Equity Valuation: A.P. Møller – Mærsk A/S

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Abstract

In this dissertation, the object of study was to determine A.P. Møller – Mærsk A/S's fair value, as of 31st December 2024, through intrinsic and comparative valuation methods, to determine an investment recommendation, ranging from buy to sell, in comparison to the market price. To this end, different valuation methods were studied and presented and the DCF model was considered the most adequate for the valuation of Maersk. Nevertheless, comparative valuation methods were generated as model adjuster for the price estimation.

From this, it was possible to determine a share price of 12.069 DKK. APMM has two different shares traded with different voting rights, however, their price difference is very low. Therefore, comparing the estimated price with the MAERSKb.CO share value of 9.622 DKK, as of 1st March 2024, it was able to determine an existence of potential upside. Hence, it was issued an Outperform recommendation.

Finally, the assumptions and estimates supporting this thesis were tested and compared in two different periods with various investment reports. The first period was on 3rd November 2023, with comparisons of reports from SEB and ABG, where it allowed to understand that the intrinsic valuation for that period was determining an underperformance of the share, while the comparative method was determining Hold position, as with the investment reports. As for the second period of 1st March of 2024, comparing with information available from MarketScreener, it was determined that the model price was near the average of the recommendations available.

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Resumo

Nesta dissertação, o objeto de estudo foi determinar o justo valor da A.P. Møller – Mærsk A/S, à data de 31 dezembro 2024, através de uma análise intrínseca e comparativa e assim determinar uma recomendação de investimento, entre compra e venda, em comparação com o preço de mercado. Com esse intuito, foram estudados vários métodos de avaliação e concluído que o DCF seria o mais adequado para avaliação da Maersk. Não obstante, foram igualmente considerados modelos comparativos para ajustar o preço obtido.

Deste modo, foi possível determinar um preço de 12.069 DKK. De notar que APMM tem duas ações cotadas com diferentes direitos de voto, mas com diferença de valor muito baixa. Pelo que, comparando a estimativa com a ação MAERSKb.CO avaliada em 9.622 DKK, a 1 março 2024, foi possível concluir um potencial positivo obtendo uma recomendação de superar expectativas.

Por fim, as condições e conclusões desta dissertação foram testadas e comparadas com relatórios de investimento. Primeiramente, a 3 novembro 2023, comparando com relatórios do SEB e ABG, onde foi possível identificar um potencial negativo intrínseco, mas com uma posição neutra por via de métodos comparativos, à semelhança dos relatórios. Em segundo lugar, a 1 março 2024, foi comparado com a informação disponível pelo MarketScreener, onde o preço estimado pelo modelo estava perto do valor médio das avaliações efetuadas.

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Table of Contents

List of Figures

List of Tables

List of Abbreviations

3FF - Fama French 3 Factor model

5FF - Fama French 5 Factor model

APM - Asset Pricing Model

APMM - A.P. Moller Maersk A/S

CAGR - Compound Annual Growth Rate

CAPEX - Capital Expenditures

CAPM - Capital Asset Pricing Model

CF - Cash-Flow

DCF - Discounted Cash Flow

DDM - Dividend Discount Model

EBIT - Earnings Before Interest and Taxes

EBITDA - Earnings Before Interest, Taxes, Depreciations and Amortizations

EU - European Union

EV - Enterprise Value

FCFE - Free Cash-Flow to Equity

FCFF - Free Cash-Flow to the Firm

FEU - Forty-foot Equivalent Unit

g - Growth rate

HML - High minus Low

Kd - Cost of Debt

Ke - Cost of Equity

MRP - Market Risk Premium

MVD - Market Value of Debt

P&L - Profit and loss statement

PV - Present Value

r - Discount Rate

Rf - Risk-free rate

SMB - Small minus Big

SOTP - Sum Of The Parts

TEU - Twenty-foot Equivalent Unit

TV - Terminal Value

WACC - Weighted Average Cost of Capital

YTM - Yield to maturity

1. Introduction

The purpose of this thesis is to delve into understanding the economic status of the company A.P. Møller – Mærsk A/S and with it the shipping industry where it operates. To that end, it will be generated an investment recommendation for the stock of the company as of 31st December 2024, as the target date.

The dissertation will be segmented into six sections. Starting from the state of the art of valuation methods in the Literature Review and describing each model and it's benefits. Were afterwards, and as an introduction to the valuation, there is an overview of the Global economy status, delving into Industry level and lastly explaining on the company level its organization.

With those analysis, various assumptions and calculations will be made in regard to the forecast expectation and generated an analysis of the intrinsic valuation and a sensitivity analysis followed by a relative valuation. Finally, the model generated will be confronted with different Investment Reports from Investment Banks, in order to understand the possible differences between the estimates and comparison purposes.

2. Literature Review

In this chapter the most common methods of valuation will be described and explored. Most valuation methods arose from the necessity of investors to set a price of a company or investment. There are various models for valuation aggregated into "only two valuation approaches: *intrinsic* and *relative"* (Damodaran, 2011). The *intrinsic* methods are based on the fundamentals of financial notion of time value of money, by using a discount rate to update for the present the value of future cash flows. As for *relative* methods, although widely used by many investors for its easier applicability, it is based on the assumption that market values and estimations are accurate of investors' expectations, to which a comparative valuation would be adequately priced.

Although these methods are the mostly considered, and will be discussed on the following stages, they are all under the assumption of going concern junction with the translation of current expectations of future events. But other methods exist, such as the liquidation value of the company, assuming closure and selling all the assets and settling all liabilities, and others linked to derivative options as the Contingent Claim method.

These types of valuation vary from the simplest to the most complex, but none is fully better than the other as "valuation is neither the science that some of its proponents make it out to be nor the objective search for true value that idealists would like it to become. (…) the inputs leave plenty of room for subjective judgments" (Damodaran, 2012).

2.1.Discounted Cash Flow Model (DCF Model)

As previously mentioned, *intrinsic* valuations as DCF are powered by the financial notion of time value of money, to which the value would be the sum of the present value (**PV**) of future cash flows (**CF**), discounted by a rate (**r**), as presented in the following formula:

$$PV = \sum_{t=1}^{t=n} \frac{CF_t}{(1+r)^t}$$

Where **n** is the number of periods in future valuations of the estimation. The problem that surges from this basic formula is: "How do we obtain the Future CF?" and "What is the correct estimation for r?".

For this, multiple developments and assumptions were created to get a better understanding of the investment driver and put these into a complete model.

2.1.1. Dividend Discount Model

The first, and one of the most intuitive models, is to assume that CF is the future dividends that the investment will pay out. To which, the discount rate assumed would the so-called Cost of Equity ($\mathbf{K_e}$). But it is very restrictive as this model assumes constant dividends growth in perpetuity ($\mathbf{g_{div}}$), which is not a realistic assumption for companies. So, this is only usable in very few scenarios.

$$PV = DDM_t = \frac{Dividends_{t+1}}{(K_e - g_{div})}$$

2.1.2. Free Cash Flow to Equity Model (FCFE)

Considering the restrictions of the DDM model, analysts tend to consider the FCFE the better proxy CF for a calculation of the value of equity (or shares). The FCFE is the CF that the company has available after paying all other stakeholders – including debt holders – and that would be available for the shareholders, even if they are not distributed through dividend payments.

Also, this is considered a proxy CF, because it is not directly observable, but rather estimated through the balance sheets and P&Ls reports, and can be estimated according to the following formula (Damodaran, 2012):

$$FCFE = Net\ Income - (Capital\ expenditures - Depreciation) - (Change\ in\ noncash\ working\ capital) + (New\ debt\ issued - Debt\ repayments)$$

With the calculations of each expected FCFE in the preview analysis, to estimate the equity value, the discount is done using Cost of Equity ($\mathbf{K_e}$):

$$PV = Equity\ Value = \sum_{t=1}^{t=n} \frac{FCFE_t}{(1+K_e)^t} + \frac{TV_n}{(1+K_e)^n}$$

Where TV is the Terminal Value.

Depending on the type of company and sector we are creating our valuation range, we should consider an adequate range period. For more stable companies, a shorter range of 5 years model should be sufficient, as for more volatile should have extended periods. All this should be measured according to the economic period at which the valuation is being done, so it is possible to try effectively to capture the value drivers and value creation of the company.

2.1.3. Terminal Value

The Terminal Value (**TV**) can be estimated in three possible ways: 1) Liquidation value – where we assume that the company will shut down its operations at the end of the estimation period and sell all its assets, and for this we can base on the book value of the assets or estimating the Market Value of each assets; 2) Multiple approach – where the future value is estimated by the application of a multiple on the company's earnings or revenues at that time; 3) Stable growth model – based on the going concern concept, where the company will continue to exist for an unknown period, and apply a perpetuity, under the assumption that the company will grow at a constant rate forever.

While all the options are valid, the latter is the most used. Thus, Terminal Value (**TV**), is usually calculated at a constant growth (**g**):

$$TV_n = \frac{FCFE_{n+1}}{(K_e - g)}$$

But this model has a limitation that must be imposed when estimating. It is economically incorrect to consider that the company "will grow forever at a rate higher than the growth rate of the economy in which it operates" (Damodaran, 2012). Thus, the growth rate assumed must be at least lower than the growth rate of the country it operates in, depending on the sector and the type of growth expected following the development of the economic cycles.

Although this is the most used scenario for analysis, the estimations of the factors for the TV calculations must be detailed and sensible, as this value will highly impact the PV estimation of the investment and can lead to incorrect pricing of the model.

2.1.4. Free Cash Flow to the Firm Model (FCFF)

There is also the possibility of determining calculation through the FCFF, that is "the cash flow available to the company's suppliers of capital after all operating expenses (including taxes) have been paid and necessary investments in working capital (e.g., inventory) and fixed capital (e.g., equipment) have been made." (Pinto et al, 2010).

FCFF or also known as "Unlevered Cash Flow" (Damodaran, 2012), like FCFE, is estimated through the balance sheet and P&L, usually starting from the company's EBIT (Damodaran, 2012):

$$FCFF = EBIT \times (1 - Tax\ rate) + Depreciation - Capital\ expenditure - \Delta Working\ Capital$$

As for the Tax rate considered in this estimation, we have two options – to consider the marginal or the effective tax rate. Although considered "appropriate to use a company's marginal tax rate rather than its current effective tax rate (…) because the effective tax rate can reflect nonrecurring items" (Pinto et al., 2010).

After the estimation of the FCFF, we can determine the Enterprise Value (**EV**), by considering the weighted average cost of capital (**WACC**) – explained later – as the discount rate:

$$PV = EV = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1 + WACC)^t} + \frac{TV_n}{(1 + WACC)^n}$$

The value of equity, will be calculated by discounting the market value of Debt (MVD) from the EV:

$$Equity\ Value = EV - MVD$$

2.1.5. FCFF vs. FCFE

Both approaches for determining the Equity Value – FCFF and FCFE – are valid and equivalent, depending on the assumptions of the model expectations. While FCFE tends to be more intuitive, as it directly prices equity through the cash available for the shareholders, it can generate problems on estimations of companies with high debt structures, that generate a negative FCFE, even if FCFF is substantial. Notwithstanding, in the FCFF extra attention needs to be dedicated towards the debt structures, but also the WACC factor allows for extra impact stress tests.

As previously mentioned, the CF estimations are mathematically equivalent and can be translated with the following formula (Damodaran, 2012):

$$FCFF = FCFE + Interest\ Expense(1 - Tax\ Rate) + Principal\ repayments - New\ debt\ issues + Prefered\ dividends$$

2.1.6. WACC – Weighted average Cost of Capital

The WACC is usually referred to as "Cost of Capital", but it is actually the "weighted average of a cost (of capital) and a required return" (Fernández, 2011). When valuing the EV, we are subjecting the valuation to the structure debt to equity, and the riskiness of each exposure is translated in this weighted factor.

In this expression we can also understand the benefit of holding debt, as its cost (**K_d**) is usually smaller than the required return for equity (**K_e**).

$$WACC = \frac{E_{MV}}{E_{MV} + D_{MV}} \times K_e + \frac{D_{MV}}{E_{MV} + D_{MV}} \times K_d(1 - t)$$

As denoted in the formula, the values for equity and debt should be their market values (**MV**) and not their book-value, as their usage gives a better estimate of future expectations, rather than historical values. Also, the WACC should be subject to adjustment if there is expectation of changes of capital of debt in the following years.

2.1.6.1.Cost of Equity (K_e)

The required return of equity, also referred to as cost of equity, is the required amount that an investor requires to invest in the company. Under the assumption that there is free market of capital, the investor shall require a return that is at least higher than the risk-free rate (**R_f**), considered to be guaranteed return and default free, usually measured by the long-term Government Bond rate – usually 10-year bonds.

This excess required return is referred to as the Risk Premium or the Market Risk Premium (**MRP**), the excess return obtained over the risk-free rate.

$$K_e = R_f + MRP$$

To estimate the K_e, under the assumption that all investments bear distinct types of risk, various models were developed to obtain an estimate of the value for the future – such as the CAPM, the APM and the Multifactor Model.

All these models give focus to the non-diversifiable risk, and they all consider "past stock prices to measure that risk exposure, whether it is with one beta (…) or multiple" (Damodaran, 2016).

2.1.6.1.1. CAPM Model

The CAPM Model starts from the assumption that there is a relationship between the expected returns and the risk of the investment, and that risk is quantifiable when compared to the market portfolio against the reaction of the individual investment.

This response measure is introduced by the beta (**β**) which "measures the sensitivity of the asset's return to variation in the market" (Damodaran, 2016):

$$CAPM = E(R_i) = K_e = R_f + \beta_i \times (R_{Market} - R_f)$$

Although this model has been considered as a good description for the expected returns, mostly for its "simplicity and intuitive appeal" (Damodaran, 2016), in the years after its creation, many empirical tests came to demonstrate shortcomings of its application.

In the ninety's, following the limitations of the beta estimation, Fama and French updated the considered regression as to include size (**SMB**) and book-to-market value (**HML**), that came to be known as 3FF (Fama and French 3 factor model):

$$3FF = R_{i;t} - R_{f;t} = \alpha_{i;t} + \beta_{i;Market}(R_{Market;t} - R_{f;t}) + \beta_{i;S} SMB_t + \beta_{i;H} HML_t + \varepsilon_t$$

This way of estimation, expanding on the same ideology of the initial CAPM, has been most fitting to adapt to the risk estimation for each type of company.

Nevertheless, further expansions have been made on top of this model, one also being well known, called the 5FF – Fama and French's Five Factor Model. Which added factors such as "profitability" and "investment" to the regression.

These analytical models, while they help estimate the expected return, none is considered a perfect fit for future expectations, as it depends heavily on the data that is fed into the regressions and the assumptions created by the analyst.

