14%**	**21%**	**25%**	**24%**	**19%**	**16%**	**20%**
EBIT	**10%**	**18%**	**22%**	**19%**	**14%**	**10%**	**16%**
NOPAT	**8%**	**12%**	**20%**	**15%**	**11%**	**9%**	**13%**
Net financial expenses after tax	**-1%**	**-1%**	**-1%**	**-1%**	**-1%**	**-1%**	**-1%**
Net profits	**7%**	**12%**	**19%**	**14%**	**11%**	**8%**	**12%**

Analytical Income statement Lerøy Group
Growth Y/Y

Financial Year All numbers in TNOK	2016	2017	2018	2019	2020	Average	CAGR
Total Operating Revenue	28%	8%	7%	3%	-2%	9%	8%
COGS	16%	-6%	7%	8%	-1%	5%	5%
Gross profit	**51%**	**28%**	**5%**	**-2%**	**-4%**	**16%**	14%
Payroll and administration costs	27%	37%	9%	10%	5%	17%	17%
Other operating expenses	28%	18%	7%	11%	3%	14%	13%
Revenue form associated companies	328%	15%	-5%	-37%	-41%	52%	11%
EBITDA	**98%**	**28%**	**2%**	**-18%**	**-18%**	**18%**	**12%**
EBIT	**122%**	**30%**	**-5%**	**-25%**	**-29%**	**19%**	**8%**
NOPAT	**95%**	**70%**	**-19%**	**-20%**	**-23%**	**20%**	**10%**
Net financial expenses after tax	**-2%**	**68%**	**-26%**	**30%**	**14%**	**17%**	**13%**
Net profits	**105%**	**70%**	**-19%**	**-23%**	**-26%**	**21%**	**10%**

Analytical Income statement Lerøy Group
Indexing analysis

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Total Operating Revenue	100	128	139	148	152	149
COGS	100	116	110	118	127	126
Gross profit	**100**	**151**	**194**	**204**	**200**	**191**
Payroll and administration costs	100	127	173	189	208	218
Other operating expenses	100	128	151	161	180	186
Revenue form associated companies	100	428	493	467	293	172
EBITDA	**100**	**198**	**253**	**259**	**212**	**175**
EBIT	**100**	**222**	**288**	**274**	**206**	**146**
NOPAT	**100**	**195**	**330**	**266**	**212**	**163**
Net financial expenses after tax	**100**	**98**	**166**	**123**	**161**	**183**
Net profits	**100**	**205**	**347**	**281**	**217**	**161**

A 15. Index and Common-size GSF

Analytical Balance Sheet Grieg Group

Financial Year **Common-size analysis (Invested Capital)**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**
Assets							
Operational Assets							
Non-interest bearing assets							
Goodwill	3%	2%	2%	2%	2%	10%	3%
Deferred taxes	0%	0%	0%	0%	0%	0%	0%
Licenses	26%	23%	21%	18%	17%	23%	21%
Other intangible assets	0%	0%	0%	0%	0%	1%	0%
Property, plant and equipment	34%	24%	26%	30%	32%	34%	30%
Right-of-use assets	3%	9%	10%	7%	13%	11%	9%
Investments in associates	1%	0%	0%	1%	1%	1%	1%
Inventories	2%	2%	2%	2%	3%	1%	2%
Biological assets	46%	53%	53%	52%	53%	38%	49%
Trade receivables	14%	17%	15%	15%	7%	3%	12%
Other current receivables	3%	4%	4%	3%	5%	2%	3%
Total Operational non-interest bearing assets	**132%**	**135%**	**133%**	**130%**	**133%**	**124%**	**133%**
Operational Liabilities							
Non-interest bearing							
Deferred tax liabilities	13%	15%	14%	14%	13%	14%	14%
Pension obligations	0%	0%	0%	0%	0%	0%	0%
Factoring liabilities	8%	11%	10%	9%	1%	0%	8%
Trade payables	16%	11%	11%	11%	13%	8%	12%
Tax payable	1%	4%	3%	2%	3%	0%	3%
Public tax payable	0%	1%	0%	0%	1%	0%	1%
Other current liabilities	3%	5%	4%	2%	3%	1%	3%
Total Operational non-interest bearing liabilites	**32%**	**35%**	**33%**	**30%**	**33%**	**24%**	**33%**
Net operating assets (Invested Capital)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Equity							
Total equity	**53%**	**70%**	**65%**	**63%**	**63%**	**65%**	**63%**
Financial Liabilities							
Interest bearing liabilities							
Cash-settled share options	0%	0%	0%	0%	0%	0%	0%
Borrowings	36%	21%	23%	21%	24%	50%	25%
Other non-current borrowings	1%	0%	0%	0%	0%	0%	0%
Lease liabilities	7%	5%	4%	5%	10%	8%	6%
Overdraft facility	0%	0%	0%	1%	0%	0%	0%
Current portion of long-term borrowings	2%	2%	2%	2%	2%	2%	2%
Current portions of finance lease liabilities	1%	1%	1%	1%	3%	2%	2%
Cash-settled share options	0%	0%	0%	0%	0%	0%	0%
Derivatives and other financial instruments	1%	1%	1%	0%	0%	0%	0%
Liabilities directly associated with the assets held for sale	0%	0%	0%	0%	0%	7%	0%
Total Financial interest bearing liabilities	**56%**	**42%**	**41%**	**39%**	**40%**	**70%**	**44%**
Financial Assets							
Interest-bearing assets							
Equity instruments	0%	0%	0%	0%	0%	0%	0%
Other non-current receivables	0%	0%	0%	0%	0%	0%	0%
Derivatives and other financial instruments	0%	1%	1%	0%	0%	1%	0%
Cash and cash equivalents	9%	11%	5%	2%	3%	4%	6%
Assets held for sale	0%	0%	0%	0%	0%	29%	0%
Total Financial interest bearing assets	9%	12%	6%	2%	3%	35%	**7%**
Net interest-bearing liabilities	**47%**	**30%**	**35%**	**37%**	**37%**	**35%**	**37%**
Invested Capital (NIBL + Equity)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Analytical Balance Sheet Grieg Group

Financial Year **Indexing analysis**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**CAGR**
Assets							
Operational Assets							
Non-interest bearing assets							
Goodwill	100	98	99	99	99	577	42%
Deferred taxes	100	-	35	17	10	284	23%
Licenses	100	97	98	103	104	138	7%
Other intangible assets	100	104	108	148	95	459	36%
Property, plant and equipment	100	77	95	130	148	162	10%
Right-of-use assets	100	359	445	383	738	632	45%
Investments in associates	100	-	36	143	312	325	27%
Inventories	100	98	102	139	196	86	-3%
Biological assets	100	128	140	166	178	132	6%
Trade receivables	100	138	131	159	79	31	-21%
Other current receivables	100	112	136	114	230	91	-2%
Total Operational non-interest bearing assets	**100**	**112**	**123**	**144**	**157**	**150**	**8%**
Operational Liabilities							
Non-interest bearing							
Deferred tax liabilities	100	125	134	163	162	169	11%
Pension obligations	100	-	-	-	-	450	35%
Factoring liabilities	100	149	148	170	25	-	-3%
Trade payables	100	76	90	99	131	86	-10%
Tax payable	100	701	641	531	862	60	13%
Public tax payable	100	402	136	242	417	180	-5%
Other current liabilities	100	181	173	121	146	77	3%
Total Operational non-interest bearing liabilites	**100**	**119**	**125**	**136**	**161**	**119**	**10%**
Net operating assets (Invested Capital)	**100**	**110**	**123**	**147**	**156**	**160**	**10%**
Equity							
Total equity	**100**	**143**	**150**	**174**	**185**	**195**	**14%**
Financial Liabilities							
Interest bearing liabilities							
Cash-settled share options	100	259	202	194	191	-	17%
Borrowings	100	65	78	86	103	222	-100%
Other non-current borrowings	100	75	72	66	62	-	14%
Lease liabilities	100	92	74	107	232	195	0%
Overdraft facility	-	-	-	-	-	-	0%
Current portion of long-term borrowings	100	97	97	105	96	102	20%
Current portions of finance lease liabilities	100	110	96	112	327	251	-100%
Cash-settled share options	100	-	540	721	902	193	14%
Derivatives and other financial instruments	100	89	105	22	34	53	-12%
Liabilities directly associated with the assets held for sale	-	-	-	-	-	100	0%
Total Financial interest bearing liabilities	**100**	**83**	**90**	**103**	**112**	**199**	**15%**
Financial Assets							
Interest-bearing assets							
Equity instruments	100	101	81	81	74	-	-100%
Other non-current receivables	100	156	6	6	78	355	29%
Derivatives and other financial instruments	-	100	98	6	15	172	14%
Cash and cash equivalents	100	128	69	35	55	70	-7%
Assets held for sale	-	-	-	-	-	100	0%
Total Financial interest bearing assets	**100**	**141**	**81**	**36**	**57**	**591**	43%
Net interest-bearing liabilities	**100**	**71**	**92**	**117**	**123**	**120**	**4%**
Invested Capital (NIBL + Equity)	**100**	**110**	**123**	**147**	**156**	**160**	**10%**