On top of it, all these estimates commit another error, that we are trying to estimate future expectations with past data, and it is not advisable. For this, considering that the beta over time will tend closer to the mean of the market – to 1 – it was introduced the Adjusted beta:

$$Adjusted\ beta = {}^{2}/_{3} \times \beta + {}^{1}/_{3} \times 1$$

2.1.6.2.Cost of Debt (K_d)

The last factor for the WACC is the Cost of Debt (**K_d**), it is, as mentioned, the expected cost that the company will face in financing its debt generation on the financial market, either through bonds or loans. It is through this estimate that we introduce the credit risk of the company, as the most common measure to determine this value is:

$$K_d = R_f + Default\ Spread$$

That is, the financial market will put a spread for the riskiness of the debt, on top of the risk-free rate.

To estimate the Default Spread it depends if the company is public or private. If the company is publicly traded, we can either look at the Yield to Maturity (**YTM**) of currently issued bonds or look at the credit rating of the company, and through it estimate the spread that will be applied on top of the risk-free.

If the company is private, then we would need to estimate the interest coverage of the company to understand the capability of the company paying its debt and interest, and synthetically estimate its credit rating.

2.2.Relative Valuation

The relative valuation models, also known as valuation multiples, is a market valuation method, by comparing the multiples, such as equity or price multiples, of similar companies as to the one it is being analyzed and quickly estimate the equivalent expected market value of the company.

This methodology is quite used by investors and executives, as it is quick to apply as the "DCF technique (…) is often too cumbersome to be applied by executive officers who prefer to think in 'simple terms'" (Harbula, 2009). But the values estimated depend highly on comparable firms and multiples used, as there is no perfectly equivalent match.

As such, relative valuation is "useful in a second stage of the valuation" (Fernández, 2002), as a complement and for comparing to the estimates obtained in other models. Furthermore, it is important to consider forward-looking multiples as they are "more accurate than trailing multiples" (Schreiner, 2007). Some examples of used multiples are:

$$\frac{EV}{Sales}\ ;\ \frac{EV}{EBITDA}\ ;\frac{EV}{EBIT}\ ;\ \frac{Equity}{Net\ Income}\ ;\ \frac{Share\ Price}{Earn.per\ share}$$

2.3.Contingent Claim Valuation

One of the most revolutionary methods of valuation is the consideration of the application of the option pricing model – Black-Scholes – in equity valuation. Although equity is not an option, it "can be viewed as a call option on the value of the underlying firm" (Damodaran, 2012), being the strike price the value of debt and the time to maturity the term of the debt.

This methodology was somewhat accepted as a way of valuing the investment in equity, but it does not work in all cases, as it depends on the structure of debt of the company.

2.4.Literature Review - Conclusion

In sum, to generate a valuation of Maersk's equity, it will be done a DCF model as the basis for the valuation as being the most detailed option for valuating, followed by valuation multiples as to understand the range and complement the initial valuation.

3. Global Situation and Industry Overview

Before exploring the valuation of the company, in the following sections we will be exploring the world situation and zoom in, walking towards the explanation of the status of Maersk history in order to justify the assumptions going forward.

Primarily, it is important to understand the past and current events unravelling while this thesis was made. Starting from the Black Swan event that happened in 2020, the COVID-19 pandemic, which turned the world economy upside down. As of 31st of December 2023, 3 years have passed, but only now that we could conservatively affirm that the effects of such an event were finally subsiding.

But from it, other issues surged such as the high rise of inflation following the reopening of international borders and consequent normalization process of trade. This effect worsened with the Russo-Ukrainian War, with the Russian invasion of Ukraine in February 2022, that is still ongoing, that catapulted a series of geopolitical events and sanctions, and as indirect results of the war the cost of international fuels, such as natural gas, worsened.

Throughout 2022, most Central banks battled the inflationary pressures by raising the interest rates, to cool down consumption and inflation. Currently, by 2023, the inflation rates are still above most Central Banks intention of 2%, rounding around 3%.

More recently, in the third quarter of 2023, another armed conflict surged in Israel, between Israel and Hamas-led Palestinian militants. This is an ongoing conflict, that at the moment is extending its reach into other areas of the middle east, currently extending the issue to Yemen and Houthi rebels threatening global trade by menacing commercial ships with routes through to the Suez Canal, one of the most common routes in shipping "handling around 10 percent of the world's trade" (Maritime Traffic Remains Normal Despite Red Sea Attacks: Suez Canal Authority, 2023), and forcing "four of the world's five largest shipping companies" (Maritime Traffic Remains Normal Despite Red Sea Attacks: Suez Canal Authority, 2023) to avoid this route for safety reasons.

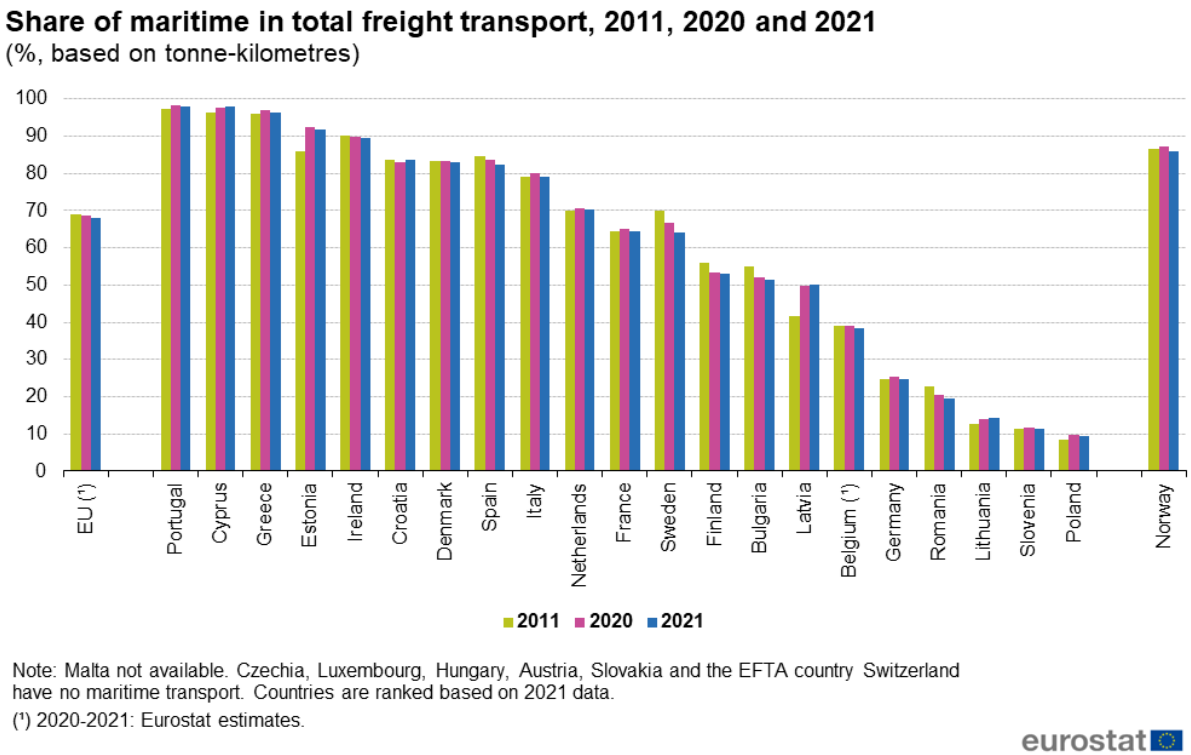
Therefore, in the future expectations that will be built for the models, will be based on this information, under the assumption that these conflicts will continue for the near future, that in 2024 the inflationary pressure will ease down slightly and that oil prices will not rise much according to the "Oil Market Report" (December 2023).

4. Shipping and Logistics Industry Overview

Shipping is a very used phrase to describe transportation of goods, and mostly known in online shopping, it is also the term associated with the business of transportation of cargo, for the companies that fulfil the need of movement of goods and commodities between people.

The term shipping can be associated with the big four major modes of transport as road, rail, air and marine, being the latter where the term originated from and the most common. Sea freight is very advantageous in comparison to the other methods as it provides the possibility of overseas transportations of all types of cargo, sizes, and weights, in more cost-efficient ways, exploring the massive capabilities of the large-scale ships available.

Figure 1: *Eurostat – Share of maritime in total Freight Transport, 2011, 2020, 2021.*



For this to happen, we need also to acknowledge the existence of a Logistics network, for the dense expansion of companies in the world dedicated to facilitating the exploration of the forwarding web available and in syntony with the shipping, provide comfortable and easy delivery worldwide, crucial for the existence for the globalized economy.

In the following paragraphs, we will be exploring the details focusing on the marine shipping industry and the logistics services around it, as to explain the expected developments of such industries in the upcoming years.

The marine sector is particularly important for many countries in its international position of commerce. As seen in Figure 1, in Europe nearly 70% of all tonne-kilometres of freight are of fulfilled by ships. Worth noting that in cases as Portugal, more than 90% of the cargo is transported by ship.

The Shipping Industry is known as the driving force for globalization, which manages to fulfil transportation in a cost-efficient way, "hauling goods over $14 trillion, controlling 80% of global trade" (Porwal, 2023b). Not far behind, the Logistics Industry, which has a substantial impact in the success of shipping, had a "market size of approximately 10,41 trillion U.S. dollars" (*Logistics Industry - Market Size 2028 | Statista*, 2023b), with the projection of achieving 14 trillion by 2028.

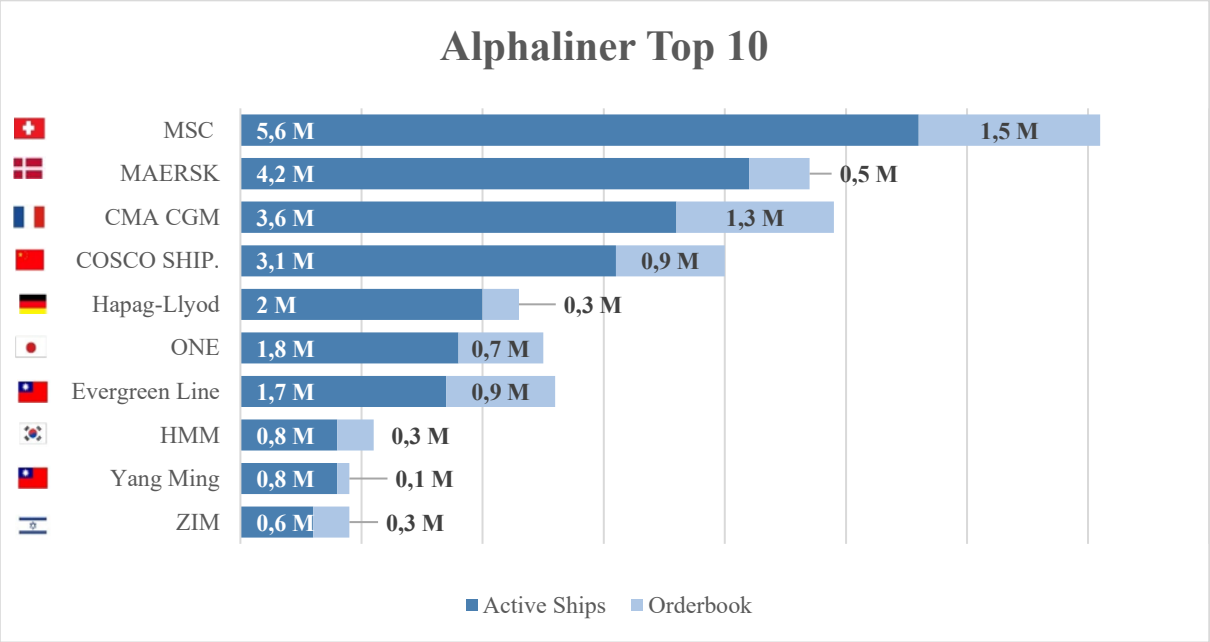
4.1.Industry Dimension

In shipping, there are several types of vessels available worldwide for each specific type of cargo, for example: Bulk, Tankers, Ro-Ro, Container Ships. Being the latter the most common one.

For Container ships, the most common type of measurement of capacity is by TEU – Twenty-foot Equivalent Unit. This is based on the size of containers, where the standard measure of containers is twenty-feet or forty-feet, being the latter represented by 2 TEU or 1 FEU – Forty-foot Equivalent Unit. With this, we can understand the capacity of the vessels by understanding how many twenty-feet containers may fit, by knowing how many TEU the ship has. For example, the biggest container ship held by the largest Portuguese shipping company (Drumond, 2023), GS Lines, has a capacity of 1.577 TEU (Martins, 2022). As another example, we can observe Maersk's newbuilds, that will set sail in 2024, will have a capacity of 16.000 TEU (Bloomberg, 2021).

Understanding this measure enables us to give the ability to understand that, at 31st of December 2023 according to Alphaliner, we had 6.764 active container ships worldwide, with the capacity of transporting twenty-eight million TEUs. In fact, in "2022 alone, around 862 million" (Topic: Container Carriers Worldwide, 2023b) TEU were managed in ports.

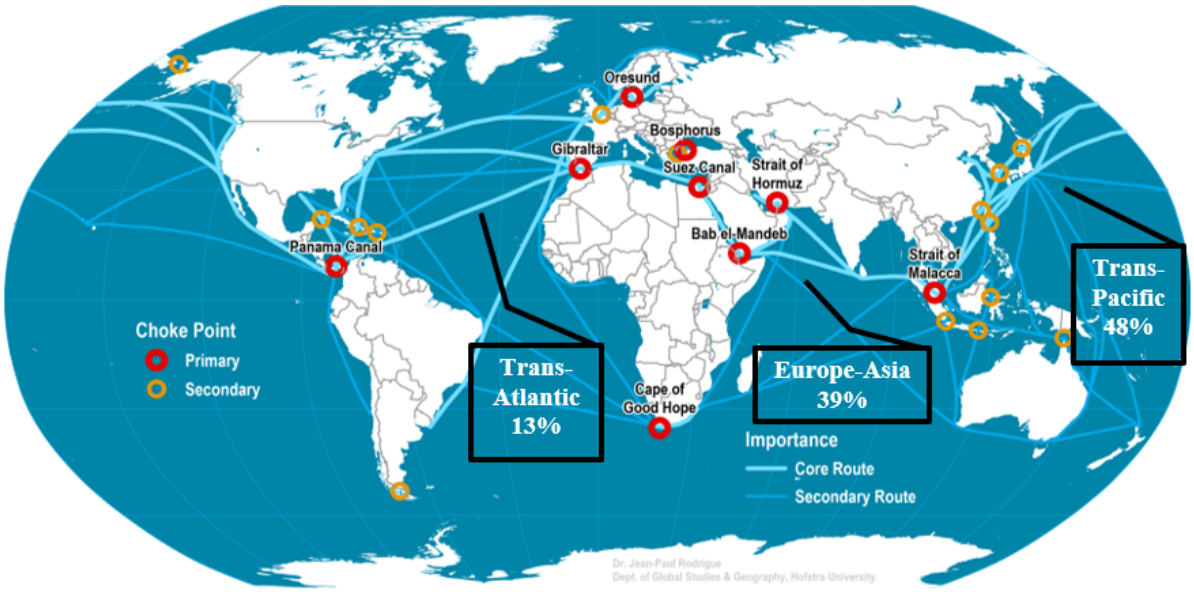
***Figure 2**: Alphaliner Top 100 – December 2023 – TEU Capacity, in Millions*



4.2.Geographical Distribution

The distribution of the regional trade can be set up in three route groups: Trans-Pacific; Europe-Asia Route; Trans-Atlantic. Being the two first the most common trade routes, with the Panamá Canal usage associated with the first route and the Suez Canal (Egypt) and the Malacca strait (Malaysia-Indonesia) with the second route.

***Figure 3:** World Map – Marine Shipping Routes*



Note. Map obtained from (*Main Maritime Shipping Routes and Chokepoints | Port Economics, Management and Policy*, 2023), added with the weights of the main routes.

4.3.Sector Exposition

As seen in Figure 2, this sector is highly concentrated, with the biggest six companies (MSC, Maersk, CMA CGM, COSCO, Hapag-Llyod, ONE) holding over 70% of all capacity worldwide. This concentration is one of the biggest downsides for any competition, as the bigger players can unilaterally apply pressure on competitors in freight rates, impacting profits. For example, MSC in 2023 "implemented a highly aggressive rates policy with the aim of acquiring additional market share (…)" (De Ricqlès, 2023b).

The sector itself is highly exposed to geopolitical risk and international pressures, which mandate their profit margins. It has remarkably high investment costs, which makes it hard for growth opportunities in the competition and even harder for new players. As an example of the dimension of the investment cost, we have the previously mentioned companies, GSLINES and Maersk, where the first acquired a vessel of 1.577 TEU in 2022 for 28 million euros (Martins, 2022) and the latter made a deal of 8 new vessels of 16.000 TEU each, for 175 million dollars, totalizing an investment of 1,4 billion dollars (Bloomberg, 2021).

On top of the above-mentioned issues, the shipping industry is facing immense pressure from international rules, such as the EU, for the reduction of carbon emissions. Even though the marine shipping industry is on the "most energy-efficient modes of transport, (…) in 2018, global shipping emissions (…) were responsible for around 2,9% of global emissions caused by human activities" (*Reducing Emissions From the Shipping Sector*, n.d.-b).

In July 2023, the IMO (International Maritime Organization) made the commitment for new targets in the reduction of emissions. Being one of the main focus the need to act for investment in zero or near-zero GHG (Green House Gas) emission technologies, fuels and/or energy sources.

4.4.Shipping and Logistics Industry - Conclusion

In conclusion, for the following years it is expected additional hardships for the Shipping and Logistics sector as such:

- Expectation of persisting high interest rates with inflation gradually cooling off over time.
- The extension of geopolitical uncertainty worldwide, with the persistence of current armed conflict. But at the same time, new commerce dynamics are expected in the BRICS, with the recent expansion group influence (Von Hein, 2024).

- Potential oversupply risk due to the excess capacity brought in by the new ships in the orderbook being delivered – structural crisis.
- Reduced demand on trade, following the decrease of purchasing power in developed countries, as inflation readjusts the consumer expectations. That will lead to fierce competition, a reduction in profits and possible new M&A's in the sector.
- General expectation of a continuous decrease in freight rates, to return to pre-pandemic levels on most routes. But some routes it is expected to face rate surcharges for extra insurance premiums and cost of rerouting due to conflicts – such as Israel and the Suez Canal usage.
- Continuous investment pressure to meet decarbonization goals set for the sector.

5. Company Level – A. P. Moller-Maersk A/S

5.1.Company Introduction

A.P. Moller-Maersk A/S is a Denmark based company, currently the second largest shipping company in capacity offered and revenue, as previously seen in the Alphaliner data, and fifth largest logistics company in freight revenue, just after UPS, FedEx, DHL, and US Postal Office (Statista, 2023).

The company was founded in 1904 in the midst of the industrial revolution in Denmark. It was created by A.P. Møller, the driver of the Steamship Company Svendborg. But the history goes back some years, to A.P. Møller's father - Peter Mærsk Møller – that after a long life of sea journeys, at the age of 50, completed the examinations to become a steamship master, and in 1886 bought his first steamship – LAURA (A.P. Moller - Maersk., n.d.) – and paved the way for his children's education into this business.

A.P. Møller had high ambition to expand the company business, and the I World War and the high need for trade and shipping, helped the company become a leading shipping company in Denmark, although he always expressed his uneasiness from the origin of such profits. Nonetheless, this permitted the company to grow and expand in the following years to even other areas such as shipbuilding, tanker trade, liner shipping and other industries.

The II World War was very troublesome, as a large number of vessels were requisitioned by both sides and eventually many lives and ships were lost due to the conflict. After the war, the company had to reposition itself, and they went on their expansion phase, being the primary focus of crude oil trade in Maersk Tankers.

The biggest revolution that permitted global expansion was the introduction of large-scale containerization, which came into mainstream practice in 1975 in the company. In the following years, container shipping saw an annual growth of around 20%.

The fall of the Berlin wall created another big expansion opportunity for new markets, with the help of new technology and inventions such as the barcode, enabled Maersk to expand its reach from 40 countries by 1990 to more than 100 countries just ten years later.

By 2015, the company was a wide-range conglomerate, with various focuses. This was turning out to be a hamper on its sustainable growth, which led the company to decide on a new strategy, focusing on Transportation and Logistics – the "Global Integrator strategy."

The new phase aims to take advantage of the existing Ocean capabilities of the company, and seek a vertical integration of the industry, as indicated in Maersk's vision: "At Maersk, our strategic vision is to become the Global Integrator, offering truly integrated logistics solutions that connect, protect and simplify our customers' supply chains." (A.P. Moller - Maersk - About Us, n.d.).

5.2.Ownership Details

A.P. Moller-Maersk A/S is listed in Nasdaq Copenhagen and has its capital divided into two types of shares: A shares have 2 votes per share; B shares do not have voting rights. Although public, the family still has a high participation, with A. P Møller Holding A/S having 41,67% of share capital and 51,45% of voting rights.

Table 1: *Share Capital and Traded Shares detail – Author's analysis (data from Refinitiv and Maersk Investor Relation)*

Share capital:	DKK 17.569.715.000
Number of votes:	20.214.092

Listed in Nasdaq Copenhagen - Divided in two classes:		**Number of shares**
A share - 2 votes per share	[MAERSKa.CO]	10.107.046
B shares - without voting right	[MAERSKb.CO]	7.462.669
Total		**17.569.715**

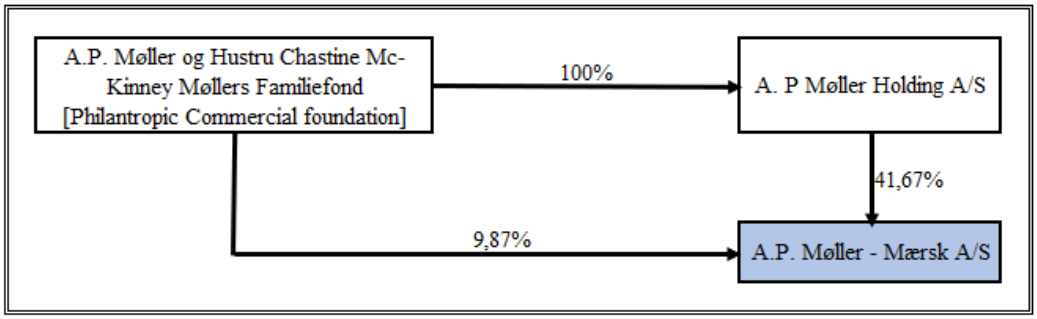
The ultimate owner of this stake is the A.P. Møller og Hustru Chastine Mc-Kinney Møllers Familiefond, a Danish philanthropic commercial foundation, founded in 1953 with the intend of long-term viability of the A.P. Moller Group and core values of the establishing family. The fund is highly active in the Danish culture and acts mostly in Denmark and Scandinavian countries.

Table 2: *Major Shareholders Detail – As of June 2023 – obtained from Maersk Investor Relation*

Major Shareholders	**Share Capital**	**Votes**
A. P Møller Holding A/S, Copenhagen, Denmark	41,67%	51,45%
A.P. Møller og Hustru Chastine Mc-Kinney Møllers Familiefond, Copenhagen, Denmark	9,87%	14,14%
Den A.P. Møllerske Støttefond, Copenhagen, Denmark	3,84%	6,45%
A.P. Møller - Mærsk A/S, Copenhagen, Denmark (treasury shares)	5,00%	1,64%
*These percentages are calculated based on the share capital excl. treasury shares as of 30 June 2023	**60,38%**	**73,68%**

Given the previous details of major shareholders, we can plot out the organization chart of the ultimate owner, as seen below.

Figure 4: *Organization Chart of Major Shareholders – As of June 2023 – obtained from Maersk Investor Relation*



5.3.Current Business Model

With the vision of Global Integrator, A.P. Moller-Maersk A/S decided to focus its business on four sectors: Ocean, Logistics & Services, Terminals, and Towage. The Ocean sector is the main driver of the company through the years, and as such, in 2023, it represents nearly 67% of all revenue generated, followed by Logistics with 26%. The remainder areas work as a synergistic complement to the Ocean business.

Table 3: *Revenue details in 2022 (annual report) and 2023 (quarterly report of first 9 months)*

USD in million	**2022**	**2023**						
Segment	**Revenue**	**1Q**	**YoY**	**2Q**	**YoY**	**3Q**	**YoY**	**9M 2023**
Ocean	64.299	9.873	*-37%*	8.703	*-50%*	7.897	*-56%*	26.473
Logistics	14.423	3.471	*21%*	3.386	*-3%*	3.517	*-16%*	10.374
Terminals	4.371	876	*-23%*	950	*-15%*	999	*-11%*	2.825
Towage	2.293	602	*8%*	504	*-13%*	483	*-18%*	1.589
Unallocated Activities	-3.857	-615	*-27%*	-555	*-43%*	-767	*-33%*	-1.937
Consolidated	**81.529**	**14.207**	***-26%***	**12.988**	***-40%***	**12.129**	***-47%***	**39.324**

The focus in the latest years has been on the vertical integration of Logistics into the business model, with the intent of diversification of the Ocean risk and simplification of logistics in order to maintain a higher customer base. To this end, the main focus of investment has been the acquisition and integration of logistics companies.

5.3.1. Ocean Sector

On the Ocean sector, Maersk has decided to keep a disciplined investment, by "growing through efficiency and on replacement rather than growing capacity, keeping the fleet at around 4.1-4.3 million TEU", as mentioned in the 2022 annual report. With the goal they label "All the way to zero", the motto of becoming net-zero in 2040, they have on order 25 methanol-enabled vessels, to replace existing models.

5.3.2. Logistics & Services

The logistics service model, "by Maersk", is currently divided into three types:

- "Transported by Maersk" – is described as the basic service of freight forwarder throughout the supply chain.
- "Fulfilled by Maersk" – offers on top of the previous, the consolidation and deconsolidation of cargo, warehousing, and distribution services.
- "Managed by Maersk" – is essentially outsourcing the supply chain management to Maersk for the whole service.

As of the third quarter of 2023, this subdivision had a weight of 45%, 38% and 17% respectively. It is also worth noting that Maersk Air Cargo operations fit into the Logistics & Services segment.

5.3.3. Terminals and Towage

The Terminals segment has been a high interest, to bring operational synergies with the other segments. The Terminals are either explored exclusively under the APM Terminals brand or in joint venture partner, spanning across 31 countries.

As for the Towage segment, under the Svitzer brand, this service helps the operations of the ships port operations and has maintained considerable importance for synergies with the Ocean segment.

5.4.Key risks to the business plan

In the 2022 annual report, Maersk presents the key risks to the business plan between 2023 and 2027, as listed in Table 4.

These risks, for the most part, are still relevant at this stage, and it shows the dimension of a forward-looking perspective the company has. But the severity of some factors as seen an increase in the last year, and today the Geopolitical tension and Ocean industry collapse factors

should be well maintained, as current events are bringing further and further risks for the business.

***Table 4**: Key risks to the 2023-2027 business plan - as presented in 2022 report.*

Type	Risk	Risk Movement	Severity	Description
Strategic	Ocean industry collapse	Increased	**High**	Ocean freight rate collapse
	Geopolitical Tension	New Risk	**High**	Escalation of tensions and uncertainty of the impact
	Process standardisation & technology roadmap	Stable	**Medium**	Failure of execution of tech roadmap implementations
	Decarbonisation	Stable	**Medium**	Failure to meet the decarbonisation expectations
	Mergers and acquisitions integration	Stable	**Low**	Failure to integrate acquisitions
Compliance	Legal and regulatory compliance	Stable	**Low**	Issues if surge of a large compliance situation
Operational	Costumer service level	Decreased	**High**	Inability to meet consumer expectations
	Cyberattack	Stable	**Medium**	Attack disabling service or data breach
	Rising cost in an inflationary environment	New Risk	**Medium**	Inflationary cost pressure
	Organisational capabilities	Stable	**Low**	Difficulties attracting adequate workforce

5.5.Share Price – Historic Development

In the following graph we present the historical price of both tradable shares, starting from January 2019 up to December 2023.

Figure 5: Maersk Stock Price History and Stoxx Europe 600 for index – 01/01/2019-*31/12/2023.*

Note. Prices obtained through Refinitiv Eikon in euros for all assets.

Both shares have been, for the most part, very similarly priced, with recently having a small difference in price between them, even though they hold different voting rights.

With this, we can understand the impact the global events, described in the overview, and how did the company's valuation developed, as detailed in the following paragraphs:

1) ***Lockdown*** – With the COVID-19 outbreak and the quick lockdown of all economic trades, the price of the stock went down, following the lack of trade.
2) ***World Economy Reopening*** – After some months of uncertainty and world adjustments, by the end of 2020, trade started to pick up. But due to the high disruptions in the shipping and logistics sector, followed by a boom in consumption, the need for shipping led to a spike in the freight rates. For example, Global freight rate went from 2.652 USD per FEU, by the end of 2020, to 9.425 USD per FEU – almost quadrupling the freight rates (Statista, 2023b).
3) ***Central Banks Intervention*** – Following the heating up of prices, which was a result of excess consumption and logistics struggle to normalize, due to different COVID policies, the World Central Banks started acting and gave way to raise the interest rates. This went to bring future expectations for the company down, and possibly to a more realistic scenario.
4) ***Further Central Bank shocks*** – Further shocks related to described in point 3).
5) ***Report of 3Q results*** – Following the publication of the results for the 3rd quarter, the price of the shares dropped sharply. The values presented in the report were indicated as to "within expectations" by the company, as they expect a stabilization of revenues comparing to previous quarters, but a possibility of worsening in the following years given the expectation of worsening market environment in the global stage.