Analytical Income statement Grieg Group
Common-size Analysis (Revenue)

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020	Average
Total Operating Revenue	100%	100%	100%	100%	100%	100%	100%
COGS	-59%	-50%	-53%	-51%	-51%	-39%	-53%
Gross profit	**41%**	**50%**	**47%**	**49%**	**49%**	**61%**	**47%**
Profit/loss from associates	0%	0%	0%	0%	0%	0%	0%
Salaries and personnel expenses	-9%	-7%	-7%	-7%	-7%	-11%	-8%
Other operating expenses	-26%	-22%	-22%	-22%	-24%	-36%	-23%
EBITDA	**6%**	**21%**	**18%**	**20%**	**18%**	**13%**	**16%**
EBIT	**1%**	**17%**	**14%**	**16%**	**13%**	**5%**	**12%**
NOPAT	**1%**	**13%**	**11%**	**12%**	**10%**	**4%**	**9%**
Net financial items, after tax	**-1%**	**-2%**	**0%**	**-1%**	**0%**	**-4%**	**-1%**
Net profits	**-1%**	**11%**	**11%**	**12%**	**10%**	**-1%**	**8%**

Analytical Income statement Grieg Group
Growth Y/Y

Financial Year All numbers in TNOK	2016	2017	2018	2019	2020	Average	CAGR
Total Operating Revenue	42%	7%	7%	10%	-47%	4%	-1%
COGS	20%	13%	3%	9%	-59%	-3%	-9%
Gross profit	**74%**	**1%**	**11%**	**12%**	**-35%**	13%	**7%**
Profit/loss from associates	25%	-104%	323%	-109%	1488%	324%	-20%
Salaries and personnel expenses	18%	0%	12%	13%	-18%	5%	4%
Other operating expenses	20%	8%	5%	24%	-21%	7%	6%
EBITDA	**405%**	**-7%**	**18%**	**-1%**	**-61%**	71%	**17%**
EBIT	**2285%**	**-12%**	**21%**	**-12%**	**-80%**	440%	**35%**
NOPAT	**2350%**	**-11%**	**23%**	**-11%**	**-80%**	454%	**36%**
Net financial items, after tax	**48%**	**-89%**	**447%**	**-66%**	**845%**	237%	**23%**
Net profits	**-2305%**	**0%**	**17%**	**-7%**	**-104%**	-480%	**-2%**

Analytical Income statement Grieg Group
Indexing Analysis

Financial Year All numbers in TNOK	2015	2016	2017	2018	2019	2020
Total Operating Revenue	100	142	152	163	180	95
COGS	100	120	136	141	153	63
Gross profit	**100**	**174**	**176**	**195**	**219**	**143**
Profit/loss from associates	100	125 -	5 -	23	2	33
Salaries and personnel expenses	100	118	118	132	149	122
Other operating expenses	100	120	129	135	167	132
EBITDA	**100**	**505**	**470**	**554**	**550**	**216**
EBIT	**100**	**2 385**	**2 098**	**2 545**	**2 242**	**443**
NOPAT	**100**	**2 450**	**2 184**	**2 684**	**2 395**	**474**
Net financial items, after tax	**100**	**148**	**16**	**88**	**30**	**284**
Net profits	**100**	**2 205**	**2 201**	**2 566**	**2 389**	**89**