5.6.SWOT Analysis

Following the previous analysis, we can understand that Maersk is well positioned in the Market. And to further delve into the position of the company going forward, we present the SWOT analysis, with the expectations for the following years.

Figure 6: SWOT Analysis of Maersk – author's analysis.

Strengths
Integrated Business Model - vertical integration of the supply chain
Large fleet of vessels - offering the second highest TEU capacity Worldwide
Installed capacity of Terminals in various key ports in all Continents
Capacity of Worldwide reach of the Logistics services
Negotiable position to establish international partnerships for development of biofuels (currently Green Methanol)
Continued capacity of reinvestment in CAPEX and M&A

Weakness
Little to no visibility of Air and Road transport service
High exposure to international conflicts and Geopolitical pressure
High dependence on oil prices due to the lack of alternative for fuel consumption
Elevated costs of investment to accomplish Carbon neutrality goal
Increasing risk to cyber-attacks, considering the high investment in technology

Opportunities
Increasing e-commerce trends, that enables to take advantage of the vertical integration
Opportunities in M&A market for Logistics integration and expansion
Cooperation agreements with other international players to extend the reach of the service
International developments in biofuel research
IA Technology developments that enable further efficiency of the vertical integration service

Threats
Continued escalation of armed conflicts in Europe and Israel
Inoperability of major trade routes: War menacing the Suez Canal usage; Drought menacing the Panama Canal usage.
International regulations on trade and shipping
High and sustained inflationary pressure, creating reduction of consumer purchasing power; And potential recessions in some countries
High pressure to decarbonise the Ocean Industry
Elevated competition with Ocean and Logistics peers

5.7.Financial Analysis

5.7.1. Liquidity Ratios

Through the years, Maersk has presented a healthy capacity of liquidity in its accounts, with a high conversion rate of its EBITDA into cash.

Table 5: *Liquidity Rations – author's analysis*

Liquidity Ratios	2018	2019	2020	2021	2022
Current Ratio	1,58	1,19	1,27	2,13	3,01
Cash Ratio	0,47	0,49	0,58	0,98	0,83
Cash Conversion Ratio	1,71	0,92	0,91	0,91	0,94

The company has been building on excess liquidity in the later years, taking advantage of the growth in sales and sustaining highly liquid assets as Cash, Term Deposits and Accounts Receivable. All through the years, the conversion into Cash remained stable, with an outlier in 2018.

5.7.2. Profitability Ratios

Following the liquidity analysis, we can observe when looking at the profitability ratios that the company always had good margins. Although they had consistently grown their

margins, they had a negative impact on Net Income in 2019 due to the discontinuation of Maersk Oil and Maersk Drilling with a net loss.

Apart for the outlier event of 2019, the margins have been extraordinarily increasing until 2022, but due caution is needed, because this accumulated growth, as explained before, was in the following of the COVID-19 pandemic, which boosted freight costs due to lack of supply for all the demand.

Table 6: *Profitability Ratios – author's analysis*

Profitability Ratios	2018	2019	2020	2021	2022
Gross Profit Margin	9,3%	18,7%	23,2%	41,5%	46,8%
EBITDA Margin	10,1%	15,4%	21,6%	39,2%	45,1%
Ocean	13,3%	15,4%	22,4%	44,4%	52,5%
Logistics & Services	3,1%	3,4%	6,5%	9,2%	9,6%
Terminal	26,5%	28,3%	31,7%	36,4%	35,1%
Towage &Maritime Services	5,8%	9,9%	13,2%	17,1%	16,1%
EBIT Margin	0,6%	4,4%	10,4%	31,8%	37,8%
Net Income Margin	8,2%	-0,1%	7,3%	29,2%	36,0%
Return on Assets	5,7%	-0,1%	5,2%	24,9%	31,3%
Return on Equity (Market Value)	21,6%	-0,4%	22,1%	73,3%	128,3%
Return on Equity (Book Value)	9,9%	-0,2%	9,7%	40,5%	45,8%

5.7.3. Solvency Ratios

The latest increase in revenues has helped the company establish a capacity of covering its debt and related interests. But, even before it, in 2018 they held a position of capacity of covering their debt. Notwithstanding it is worth noting that the company had such a high increase in EBITDA that went from having a Net Debt of 3x EBITDA to less than 0,5x.

This value is expected to rise back up with the normalization of EBITDA to lower values in the coming years. This capacity of debt coverage has granted an investment grade rating from S&P and Moody's, with a rating of BBB+ and Baa2 respectively, as of December 2023 (*Credit Ratings | A.P. Møller - Mærsk a/S*, n.d.), with a positive outlook for forward expectancies of the company dealing with the events successfully, without impact the repayment of the issued debt.

Table 7: *Solvency Ratios – author's analysis*

Solvency Ratios	2018	2019	2020	2021	2022
Interest Coverage Ratio	0,60	2,28	5,03	21,97	49,92
Debt-to-Assets Ratio	0,21	0,30	0,27	0,21	0,17
Debt-to-Equity Ratio	0,36	0,60	0,52	0,34	0,24
Net Debt-to-EBITDA Ratio	2,99	2,79	1,79	0,63	0,42

5.7.4. Operational Ratios

Through the observed years, the offered capacity did increase gradually, either from the Ocean segment's capacity, from the Air capacity and Logistic offer and Margin practiced in the Terminals per move. But the highest explanation, as previously mentioned, is the freight rates continuous increase, and a trend that was not accompanied in the cost side of bunker price.

Table 8: *Operational Ratios – author's analysis*

Operational Ratios	2018	2019	2020	2021	2022
Freight Rates Evolution	1879	1883	2000	3318	4628
Freight-to-Bunker Ratio	1,04	0,96	1,01	1,58	1,89
Ratio Average Capacity per vessel (TEU)	5.796	5.836	5.780	5.652	6.061
Air Shipping Weight Development	175.502	158.405	138.086	163.838	211.484
Terminal Margin per move	16,27%	14,34%	15,64%	22,44%	22,87%

5.8.Company Level - Conclusion

In the following chapters, we will delve into the predictive process to estimate the DCF valuation of Maersk. As described, the past information of the company, although informative to understand the company development, is not an adequate guess for the future. And the main assumption is that the company will see a reduction in Revenue, in a stabilization process.

It is believed that the company will go back to pre-pandemic levels, considering the expansion of its segments and investment that is consistent with the company's Business Model. But extraordinary Revenues as seen in the last two years is not expected to be obtainable in the near future.

6. Valuation

The valuation of APMM was made with the information available up to the 3rd quarter of 2023, for the analysis of the price target as of 31/12/2024. The company presents quarterly reports, and the fiscal year corresponds to the calendar year.

The main strategy for the valuation of the share price is using the DCF model, under a normalization assumption of future revenues. Given that the business is segmented into 4 sectors – Ocean, Logistics & Services, Terminals, and Towage and Maritime Services – the model was created under the basis of a SOTP. By doing this, and constructing a consolidated Income Statement, Balance Sheet, and Cash Flow Report.

The period of analysis is up to 2029, being this year considered the basis for the calculation of the Terminal Value for perpetuity. It was taken into consideration +5 years of data under the assumption that the last few years were very exceptional, and a wider range enables to present the evolution given the current economic cycle.

6.1.Discounted Cash Flow Valuation

6.1.1. Income Statement by Segment – 2023 Year-end

By the 3rd quarter of 2023 the company was experiencing a downturn of its returns mainly due to a continuous decrease of freight rates, although considered as expected by management. To this end, and following the expectation of normalization of returns, as previously mentioned in the company description, an estimation for the 4th quarter was generated.

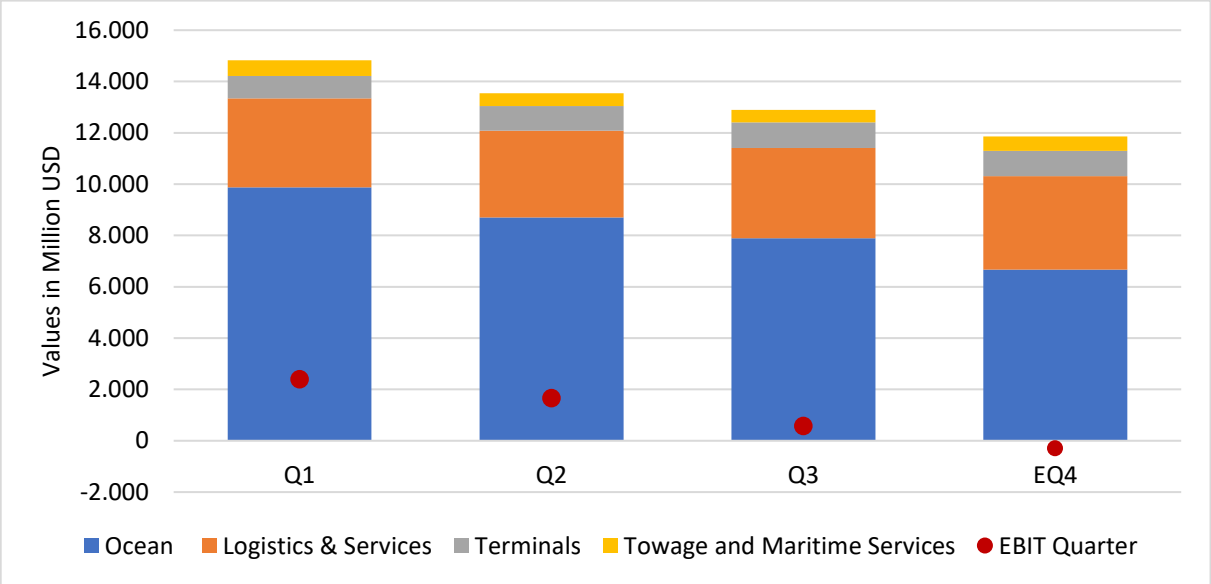
In fact, the highest impact on revenue was demonstrated by the decrease in the freight rates, so the estimated EBITDA for the 4th quarter in the Ocean segment is expected to be near zero or negative.

Regarding the remainder segments, no further shocks were inputted for the short term, giving a 4th quarter in line with the previous quarter's results. Because of this, and under the expectation of no additional changes in cost structure, the values that were considered for the 4th quarter are in order with the previous quarters.

The major change that influenced the year 2023 was the continuous decline in revenues, as previously mentioned, that generated an increase in difficulty of maintaining reliable results. Given this, there is the expectation that by the 4th quarter, the company will be presenting a negative EBIT.

Nevertheless, in 2023 it is expected to generate a positive EBIT of around 4 billion USD, well below the 2022 value of 30 billion, marking the difficult environment the company is dealing in in the upcoming periods.

Figure 7: *2023 Quarterly Revenue and Consolidated EBIT – author's analysis.*



6.1.2. Income Statement by Segment – 2024-2029

The following years of estimation and assumptions were made under the 2023 preview. For upcoming years, it was assumed that the Inflation rate would be around 2%, as per OECD (2024), Inflation forecast indicator, a rate that was applied to most of the model created for following periods.

6.1.2.1.Ocean Segment

The Ocean Segment revenue is mainly determined by two factors, the loaded volumes, and its respective freight rate, while also having other associated revenues with this operation.

The loaded volumes have faced a moderate slowdown in the upcoming years, going from 13,3 million FEUs in 2019 to an expected 11,8 million FEUs by 2023 year-end. But given the capacity of offer that the company has, it is expected that during the valuation period the company will manage to recover the volumes lost. The basic expectation is that, with the gradual recovery of international business, values will gradually bounce back to values previous to COVID by 2029.

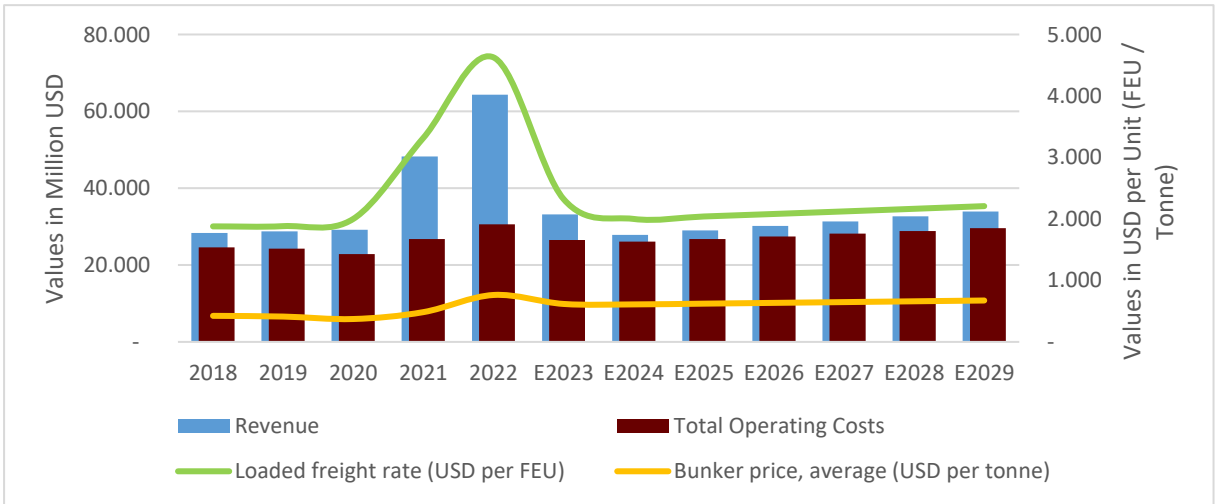
As mentioned in the Key Risks, the main focus that the company has to deal with is the practiced freight rate, as this is market determined and highly influenced by other competitors and by geopolitical risks. Given the uncertainty of these two, there will be downwards pressure. On the basis for 2024, following the trends of rate decrease experienced in the last quarters, falling from 2.800 USD/FEU by 1st quarter of 2023 to lower that 1.900 by year-end, it was assumed that the Freight rate would be around 2.000 USD/FEU. A further decrease of this rate would be unsustainable for most companies with similar dimensions, taking into consideration that this was referred to as the rate for 2020. Going forward, it was generated the expectation of growth of rated in line with the expected inflation.

The Operating Costs of this segment are mostly divided into the bunker costs, container handling costs and network costs. The bunker costs were estimated under the assumption that there will be little shift in the price, "based on the latest crude prices forecasts" (Latest Oil Price Outlook Puts VLSFO Bunker Prices in the $600's Until 2024, n.d.), taking into consideration a price of 610 USD per tonne in 2024. The handling costs includes handling of full and empty containers that ships transport, as such it was assumed a normalization of this costs based on historical information, as with the network costs, as these costs depend on operational changes of shipping lines and no foreseeable change is expected.

As for the SG&A, following the cost reduction of 600 million USD announced (Reid, 2023), this was input for 2024, with no other change expected to it.

From this, it was able to establish a total of Operating Costs of 26,1 billion USD by 2024, that considers a normalization of the operations. Going forward, on top of this estimate, it was added the expected inflation.

Figure 8: *Ocean Segment – Historic Evolution and Preview – author's analysis.*



6.1.2.2.Logistics & Services Segment

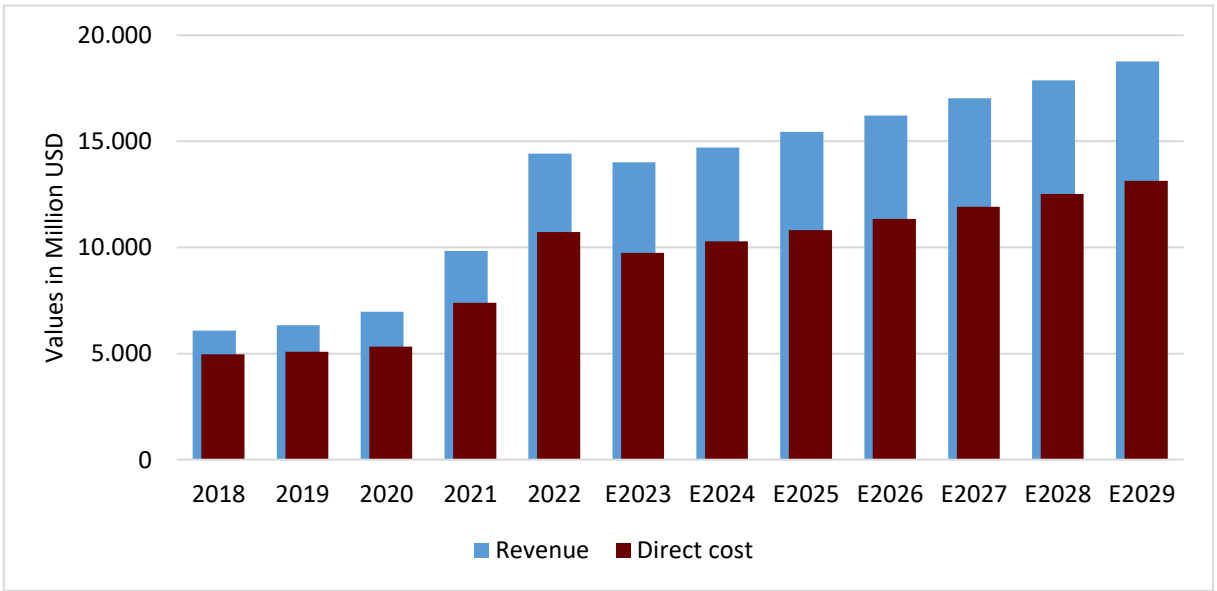
The Logistics & Services segment is currently a focus of expansion of APMM for a vertical integration of its business, bringing the synergies of the shipping segment into other valued-adding services. And as such it is believed that this segment will be continuously expanded and improved as the recent acquisitions are integrated into the Group.

It was considered a Revenue growth of this segment as an average of three reports of expected CAGR for the next following years. The lowest estimation expects a "CAGR of 4,57% during the forecast period" (Freight and Logistics Market Insights, n.d.) while the other reports had reported higher CAGR, for different periods of time, of 5,6% (Allied Market Research, https://www.alliedmarketresearch.com/, n.d.) and 5,9% (Yahoo Is Part of the Yahoo Family of Brands, n.d.). Considering that Maersk is on the consolidation of acquisitions, it was assumed a CAGR of 5% for the analyzed period.

Therefore, starting from the estimate of 14 billion USD of Revenue for 2023 that already considers all the recent acquisitions the company has made, it was inputted the CAGR of 5%, reaching a Revenue of 18,7 billion USD by 2029.

With this information, and considering historical data and the company's objective, it was assumed a Gross Profit Margin of 30%, and EBITDA margin of 10% and an EBIT margin of 6%. From this, by 2024, we would be expecting a Gross Profit of 4,4 billion USD, EBITDA of 1,4 billion USD and an EBIT of 882 million USD.

Figure 9: *Logistics & Services Segment – Historic Evolution and Preview – author's analysis.*



6.1.2.3. Terminals Segment

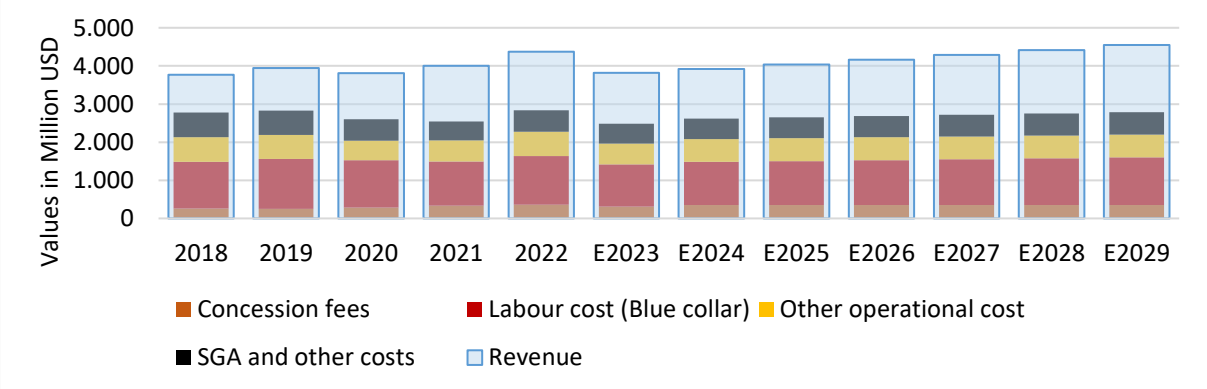
In the Terminals Segment the Revenue is estimated taking into consideration the Terminal Revenue per move and the volume of said movements. Price shocks in this segment are not usual, with an expectancy of continuous growth over time. Also considering that this segment is sometimes a political ground for governments' foreign policy and most of them are public concessions of exploration, it was assumed a growth of 1% for the Revenue per move in the years of analysis, below inflation expectations, starting from the estimated revenue per move of 312 USD for 2023.

As for the volume, in the previous 5 years it experienced a CAGR of 2,3%. With this and considering that they have constant investment plans for capacity increase, a CAGR of 2% was considered for the following years. Therefore, starting from 12 million moves by 2023, with the expected reinvestment in improving this segment, it is expected of reaching 13,8 million moves by 2029.

The costs of this segment are divided into 4 major groups. The concession fees are a main factor associated with this segment as most of the operations are public concession contracts for the right to explore the activity, generally associated with Government entities. As these concessions are mostly associated with long-term contracts, the preview was maintained for 350 million USD, an amount similar to recent years, as was assumed with the Other operational costs, fixing on 600 million USD.

Following this, and the largest cost associated with the activity is the Labor Cost, as this is a Labor-intensive activity. Given that there is no additional data for changes regarding this, it was input a growth according to inflation expectations, starting from an estimated cost of 1,1 billion USD by 2023. The latter group, SGA, was assumed to have a growth in accordance with inflation.

Figure 10: *Terminals Segment – Historic Evolution and Preview – author's analysis.*



6.1.2.4. Towage and Maritime Services

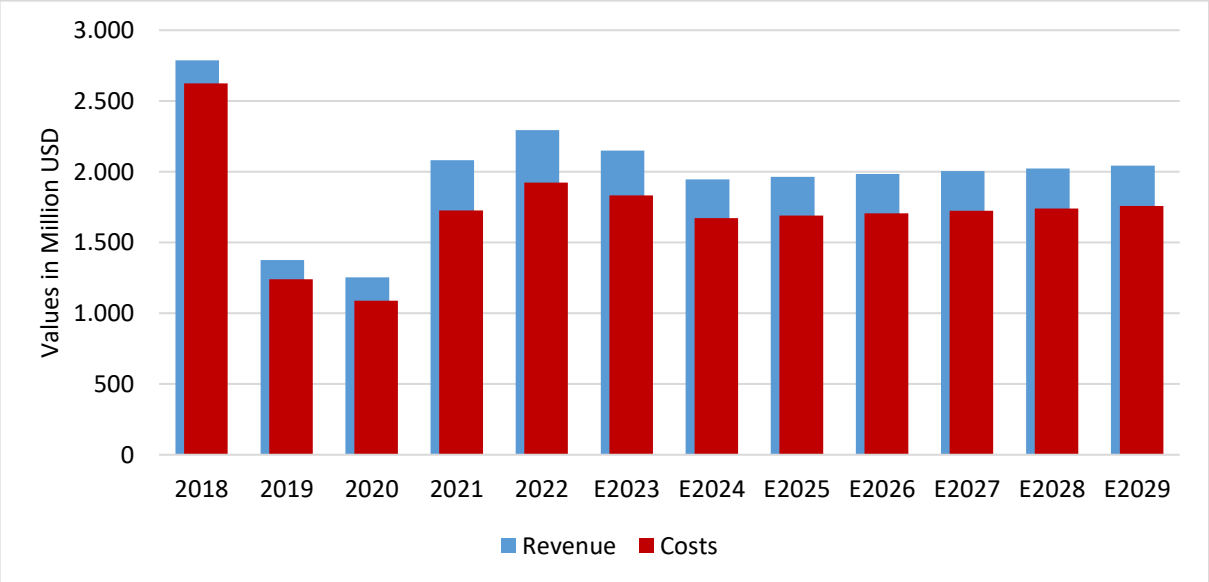
The latter segment contains various services that are deemed as auxiliar for the Ocean Segment, and in the last few years has been a target of restructuring through divestments of some non-essential operations. Nonetheless, due to lack of official information of intended divestments for the future, no sale was considered in the upcoming years.

The major business in this Segment is the Towage sector, estimated to account for around 30% of the revenue of the segment. This sector is estimated to experience a CAGR of 13,3% in the forecast period (Tugboats Market Size, Share & Key Industry Players [2030], n.d.), as for a general business. However, Svitzer already holds a considerable presence in the Markets it operates, with no major investment associated with it, thus it was assumed that Svitzer will only be able to capture 25% of the reported CAGR.

As for the remainder of the segment, it was assumed that it would experience little to no growth from its current status. And as such, it is expected that the Revenue for this segment will be stable around 2 billion USD, with costs taking a part of an estimated 86% of said Revenue.

For this segment, based on historical information, it was assumed to achieve an EBITDA margin of 14% and EBIT margin of 12%, marking 272 million EBITDA and 233 EBIT as for 2024.

Figure 11: *Towage and Maritime Services Segment – Historic Evolution and Preview – author's analysis.*



6.1.3. SOTP – Segment Estimates & Account Consolidation

Following the estimation of Income by Segment, until EBIT, it was introduced the Consolidation of Group Revenues, Costs, EBITDA, EBIT, Depreciation and CAPEX. For this purpose and looking at the methodology of consolidation employed by Maersk, it was needed to estimate Other/Eliminations that need to be considered in order to achieve a more accurate forecast of Group's Income Statement.

For Depreciation and CAPEX, it was assumed that the eliminations are null. As for the remainder, it was considered average values as seen in historical information as per demonstrated in Table 9 for the Consolidated Revenues.

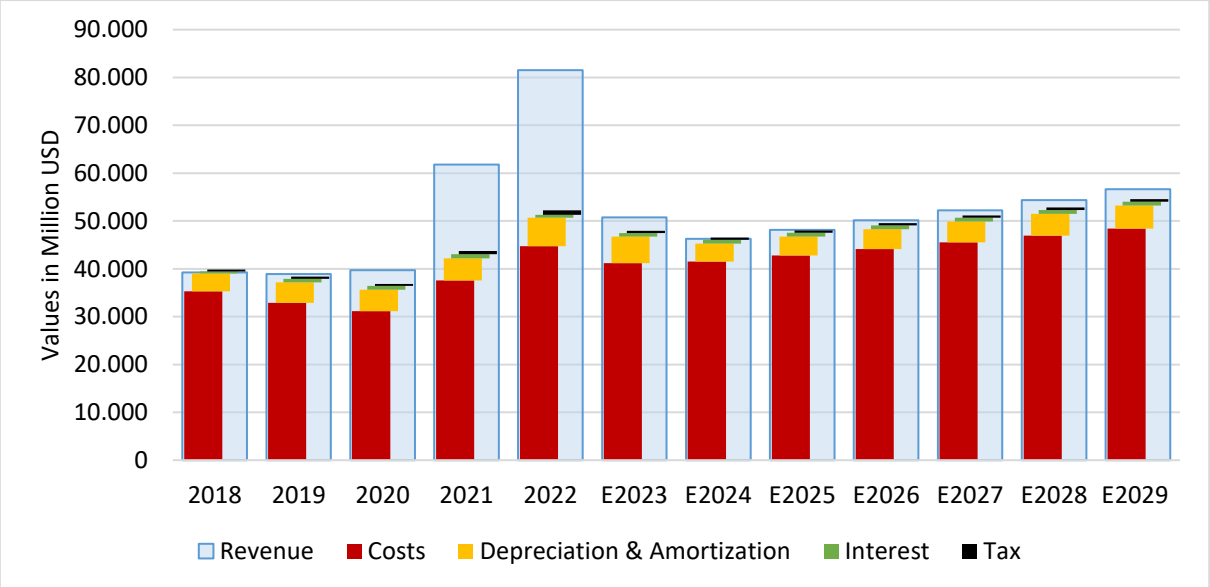
Table 9: *SOTP Revenue – Consolidation Estimate – author's analysis*

USD million

Revenue | Segments	2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029
Ocean	28.366	28.782	29.175	48.232	64.299	33.148	27.858	28.983	30.154	31.372	32.640	33.959
Logistics & Services	6.082	6.331	6.963	9.830	14.423	14.005	14.705	15.440	16.212	17.023	17.874	18.768
Terminals	3.772	3.948	3.807	4.000	4.371	3.821	3.921	4.039	4.161	4.287	4.416	4.550
Towage &Maritime Services	2.787	1.376	1.254	2.082	2.293	2.149	1.945	1.964	1.984	2.004	2.024	2.044
Other/Elimin.	-1.727	-1.547	-1.459	-2.357	-3.857	-2.391	-2.179	-2.269	-2.363	-2.461	-2.563	-2.669
Group	39.280	38.890	39.740	61.787	81.529	50.733	46.249	48.158	50.149	52.225	54.391	56.651
Elim	4,2%	3,8%	3,5%	3,7%	4,5%							

The interests are calculated on top of outstanding Debt of the previous year, with an average interest rate of 5%, according to the estimations presented by Maersk's report, considering that nearly 78% of its debt has an applied Interest rate between 3-6%.