A 16. Index and Common-size NRS

Analytical Balance Sheet NRS Group

Financial Year **Common-size analysis (Invested Capital)**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**
Assets							
Operational Assets							
Non-interest bearing assets							
Licenses	39%	28%	26%	31%	21%	20%	28%
Land, buildings and other material property	7%	7%	9%	13%	25%	44%	17%
Right-of-use assets	14%	11%	13%	12%	9%	7%	11%
Inventory	2%	4%	4%	3%	2%	2%	3%
Biological assets	50%	52%	47%	45%	36%	28%	43%
Trade receivables	30%	21%	22%	14%	12%	3%	17%
Other short-term receivables	6%	11%	3%	3%	7%	4%	5%
Investments in associated companies	10%	23%	23%	21%	18%	16%	18%
Total Operational non-interest bearing assets	**159%**	**157%**	**148%**	**141%**	**132%**	**123%**	143%
Operational Liabilities							
Non-interest bearing							
Pensions	1%	0%	1%	1%	1%	1%	1%
Deferred tax liabilities	18%	17%	14%	14%	11%	8%	14%
Trade payables	32%	28%	22%	16%	17%	13%	21%
Tax expenses	0%	3%	5%	5%	1%	0%	2%
Other short-term liabilities	8%	8%	6%	5%	2%	1%	5%
Total Operational non-interest bearing liabilites	**59%**	**57%**	**48%**	**41%**	**32%**	**23%**	43%
Net operating assets (Invested Capital)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	100%
Equity							
Total equity	**71%**	**89%**	**75%**	**85%**	**99%**	**70%**	81%
Financial Liabilities							
Interest bearing liabilities							
Long-term interest-bearing liabilities	39%	13%	19%	20%	6%	27%	21%
Short-term interest-bearing liabilities	3%	2%	14%	4%	1%	5%	5%
Total Financial interest bearing liabilities	**42%**	**15%**	**33%**	**24%**	**7%**	**32%**	25%
Financial Assets							
Interest-bearing assets							
Financial assets available for sale	0%	0%	0%	0%	0%	0%	0%
Other long-term receivables	1%	1%	1%	3%	2%	1%	2%
Cash and cash equivalent	12%	3%	6%	6%	5%	1%	5%
Total Financial interest bearing assets	13%	4%	7%	9%	7%	2%	7%
Net interest-bearing liabilities	**29%**	**11%**	**25%**	**15%**	**1%**	**30%**	19%
Invested Capital (NIBL + Equity)	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	100%

Analytical Balance Sheet NRS Group

Financial Year **Indexing Analysis**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**CAGR**
Assets							
Operational Assets							
Non-interest bearing assets							
Licenses	100	100	100	131	110	146	8%
Land, buildings and other material property	100	142	182	300	735	1 749	77%
Right-of-use assets	100	104	137	134	131	128	5%
Inventory	100	250	244	200	197	257	21%
Biological assets	100	145	142	149	148	154	9%
Trade receivables	100	96	109	74	83	30	-21%
Other short-term receivables	100	244	74	69	232	165	11%
Investments in associated companies	100	313	341	334	358	425	34%
Total Operational non-interest bearing assets	**100**	**137**	**139**	**145**	**168**	**216**	17%
Operational Liabilities							
Non-interest bearing							
Pensions	100	91	134	152	221	190	14%
Deferred tax liabilities	100	130	114	127	118	120	4%
Trade payables	100	122	104	84	109	116	3%
Tax expenses	100	2 495	3 569	4 238	1 338	118	3%
Other short-term liabilities	100	136	116	97	52	50	-13%
Total Operational non-interest bearing liabilites	**100**	**134**	**120**	**113**	**109**	**110**	2%
Net operating assets (Invested Capital)	**100**	**139**	**149**	**164**	**203**	**279**	23%
Equity							
Total equity	**100**	**173**	**156**	**196**	**283**	**264**	21%
Financial Liabilities							
Interest bearing liabilities							
Long-term interest-bearing liabilities	100	46	71	84	31	184	13%
Short-term interest-bearing liabilities	100	102	737	220	103	488	37%
Total Financial interest bearing liabilities	**100**	**50**	**115**	**93**	**36**	**204**	15%
Financial Assets							
Interest-bearing assets							
Financial assets available for sale	100	100	93	93	117	1 012	59%
Other long-term receivables	100	80	163	436	342	235	19%
Cash and cash equivalent	100	34	75	77	76	19	-28%
Total Financial interest bearing assets	**100**	**39**	**83**	**110**	**100**	**40**	-17%
Net interest-bearing liabilities	**100**	**56**	**129**	**86**	**6**	**280**	23%
Invested Capital (NIBL + Equity)	**100**	**139**	**148**	**164**	**203**	**268**	22%