Figure 12: *Maersk's Income Statement – Historic Evolution and Forecast – author's analysis.*



The forecast is that for 2023 the company generates a Net Income of 2.762 million, with the expectation of a fall in revenue in 2024 that ends the year with a Loss of 292 million. Afterwards the scenario is of a slow and steady recovery of the Revenues generating positive Net Income.

6.1.4. Tax Rate

Regarding the Tax Rate, it is important to note that the EU has a plan to encourage ship registrations in Europe, which is commonly referred to as the Tonnage Tax, which Maersk is also covered in. “The tonnage tax is not a tax but rather a means to determine relevant taxable income” (Surkus, 2024), that enables the companies affect to it, instead of pay income tax, to calculate a taxable income that depends on the size of the ships and its net tonnage.

This also implies that, independent of the company making a profit or a loss, it will be always subject to tax payment. However, this taxable income is incredibly detailed in its estimation, and as such, for the estimation the tax was considered as 4% of Loaded Volumes of the Ocean Segment, as a proxy.

Nevertheless, this proxy is not convertible into the Tax Rate used for the WACC, and as such the tax rate to be considered for the WACC estimation will be the Denmark tax rate of 22%.

6.1.5. CAPEX

The company has experienced a general growth of yearly capital expenditures, with the exception of the COVID years. The major volume of CAPEX is the Ocean Segment, as it is a very demanding for a systemic investment.

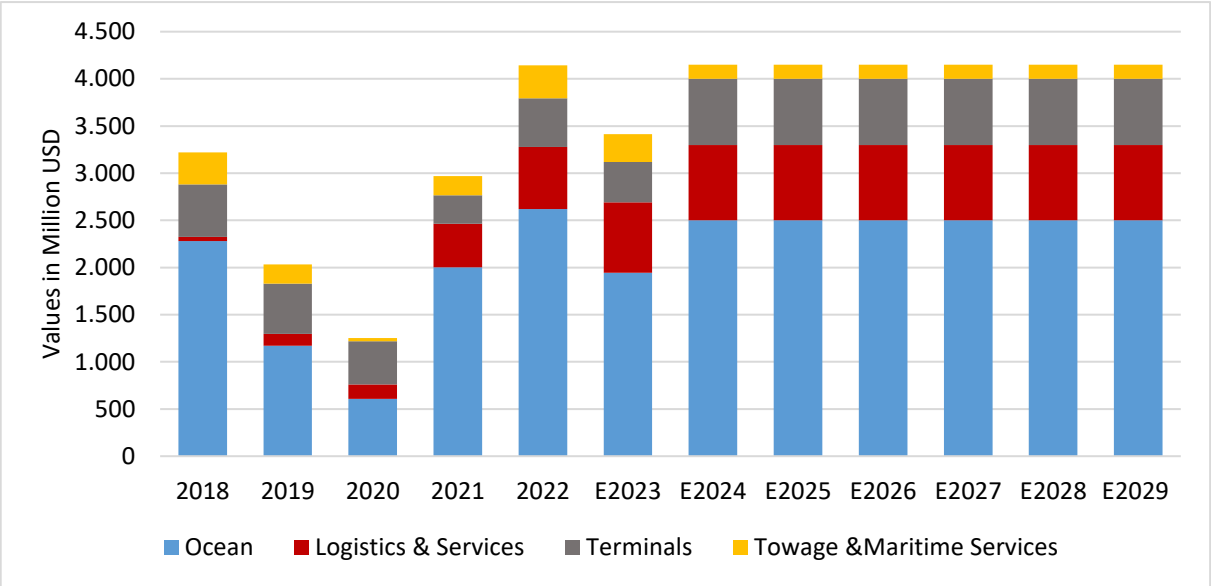
As mentioned in the industry overview, this segment is very pressured in the upcoming years in finding and investing in solutions for the reduction of carbon emissions. For that, the company is consistently working on orders of new ships with more efficient consumptions, and other auxiliary technologies, with the pledge of “net zero by 2040”. For that reason and considering the consistently increasing orderbook of methanol powered vessels, it was considered a yearly CAPEX of 2,5 billion USD, an amount that is also considered for the need for the maintenance of current vessels.

As for the Logistics segment and considering the current importance of digitalization that is already on focus, as with other green initiatives, it was considered 800 million USD of CAPEX yearly. For the Terminals, on top of the previously mentioned focus in the logistics,

there is a constant need for maintenance, repair and expansion of port capacity and efficiency, thus it was considered an estimation of 700 million USD needed for all the ports.

Lastly, the Towage segment, it was mainly determined a CAPEX of 150 million in the prospect of the need of reinvestment, maintenance, and construction of Tugboats.

Figure 13: *Maersk's CAPEX – Historic Evolution and Forecast – author's analysis.*



6.1.6. Debt and Capital Structure

Regarding the Debt Structure, in the last years the values were around 15 billion USD, in Book Values, composed by Leases, issued Bonds and some revolving debts with Banks and Credit Institutions.

The Leases weight more than 70% of the total Debt and is not listed. These leases are destined for the agreements of chartering vessels and leasing containers and other equipment. Some of these leasing is done with the purchase option or an extension option – financial leasing – but no accurate information as to determine the size of these options is available.

By the year 2022, the Leases amounted to 11,6 billion USD Debt with a respective Right-of-use estimation of 10,9 billion USD. Therefore, and considering that the difference between both is considerably small, for future estimations, the Book-Value of Leases will be considered similar to Market-Value, as a proxy of best estimate.

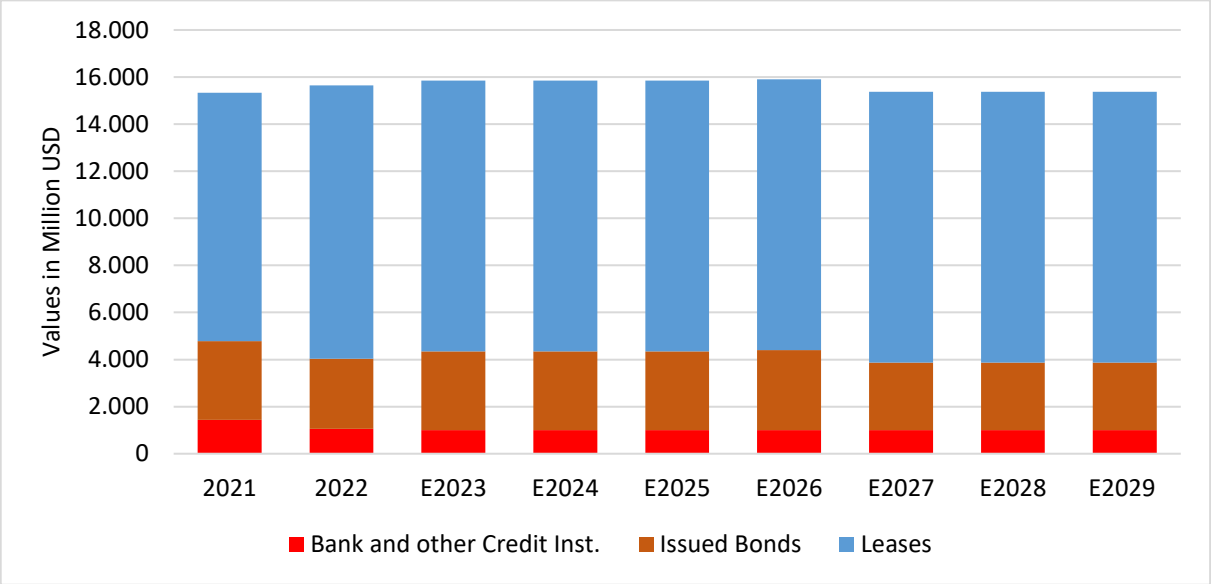
The Bonds are issued in various currencies, ranging from USD, EUR, GBP, and DKK. In the last few years, they have had outstanding around 3 billion USD, converting all other

currency. For further reference and considering a scenario of no new emission of debt, the value of Bonds will decrease in order to the expected maturity date.

As for the revolving Debts, they have had around 1 billion USD outstanding in the balance sheet. Considering that these debts are non-listed, the best proxy for Market Value will be the Book Value.

In order to estimate the debt-capital structure for the WACC, it was needed to confirm the Market Value of the Bonds at the time of estimation, while the remainder of the debt estimations were assumed Book Values.

Figure 14: *Debt Structure - Historic and Forecast – author's analysis.*



Considering this information, and based on two specific dates of data input, of 02/11/2023 and 01/03/2024 we can determine the debt-equity coefficient of 33%-67% and 39%-61%, respectively. For the input of the WACC of the target date of 31/12/2024, it will be considered a debt-equity coefficient of $^{1}/_{3}$ *to* $^{2}/_{3}$, respectively.

6.1.7. Working Capital

To be able to estimate the FCFF it was needed to forecast the changes in working capital for the same period. To that end, and looking onto historic factors, it was computed the Days Receivable Outstanding, Days Inventory Outstanding and Days Payable Outstanding.

The days Receivable were estimated to be 30 days and the days Payable as 60 days. As for the Inventory days, given that the inventory of the company is mostly in Bunkers, 14 days was considered.

Other than this data, it was also input the changes in short term debt changes in the expected upcoming due dates of bonds outstanding, as included in the Accrued Expense analysis, with the expected maturity of said bonds.

Table 10: *Changes in Working Capital – Forecast – author's analysis.*

in Millions of U.S. Dollars	E2023	E2024	E2025	E2026	E2027	E2028	E2029
Changes in Working Capital	2.833	861	575	-1.018	3	2	502
Accounts Receivable	2.801	369	-157	-164	-171	-178	-186
Inventory	24	-13	-49	-51	-53	-55	-57
Prepaid Expenses	245	0	0	0	0	0	0
Other Current Assets	117	0	0	0	0	0	0
Accounts Payable	-32	54	210	218	227	235	244
Accrued Expense	-37	451	571	-1.021	0	0	500
Other Current Liabilities	-285	0	0	0	0	0	0
Other Adjustment on Working Capital	0	0	0	0	0	0	0

6.1.8. Long-Term Growth Expectations

The company is in a stage of Maturity and Renewal, where it is well established in its Ocean business, but has been searching for a renewal of business growth model of a "Global Integrator" as they describe. Therefore, it is believed that the company will continue to grow after the forecast period.

The OECD (GDP And Spending - Real GDP Long-term Forecast - OECD Data, n.d.) and ECB (European Central Bank, 2024) have expectations for Euro Area of real growth around 1,5% annually from 2024 onwards. Under this assumption, it was estimated that the company, with the current potential and with no new acquisitions or changes in Business Model, which would be growing 1% for perpetuity, on average, under the preposition that the renewal effect at the moment described will not be sufficient to achieve the same growth as expected for the Euro Area.

6.1.9. FCFF Estimation

Following the previous the previous estimates, it was possible to generate the estimated Free Cash Flow to the Firm for the projected years, as presented in Table 11.

Table 11: *Free Cash Flow to the Firm Projection – author's analysis*

in Millions of U.S. Dollars	E2023	E2024	E2025	E2026	E2027	E2028	E2029 - TV
FCFF	**8.070**	**1.217**	**1.466**	**436**	**2.049**	**2.670**	**3.824**
EBIT	4.019	985	1.416	1.874	2.358	2.870	3.411
EBIT * Marginal Tax	-884	-217	-312	-412	-519	-631	-750
Depreciation	5.515	3.739	3.936	4.142	4.357	4.579	4.811
CAPEX	-3.413	-4.150	-4.150	-4.150	-4.150	-4.150	-4.150
Net Change in Working capital	2.833	861	575	-1.018	3	2	502

This enables us to understand that for the projection period, it is estimated that the company will be able to generate enough CF every year, enough to pay its obligations, even though we have a projection of a reduction of results in the upcoming years.

6.1.10. WACC

The target price will be considered to be at 31/12/2024, and all estimates and available information is to be considered a cut-off date of 01/03/2024. All the following estimates included in the WACC will follow this information.

The risk-free rate that will be considered is the 10-year US Government Bond, as most of the business conducted by APMM is in USD. Therefore, all estimates will consider a risk-free rate of 4,182% - as of 01/03/2024.

6.1.10.1. Cost of Debt

The Cost of Debt was estimated as the average between the estimated Default Spread and the Market value of the interest rated of quoted bonds outstanding.

For the quoted bonds it was analyzed the weighted average of its yields, to which was able to estimate a rate of 4,62%.

As for the Default Spread, the company has a rating of BBB+, with a Stable outlook, that considering Damodaran's estimation, it is applied a Default Spread of 1,47% on top of the risk-free rate. This allows for an estimated Cost of Debt of 5,137%

Table 12: *Cost of Debt Estimation 31/12/2024 – author's analysis*

Cost of Debt Estimation	31/12/2024
1) Default Spread	
Risk Free Rate (rf) - 10Y US Gov Bond	4,182%
Long Term Rating	
Spread estimated	1,47%
	5,652%
2) Market Value of interest rate of quoted Bonds	4,622%
Kd - Cost of Debt	5,137%

6.1.10.2. Cost of Equity

For the cost of equity, it was generated various regressions of APMM returns against European database dataset, published in Fama French Data Library, with the purpose of determining the company's Beta and compare it the Refinitiv's Beta.

In this regression estimation process, it was analyzed 5 different hypotheses for estimating the most adequate model. For this purpose, it was generated estimations for the CAPM, 3FF and 5FF models, as seen in Figure 22. From this it was possible to assume that the CAPM, in its simpler form and with 5 years of historic data better fitted the company return explanation, as the additional models, even with higher R-squared, all the additional variables were not statistically significant.

Table 13: *CAPM Model Regression Estimation – author's analysis*

VARIABLES	(1) CAPM_10Y	(2) CAPM_5Y	(3) CAPM_3Y	(4) FF3_5Y	(5) FF5_5Y
Beta	1.252***	1.346***	1.217***	1.303***	1.259***
	(0.168)	(0.224)	(0.339)	(0.241)	(0.273)
Observations	120	60	36	60	60
R-squared	0.392	0.496	0.421	0.500	0.522

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

From this, it was able to regress a Beta of 1,346, which is similar to the Refinitiv's Beta, consulted at the 31/12/2023, of 1,41. Therefore, going further, it was considered the estimated Beta for the calculation of the Cost of Equity. On top of this Beta, it was performed and adjustment of the historical Beta with the assumption that over time the Beta will tend to 1, therefore obtaining a Beta of 1,231.

As for the Market Risk Premium it was considered Damodaran's database and considering that the main market of activity is the USA, as the US being a reference currency for most business conducted in this industry, it was considered the US premium of 4,6%, as a AAA country. As a comparison reference, Denmark is also considered as a AAA country, therefore presenting the same Risk Premium. This enabled us to estimate a Cost of Equity of 9,843%.