Analytical Income statement NRS Group
Common-size Analysis (Revenue)

Financial Year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**
All numbers in TNOK							
Total Operating Revenue	100%	100%	100%	100%	100%	100%	100%
COGS	84%	76%	79%	81%	82%	86%	81%
Gross profit	16%	24%	21%	19%	18%	14%	19%
Payroll and administration costs	4%	4%	3%	3%	3%	3%	3%
Other operating expenses	4%	3%	3%	2%	4%	4%	3%
Profit/loss from associated companies	1%	2%	1%	0%	0%	0%	1%
EBITDA	9%	19%	16%	14%	12%	7%	13%
EBIT	7%	17%	14%	12%	9%	5%	11%
NOPAT	6%	14%	10%	10%	8%	5%	9%
Net financial items, after tax	1%	6%	-2%	1%	1%	-1%	1%
Net profits	7%	24%	5%	13%	7%	1%	10%

Analytical Income statement NRS Group
Growth Y/Y

Financial Year	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**	**CAGR**
All numbers in TNOK							
Total Operating Revenue	32%	17%	3%	10%	-8%	11%	10%
COGS	19%	20%	6%	11%	-4%	11%	10%
Gross profit	**97%**	**6%**	**-10%**	**6%**	**-28%**	14%	8%
Payroll and administration costs	37%	-11%	0%	11%	8%	9%	8%
Other operating expenses	-1%	46%	-28%	85%	-2%	20%	13%
Profit/loss from associated companies	216%	-27%	-72%	15%	-112%	4%	-161%
EBITDA	**166%**	**0%**	**-12%**	**-8%**	**-47%**	20%	3%
EBIT	**227%**	**-3%**	**-12%**	**-15%**	**-53%**	29%	**2%**
NOPAT	**218%**	**-17%**	**-2%**	**-14%**	**-44%**	28%	**5%**
Net financial items, after tax	**1271%**	**-147%**	**-143%**	**-17%**	**-180%**	157%	**-213%**
Net profits	**323%**	**-76%**	**183%**	**-42%**	**-82%**	61%	**-21%**

Analytical Income statement NRS Group
Indexing Analysis

Financial Year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
All numbers in TNOK						
Total Operating Revenue	100	132	154	158	174	159
COGS	100	119	144	153	169	162
Gross profit	**100**	**197**	**208**	**188**	**199**	**144**
Payroll and administration costs	100	137	122	123	136	147
Other operating expenses	100	99	144	103	191	187
Profit/loss from associated companies	100	316	231	65	74 -	9
EBITDA	**100**	**266**	**267**	**236**	**216**	**115**
EBIT	**100**	**327**	**317**	**278**	**238**	**113**
NOPAT	**100**	**318**	**264**	**259**	**222**	**125**
Net financial items, after tax	**100**	**1 371 -**	**647**	**277**	**229 -**	**183**
Net profits	**100**	**423**	**100**	**282**	**164**	**30**

A 17. Beta values from regression (SalMar)

Beta regression: 1: Salmar – OSEBX 3 year weekly

SUMMARY OUTPUT

SalMar 3 year Beta - OSEBX

Regression Statistics	
Multiple R	0.3074
R Square	0.0945
Adjusted R Square	0.0886
Standard Error	0.0424
Observations	157

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.0291	0.0291	16.1723	0.00009
Residual	155	0.2791	0.0018		
Total	156	0.3082			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.00264	0.00339	0.77949	0.43688	-0.00406	0.00934
Beta	0.50950	0.12669	4.02148	0.00009	0.25923	0.75977

Beta regression: 2 – Salmar – MSCI 3 year weekly

SUMMARY OUTPUT SALM

Weekly 3 Y - MSCI

Regression Statistics	
Multiple R	0.1083
R Square	0.0117
Adjusted R Square	0.0054
Standard Error	0.0443
Observations	157

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.00362	0.00362	1.84060	0.17685
Residual	155	0.30456	0.00196		
Total	156	0.30817			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.00302	0.00355	0.85231	0.39536	-0.00399	0.01003
Beta	0.16703	0.12312	1.35669	0.17685	-0.07617	0.41024

Beta regression: 3 – Salmar - S&P 500 3 year weekly

SUMMARY OUTPUT SALMAR
Weekly 3 Y - S&P 500

Regression Statistics	
Multiple R	0.13521
R Square	0.01828
Adjusted R Square	0.01195
Standard Error	0.04418
Observations	157

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.00563	0.00563	2.88641	0.09134
Residual	155	0.30254	0.00195		
Total	156	0.30817			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.002827297	0.003542122	0.798192848	0.425979816	-0.004169766	0.00982436
X Variable 1	0.200069672	0.117761269	1.698942898	0.09133618	-0.032554424	0.432693767

A 18. Beta values from regression (Peers)

Beta regression peer: Lerøy – MSCI 3 year

SUMMARY OUTPUT Lerøy
Weekly 3 Y - MSCI

Regression Statistics	
Multiple R	0.322979374
R Square	0.104315676
Adjusted R Square	0.098537067
Standard Error	0.04063194
Observations	157

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.029803098	0.029803098	18.05204057	0.0000
Residual	155	0.255897955	0.001650955		
Total	156	0.285701053			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.000851619	0.003252797	0.261811269	0.79	-0.005573915	0.007277153
X Variable 1	0.479499833	0.11285617	4.248769301	0.0000	0.256565206	0.702434459

Beta regression peer: MOWI – MSCI 3-year weekly

SUMMARY OUTPUT MOWI
Weekly 3 Y - MSCI

Regression Statistics	
Multiple R	0.251740217
R Square	0.063373137
Adjusted R Square	0.057330383
Standard Error	0.036016697
Observations	157

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.013604358	0.013604358	10.48745943	0.001470361
Residual	155	0.201066384	0.001297202		
Total	156	0.214670743			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.001319819	0.002883323	0.457742199	0.64777868	-0.004375861	0.007015498
X Variable 1	0.323964023	0.100037225	3.238434718	0.001470361	0.126351776	0.52157627

Beta regression peer: Grieg Seafood – MSCI 3-year weekly

SUMMARY OUTPUT GSF
Weekly 3 Y - MSCI

Regression Statistics	
Multiple R	0.288871155
R Square	0.083446544
Adjusted R Square	0.077533296
Standard Error	0.053746583
Observations	157

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.040764674	0.040764674	14.11179488	0.00024335
Residual	155	0.447747752	0.002888695		
Total	156	0.488512425			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	-0.000839821	0.004302692	-0.195184921	0.845503805	-0.009339304	0.007659663
X Variable 1	0.560789323	0.1492824	3.756566901	0.00024335	0.265898791	0.855679855

Beta regression peer: Grieg Seafood – MSCI 3-year weekly

SUMMARY OUTPUT NRS
Weekly 3 Y - MSCI

Regression Statistics	
Multiple R	0.151169746
R Square	0.022852292
Adjusted R Square	0.016548113
Standard Error	0.047607888
Observations	157

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.008215974	0.008215974	3.62494354	0.058772557
Residual	155	0.351309199	0.002266511		
Total	156	0.359525173			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.000399648	0.003811258	0.104859901	0.916622548	-0.007129062	0.007928358
X Variable 1	0.251760323	0.132232029	1.903928449	0.058772557	-0.009449126	0.512969772

A 19. Credit spread – Damodaran

As covered in the financial analysis, Salmar had an interest coverage ratio higher than 8.5 in every year measured. Hence, the credit spread is equal to 0.69% according to Damodaran's synthetic rating.

Interest coverage ratio – Synthetic rating

For large non-financial service firms, mkt cap > $5 billion

If interest coverage ratio is			
>	*≤ to*	*Rating is*	*Spread is*
8.50	100000	Aaa/AAA	0.69%
6.5	8.499999	Aa2/AA	0.85%
5.5	6.499999	A1/A+	1.07%
4.25	5.499999	A2/A	1.18%
3	4.249999	A3/A-	1.33%
2.5	2.999999	Baa2/BBB	1.71%
2.25	2.49999	Ba1/BB+	2.31%
2	2.2499999	Ba2/BB	2.77%
1.75	1.999999	B1/B+	4.05%
1.5	1.749999	B2/B	4.86%
1.25	1.499999	B3/B-	5.94%
0.8	1.249999	Caa/CCC	9.46%
0.65	0.799999	Ca2/CC	9.97%
0.2	0.649999	C2/C	13.09%
-100000	0.199999	D2/D	17.44%

Source; Damodaran (2021)