Table 14: *Cost of Equity Estimation 31/12/2024 – author's analysis*

Cost of Equity Estimation	31/12/2024
Estimated Beta CAPM (5 years data Regression)	1,346
Reported Market Beta (31/12/2023) - Refinitiv	1,41
Adjusted Future Beta	1,231
Risk Free Rate (rf) - 10Y US Gov Bond	4,18%
Market Risk Premium - US	4,60%
Market Risk Premium - Denmark	4,60%
Ke - Cost of Equity	9,843%

6.1.11. PV FCFF & Target Price

The WACC that was estimated for the calculation of the PV of the FCFF was 7,9%, given the previous information.

Table 15: *WACC Estimation 31/12/2024 – author's analysis*

WACC Estimation	31/12/2024
Kd - Cost of Debt	5,137%
Ke - Cost of Equity	9,843%
Equity Market Value	67%
Debt Market Value	33%
Tax Rate - Marginal (Denmark)	22%
WACC	7,90%

From this, it is possible to estimate that the Enterprise Value of the company would be 46 billion USD, with an implied Equity Value of 30 billion USD. This translates into an implied share price of 1.729 USD per share or 11.919 DKK, considering the exchange rate as of 01/03/2024.

Table 16: *PV FCFF & Target Price Estimates – author's analysis*

in Millions of U.S. Dollars	E2025	E2026	E2027	E2028	E2029 - TV
FCFF	1.466	436	2.049	2.670	3.824
PV FCFF 12/2024	1.359	375	1.631	1.970	40.898
	31/12/2024				
Enterprise Value	**46.232**				
Expected Debt 2023	**15.850**				
Implied Equity Value	**30.382**				
Implied Share Price in USD	*1.729*				
Implied Share Price in DKK	*11.919*				

Exchange Rate as of 01/03/2024:
DKK-USD = 6,8938
* Obtained from Danmarks Nationalbank

6.1.12. Sensitivity Guidance

Following the DCF analysis, additional Sensitivity tests were generated into understand the effects of the change of some variables in the implied Share Price in DKK, as quoted. A summary of the effects is shown in Table 17.

From this analysis it was able to conclude that Bunker Consumption estimates and the tax rate have no expressive implications in price changes.

The highest sensitivity factors are associated with operational estimates, as of Container Freight Rate and Volumes as with the price of Bunker.

Table 17: *Sensitivity Guidance of Price expectations – author's analysis*

Sensitivity Guidance of Price expectations		
Container Freight Rate	+/- 100 USD/FEU	+/- 7.200 DKK/Share
Bunker Price Rate	+/- 100 USD/Tonne	+/- 5.100 DKK/Share
Container Freight Volumes (FEU in '000)	+/- 500 FEU	+/- 4.600 DKK/Share
Discount Rate WACC	+/- 0,5% WACC rate	+/- 1.500 DKK/Share
Terminal Value Growth	+/- 0,5% growth rate exp	+/- 1.100 DKK/Share
Capital Structure Change Effect	+/- 5% Debt Weight	+/- 900 DKK/Share
Risk Free Rate (rf) - 10Y US Gov Bond	+/- 0,5% change	+/- 800 DKK/Share
Marginal Tax Rate - Denmark	+/- 1,00% change	+/- 50 DKK/Share
Bunker Consumption (Tonne in '000)	+/- 500 Tonne	+/- 15 DKK/Share

6.2.CCA – Comparable Company Analysis

Following the DCF analysis, it was performed a comparative analysis with similar companies to APMM. Given the current business model of vertical integration, it generated the need to collect data from two different segment types of companies – Marine Freight & Logistics and Freight & Logistics Services (General).

Given that APMM still holds a major core of its business in the Ocean segment, different weights we considered when analyzing the Multiples, considering a weight of 80% for similar Marine segment companies and 20% for the multiples obtained from general Logistics services.

For the Marine segment, it is worth noting that major players that are somewhat similar to Maersk are privately owned – such as CMA CGM and MSC. From this, it was able to extract data from comparable size companies, investment styles and area of activity, as listed in Table 18. A set of 9 companies were considered, however, from this sample, there is only one European HQ company, while the rest are from Asian countries.

Also worth noting, there is a set of 3 listed companies from Japan – Nippon Yusen, Mitsui O.S.K., and Kawasaki Kisen – that although they are independent companies listed, they created the joint-venture branded as "ONE – Ocean Network Express Holdings, Ltd.".

Further details on the estimations of the comparable firms hereby discussed will be present in the appendices.

Table 18: *Comparable Companies – author's analysis*

Segment	RIC	Name
Marine Freight & Logistics	MAERSKb.CO	AP Moeller - Maersk A/S
	HLAG.DE	Hapag Lloyd AG
	601919.SS	COSCO Shipping Holdings Co Ltd
	9101.T	Nippon Yusen KK [ONE - Ocean Network Exp.]
	9104.T	Mitsui O.S.K. Lines Ltd [ONE - Ocean Network Exp.]
	9107.T	Kawasaki Kisen Kaisha Ltd [ONE - Ocean Network Exp.]
	0316.HK	Orient Overseas (International) Ltd
	2603.TW	Evergreen Marine Corp Taiwan Ltd
	011200.KS	HMM Co Ltd
	2609.TW	Yang Ming Marine Transport Corp
Freight & Logistics Services (General)	UPS.N	United Parcel Service Inc
	CNR.TO	Canadian National Railway Co
	FDX.N	FedEx Corp
	CSX.OQ	CSX Corp
	DHLn.DE	Deutsche Post AG
	DSV.CO	DSV A/S
	KNIN.S	Kuehne und Nagel International AG
	002352.SZ	S.F. Holding Co Ltd
	PST.MI	Poste Italiane SpA
	SAIA.OQ	Saia Inc
	XPO.N	XPO Inc

As for General Logistics Services, several leading logistics companies were considered for the sample, but quickly dropped as to being considered distinct types of investment, activity or growth for the vertical integration process Maersk is employing.

Therefore, it was determined a sample of 5 logistics companies, considering a spread of activity markets, and similar recent investments, considering that the remainder did not fit for the multiple valuation of the logistics segment – as marked as grey in Table 18.

Table 19: *Comparable Company Valuation – Price Target 31/12/2024 – author's analysis*

Target Price			EV / Revenue	EV / EBITDA
Weights	Ocean	80%	1,36x	9,25x
	Logistics	20%	0,84x	6,71x
			1,26x	8,74x
		Estimated Revenue/EBITDA 2024	46.249	4.723
		Estimated EV	58.143	41.279
		Expected Debt 2023	15.509	15.509
		Implied Equity Value	42.634	25.770
		Implied Share Price in USD	2.427	1.467
		Implied Share Price in DKK	16.731	10.113

From this, it was possible to generate an estimate of Forward multiple of Revenue and EBITDA expectations for these companies, with data obtained from Refinitiv, that allowed for and estimation of the Price Target of APMM for 31/12/2024, as listed in Table 19.

6.3.Final Recommendation

In Sum and considering that the DCF is the main method of estimating the Price Target, and the Comparable Valuation a measure equalizer, it is presented the Price Target considered for the 31st of December 2024 in Table 20.

Table 20: *Price Target – Final Recommendation – author's analysis*

Method	Weight	Target USD	Target DKK
DCF	90%	1.729	11.919
F12M CCA - EV / Revenue	5%	2.427	16.731
F12M CCA - EV / EBITDA	5%	1.467	10.113
	100%	**1.751**	**12.069**
Lower-Bound	-5%	1.663	11.466
Upper-Bound	5%	1.839	12.672
Market Value as of 01/03/2024		MAERSKb.CO	9.622

From this and comparing the Price Target of 12.069 DKK with the Market Value of 9.622 DKK as of 01/03/2024, it was considered that the equity is expected to slightly outperform the Market expectations in the upcoming months, taking into consideration that 2025 forward, the company will be on a pace of recovery of its operations and respective revenues.

Table 21: *Price Recommendation – author's analysis*

Strong Buy >30%	Outperform >15% & ≤ 30%	Hold >-5% & ≤ 15%	Underperform >-20% & ≤ -5%	Sell ≤ -20%
	X			

7. Investment Report Comparison

Upon completion of the Financial Recommendation, it was compared with Investment Bank Reports from SEB Group and ABG Sundal Collier that, for the purposes of this thesis, shared their Equity Research as of 3 November 2023, following the 3rd quarter report. In addition to these reports, another comparison was made with the MarketScreener Report for Maersk, issued on the 14th of March 2024.

For the purpose of comparing the Investment Bank reports, additional adjustments on the assumptions were made, specifically in the WACC estimates, to consider data that would be available at the time. Thus, the estimate of the WACC would be at 9,48%, if it were estimated with data available at 2nd of November 2023.

In addition to it, it was made an adjustment to the comparable companies estimates, so as to consider also only data available at that point in time.

From this, it was able to estimate an expected Price Target of 7.970 DKK, a value far below the estimate presented by the Investment Banks, as described in Table 22.

Table 22: *Financial Reports Comparison – 03/11/2023 – author's analysis*

Method	Weight	Target USD	Target DKK
DCF	90%	1.124	7.581
F12M CCA - EV / Revenue	5%	1.614	10.886
F12M CCA - EV / EBITDA	5%	1.787	12.053
	100%	**1.182**	**7.970**
Lower-Bound	-5%	1.123	7.572
Upper-Bound	5%	1.241	8.369
Market Value as of 03/11/2023		MAERSKb.CO	10.130

03/11/2023	Target DKK	Consensus	Risk
SEB	10.100	Hold	High
ABG	10.550	Hold	N/A

In fact, given the estimate of the Price Target, it would be considered as a Sell Recommendation, while both banks fall on the Hold position.

Both banks share a rather similar position and view of the outlook of the market and company growth for the upcoming years, thus reaching a similar target. Nevertheless, the estimated outlook is rather similar to the estimates generated in the course of the valuation process for the company, with similar Revenues, EBITDA, and Net Profits. It is also worth

noting that SEB presents a negative Net Profit expectation, while the estimates calculated are very low in the first couple of years, but never negative.

The major difference for the price estimate is the method used for the calculation. While in the course of this thesis it is considered the DCF as the major method for calculation, with the CCA methods as model adjusters, the Investment Banks are both doing a Trading Multiple SOTP, based on CCA of multiples of companies similar to APMM.

Another difference in that is that the Investment Banks have the available information detailed for the four segments while in the CCA methods in the thesis is only segmented into two, as considered that the companies in the Ocean Segment deal with the other business segments.

By taking that information into account, were it to generate a Price Target Estimate on the similar method, by ignoring the DCF model estimates, the end result would be closer to the values determined by the Investment Bank reports of a Price Target of 11.470 DKK and given a Hold Recommendation. As such, it is possible to understand that the *intrinsic* valuation method is pulling downward the value of the Price of the share, as a comparison with the *relative* methods.

As for the comparison made with the MarketScreener Report, the basic assumptions for the comparative analysis maintained the same date as the cut-off date of 01st March 2024, as for the WACC estimation. The only adjustment made was the introduction of Equity and Debt Market Value as of 01/03/2024, instead of the $^1/_3$ *to* $^2/_3$ assumption made earlier.

From this, it was generated a WACC of 7,54% and considered the same Peers as considered for the analysis of 31st of December 2024. With this, it was able to obtain a price target of 1.798 USD, which was in line with the Average target price report by the 19 analysts included in the report, of 1.788 USD. While a majority of the analysts opted for a Hold position, there were various opinions ranging from Sell to Buy.

With this report's comparison, while most estimates of Revenues are within expectations of the forecast generated, there is some expectation of experiencing negative Net Income for 2024 and 2025. Nevertheless, the report basis does not hold details of the 19-analyst consensus, and as such not enough information is available to determine the reason of the outliers of High Price Target of 2.541 USD and Low Price Target of 1.187 USD.

From the comparable analysis made, the recommendation would be similar to the previous Recommendation, with an expectancy of Outperforming.

Table 23: *Financial Reports Comparison – 01/03/2024 – author's analysis*

Method	Weight	Target USD	Target DKK
DCF	90%	1.781	12.278
F12M CCA - EV / Revenue	5%	2.427	16.731
F12M CCA - EV / EBITDA	5%	1.467	10.113
	100%	**1.798**	**12.392**
Lower-Bound	-5%	1.708	11.772
Upper-Bound	5%	1.888	13.012
Market Value as of 01/03/2024		MAERSKb.CO	9.622

Appendices

Appendix A: Financials Estimates

Appendix A1: Historical Financials by Segment

Ocean Segment (values in USD million)	2018	2019	2020	2021	2022
Freight Revenue	24.925	24.466	24.920	42.374	56.499
Other revenue, including hubs	3.441	4.316	4.255	5.858	7.800
Revenue	28.366	28.782	29.175	48.232	64.299
Container handling costs	9.481	8.988	8.474	9.775	10.214
Bunker costs	5.042	4.566	3.835	5.369	8.077
Network costs, excluding bunker costs	7.053	7.025	6.625	7.189	7.516
Cost of goods sold and other opert costs	-	919	1.252	1.629	1.835
SGA and other costs	3.038	2.786	2.698	2.795	2.947
Total Operating Costs	24.614	24.284	22.884	26.757	30.589
Other income/costs, net	30	- 62	254	- 43	60
EBITDA	3.782	4.436	6.545	21.432	33.770
EBITDA margin	13,33%	15,41%	22,43%	44,44%	52,52%
EBIT	N/A	N/A	3.196	17.963	29.149
EBIT margin			10,95%	37,24%	45,33%
Other Metrics					
CAPEX	2.279	1.172	609	2.003	2.620
Loaded volumes (FEU in '000)	13.306	13.296	12.634	13.089	11.924
Loaded freight rate (USD per FEU)	1.879	1.883	2.000	3.318	4.628
Unit cost, fixed bunker (USD per FEU inc. VSA income)	1.808	1.954	1.973	2.102	2.444
Bunker price, average (USD per tonne)	424	412	372	484	763
Bunker consumption (tonne in '000)	11.894	11.092	10.322	11.090	10.579
Average nominal fleet capacity (TEU in '000)	4.115	4.132	4.081	4.171	4.285
Fleet owned (end of period)	303	307	301	311	318
Fleet chartered (end of period)	407	401	405	427	389
Loaded volumes	13.306	13.296	12.634	13.089	11.924
East-West	4.186	6.194	5.948	6.151	5.483
North-South	6.450	4.268	3.900	3.975	3.763
Intra-Regional	2.670	2.834	2.786	2.963	2.678
Average freight rates	1.879	1.853	2.000	3.318	4.628
East-West	1.860	1.760	2.008	3.417	5.081
North-South	2.078	2.347	2.529	4.108	5.424
Intra-Regional	1.478	1.366	1.345	2.128	2.771

Towage and Maritime Services (values in USD million)	2018	2019	2020	2021	2022
Revenue	2.787	1.376	1.254	2.082	2.293
Costs	2.624	1.240	1.089	1.726	1.924
EBITDA	163	136	165	356	369
EBITDA margin	5,8%	9,9%	13,2%	17,1%	16,1%
CAPEX		204	33	203	350
Number of operational tug jobs ('000)	131	134	138	138	146
Annualised EBITDA per tug (USD in '000)	892	889	956	913	

Logistics & Services (values in USD million)	2018	2019	2020	2021	2022
Revenue	6.082	6.331	6.963	9.830	14.423
Direct cost	4.961	5.091	5.328	7.396	10.717
Gross Profit	1.121	1.240	1.635	2.434	3.706
SGA and other costs	930	1.024	1.181	1.527	2.328
EBITDA	191	216	454	907	1.378
EBITDA margin	3,14%	3,41%	6,52%	9,23%	9,55%
EBIT	76	19	264	623	814
Other Metrics					
CAPEX	47	126	153	460	657
EBIT conversion (EBIT/gross profit - %)	6,80%	1,50%	16,10%	25,60%	22,00%
Managed by Maersk revenue	-	-	1.014	1.578	2.343
Fulfilled by Maersk revenue	-	-	1.457	2.320	3.898
Transported by Maersk revenue	-	-	4.492	5.932	8.182
Supply chain management volumes ('000 cbm)	75.309	71.664	77.023	98.394	110.264
Supply chain management revenue	867	861	-	-	-
Intermodal revenue	2.569	2.527	-	-	-
Intermodal volumes ('000 FEU)	-	3.789	3.640	4.491	4.526
Inland services revenue	595	576	-	-	-
Sea freight volumes (TEU)	639.132	475.210	401.369	133.452	-
Sea freight revenue	646	546	-	-	-
Air freight volumes (tonne)	175.502	158.405	138.086	163.838	211.484
Air freight revenue	608	485	-	-	-
Other services revenue	797	970	-	-	-

Terminal (values in USD million)	2018	2019	2020	2021	2022
Revenue	3.772	3.948	3.807	4.000	4.371
Concession fees	262	249	287	339	362
Labour cost (Blue collar)	1.222	1.313	1.236	1.151	1.270
Other operational cost	651	628	520	559	638
SGA and other costs	639	640	559	496	566
Total Operating Costs	2.774	2.830	2.602	2.545	2.836
EBITDA	998	1.118	1.205	1.455	1.535
EBITDA margin	26,46%	28,32%	31,65%	36,38%	35,12%
Other Metrics					
CAPEX	556	532	457	304	516
Terminal volumes - financially cons. (moves, m)	11,4	11,9	11,5	12,8	12,8
Ocean segment	4,1	4,1	4,1	4,5	4,6
External costumers	7,3	7,8	7,4	8,3	8,2
Terminal revenue per move (USD)	252	272	275	312	341
Terminal unit cost per move (USD)	211	233	232	242	263
Result from joint ventures and assoc comp	164	206	319	297	-46

Appendix A2: 2023 Estimates by Segmented

Ocean (values in USD million)	Q1	Q2	Q3	EQ4	E2023	Assumptions	Notes
Freight Revenue	8.431	7.414	6.687	5.805	28.337		
Other revenue, including hubs	1.442	1.289	1.210	871	4.812	15%	15% of Freight Revenues
Revenue	**9.873**	**8.703**	**7.897**	**6.675**	**33.148**		
Container handling costs	2.262	2.258	2.360	2.408	9.288	5%	Growth in line with the growth in loaded volumes
Bunker costs	1.507	1.440	1.470	1.612	6.029		
Network costs, excluding bunker costs	1.689	1.692	1.799	1.727	6.907		Average of the first 3 quarters
Cost of goods sold and other opert costs	337	358	318	338	1.351		Average of the first 3 quarters
SGA and other costs	770	711	754	671	2.906	10%	Considered a reduction of 10% following the restructuring announcement with personnel layoff
Total Operating Costs	**6.565**	**6.459**	**6.701**	**6.754**	**26.479**		
Other income/costs, net	44	15	- 63	-	- 4		Residual
EBITDA	**3.352**	**2.259**	**1.133**	**- 79**	**6.669**		
EBITDA margin	34%	26%	14%	-1%	20%		
EBIT	**1.969**	**1.205**	**- 27**	**- 746**	**2.401**		
EBIT margin	20%	14%	0%	-11%	6%	10,0%	EBIT Margin considered 10% lower than EBITDA Margin
Other metrics							
CAPEX	538	314	443	650	1.945	20%	Expected new vessels end of year/new year - Reduced expectations of CAPEX following Q3 presentation
Depreciation	1.383	1.054	1.160	668	4.265		
Loaded volumes (FEU in '000)	2.724	2.906	3.166	3.079	11.875	5%	5% growth on the avg. of the first 3Q - Assumption that values will keep around last year's (Rasmussen, 2023)
Loaded freight rate (USD per FEU)	2.871	2.444	2.095	1.886	2.324	10%	Assumed reduction of rates by 10% - going to averages similar to 2018 and 2019
Bunker price, average (USD per tonne)	625	592	593	660	618		Estimated average obtained from Ship and Bunker website
Bunker consumption (tonne in '000)	2.412	2.432	2.481	2.442	9.767		

Towage and Maritime Services (values in USD million)	Q1	Q2	Q3	EQ4	E2023	Assumptions	Notes
Revenue	602	504	483	560	2.149		Revenue for Q4 around the average of 560M USD - considering average of Q1 and Q2 since Q3 had divestment (value similar to Q4 2022)
Costs	519	445	393	476	1.833	85%	85% of Revenue
EBITDA	**83**	**59**	**90**	**84**	**316**		
EBITDA margin	13,80%	11,70%	18,60%	15,00%	14,70%		
EBIT	**85**	**71**	**194**	**79**	**429**		
EBIT margin	14,10%	14,10%	40,20%	14,10%	20,0%	14,1%	Assumption of the same EBIT margin
CAPEX	64	99	60	70	293		Around the average of investment
Depreciation	2	12	104	- 5	113		

Logistics & Services (values in USD million)	Q1	Q2	Q3	EQ4	E2023	Assumptions	Notes
Revenue	3.471	3.386	3.517	3.631	14.005	5%	Growth in line with the growth in loaded volumes Ocean values
Direct cost	2.429	2.341	2.432	2.542	9.744	70%	Average costs on top of revenue
Gross Profit	**1.042**	**1.045**	**1.085**	**1.089**	**4.261**		
SGA and other costs	726	734	746	744	2.950		
EBITDA	**316**	**311**	**339**	**345**	**1.311**	9,50%	Average of the EBITDA Margin
EBITDA margin	9,1%	9,2%	9,6%	9,5%	9,4%		
EBIT	**135**	**115**	**136**	**127**	**513**	3,5%	Average of the EBIT Margin
EBIT margin	3,9%	3,4%	3,9%	3,5%	3,7%		
Other Metrics							
CAPEX	128	223	196	200	747		Assumption of maintaining the CAPEX value
Depreciation	181	196	203	218	798		

Terminals (values in USD million)	Q1	Q2	Q3	EQ4	E2023	Assumptions	Notes
Revenue	**876**	**950**	**999**	**996**	**3.821**		
Concession fees	65	78	88	77	308	77	Average of quarter values
Labour cost (Blue collar)	247	284	291	288	1.110	5%	Growth in line with the growth in loaded volumes Ocean values
Other operational cost	147	127	131	142	547	5%	Growth in line with the growth in loaded volumes Ocean values
SGA and other costs	126	130	136	131	523	131	Average of quarter values
Total Operating Costs	**585**	**619**	**646**	**637**	**2.487**		
EBITDA	**291**	**331**	**353**	**359**	**1.334**		
EBITDA margin	33,2%	34,8%	35,3%	36,0%	34,9%		
EBIT	**207**	**269**	**270**	**249**	**995**	249	Average of quarter values
EBIT margin	23,6%	28,3%	27,0%	25,0%	26,0%		
Other Metrics							
CAPEX	111	97	113	107	428	107	Average of the 3Q's observed
Depreciation	84	62	83	110	339		
Terminal volumes - financially cons. (moves in '000)	2.816	3.052	3.168	3.163	12.199	5%	Growth in line with the growth in loaded volumes Ocean values
Terminal revenue per move (USD)	309	310	314	315	312		Assuming the revenue per move will not drop

Appendix A3: Segmented Estimates 2024-2029

Ocean Segment (values in USD million)	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assumptions	Notes
Freight Revenue	28.337	24.224	25.203	26.221	27.280	28.382	29.529		
Other revenue, including hubs	4.812	3.634	3.780	3.933	4.092	4.257	4.429	15%	15% of Freight Revenues
Revenue	**33.148**	**27.858**	**28.983**	**30.154**	**31.372**	**32.640**	**33.959**		
Container handling costs	9.288	9.250	9.435	9.624	9.816	10.012	10.213	9.250	Normalization of handling empties and other costs | + inflation expectation
Bunker costs	6.029	6.280	6.534	6.798	7.072	7.358	7.655		
Network costs, excluding bunker costs	6.907	7.000	7.140	7.283	7.428	7.577	7.729	7.000	Normalization of network costs compared to previous years | + inflation expectation.
Cost of goods sold and other opert costs	1.351	1.300	1.326	1.353	1.380	1.407	1.435	1.300	Normalization of costs compared to previous years | + inflation expectation.
SGA and other costs	2.906	2.306	2.352	2.399	2.447	2.496	2.545		1) Cost reduction of 600M expected in 2024 from job cuts (Reid, 2023) | + inflation expectation
Total Operating Costs	**26.479**	**26.136**	**26.786**	**27.455**	**28.143**	**28.850**	**29.578**		
Other income/costs, net	- 4	-	-	-	-	-	-		Residual
EBITDA	**6.669**	**1.722**	**2.197**	**2.699**	**3.229**	**3.789**	**4.381**		
EBITDA margin	20%	6%	8%	9%	10%	12%	13%		
EBIT	**2.401**	**- 1.064**	**- 702**	**- 317**	**92**	**525**	**985**		
EBIT margin	6%	-4%	-2%	-1%	0%	2%	3%	10,0%	EBIT Margin considered 10% lower than EBITDA Margin

(Ocean Segment continues in next page)

Ocean Segment (continuation)	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assumptions	Notes
Other metrics									
CAPEX	1.945	2.500	2.500	2.500	2.500	2.500	2.500	2.500	Expectation of high CAPEX for the new investments in ships
Depreciation	4.265	2.786	2.898	3.015	3.137	3.264	3.396		
Loaded volumes (FEU in '000)	11.875	12.112	12.354	12.601	12.853	13.111	13.373	2%	2024 onwards there is expectation that APMM will recover some of the Loaded volumes lost in the last couple years | 2% yearly growth of the loaded volumes - will bring back to values at least similar to previous COVID
Loaded freight rate (USD per FEU)	2.324	2.000	2.040	2.081	2.122	2.165	2.208		Basis for 2024 is 2.000 USD/FEU, under the assumption that in 2024 there will pressure downwards on the price, considering the still high inflation expectation and high inflation rates. This value is not expected to drop further, because of surcharges that will be implemented in some routes due to geopolitical risk - Israel; Cape Boa Esperança divergence needs. Assumption for 2025 onward is growth in line with expected inflation of 2%
Bunker price, average (USD per tonne)	618	610	622	635	647	660	673		Assumption that the Bunker price will not shift much from the 610 mark (Latest Oil Price Outlook Puts VLSFO Bunker Prices in the $600's Until 2024, n.d.) Assumption for 2025 onward is growth in line with expected inflation of 2%
Bunker consumption (tonne in '000)	9.767	10.295	10.501	10.711	10.925	11.144	11.367	85%	Bunker Consumption has been, on average, around 85% of loaded volumes

Towage and Maritime Services (values in USD million)	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assumptions	Notes
Revenue	2.149	1.945	1.964	1.984	2.004	2.024	2.044	13,30%	Expected CAGR 13,3% from 2023 to 2030- (Tugboats Market Size, Share & Key Industry Players [2030], n.d.) | Svitzer brand is already considered one of the largest fleets worldwide and stable in terms of business growth and weights only around **30% of this Segment**, thus will be only considered that they will capture **approx.. 25% of the CAGR** This segment is constant target of restructuring through **divestments** of non-essential business to the AP Moller Mission, thus, after divestments in 2023 (Maersk Supply Services; US Marine Management Inc), it is expected for 2024 that the revenue **of non-Svitzer related areas to be reduced - est. 15%**
Costs	1.833	1.673	1.689	1.706	1.723	1.740	1.758	86,0%	86% of Revenue
EBITDA	**316**	**272**	**275**	**278**	**281**	**283**	**286**		
EBITDA margin	14,70%	14,00%	14,00%	14,00%	14,00%	14,00%	14,00%	14,00%	Average Margin obtained in the last five years - stable segment with some divestments
EBIT	**429**	**233**	**236**	**238**	**240**	**243**	**245**		
EBIT margin	20,0%	12,0%	12,0%	12,0%	12,0%	12,0%	12,0%	12,0%	
CAPEX	293	150	150	150	150	150	150	150	Reduction for the following years - keep constant for the need of reinvestment in greener tugs
Depreciation	113	39	39	40	40	40	41		

Logistics & Services (values in USD million)	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assumptions	Notes
Revenue	14.005	14.705	15.440	16.212	17.023	17.874	18.768	5%	Given various reports presenting CAGR for the following years ranging from 4,57% to 10,7%, and considering the latter an outlier range, it was considered around 5% (not considering the high investment in M&A of companies in the sector)
Direct cost	9.744	10.294	10.808	11.349	11.916	12.512	13.138	70%	Average costs on top of revenue
Gross Profit	**4.261**	**4.412**	**4.632**	**4.864**	**5.107**	**5.362**	**5.630**		
SGA and other costs	2.950	2.941	3.088	3.242	3.405	3.575	3.754		
EBITDA	**1.311**	**1.471**	**1.544**	**1.621**	**1.702**	**1.787**	**1.877**	10,00%	EBITDA Margin Assumption - Assumption under the target expectation of APMM Organic revenue growth of 10%
EBITDA margin	9,4%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%		
EBIT	**513**	**882**	**926**	**973**	**1.021**	**1.072**	**1.126**	6,0%	EBIT Margin Assumption - Assumption under the target expectation of APMM EBIT margin of 6%
EBIT margin	3,7%	6,0%	6,0%	6,0%	6,0%	6,0%	6,0%		
Other Metrics									
CAPEX	747	800	800	800	800	800	800	800	High investment dedication on automation and IoT new Tech, as well as expansion on the Vertical Integration
Depreciation	798	588	618	648	681	715	751		

Terminals (values in USD million)	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assumptions	Notes
Revenue	**3.821**	**3.921**	**4.039**	**4.161**	**4.287**	**4.416**	**4.550**		
Concession fees	308	350	350	350	350	350	350	350	Assumption of fixed Concession Fees - Fluctuation depends on Governments decisions
Labour cost (Blue collar)	1.110	1.132	1.155	1.178	1.201	1.225	1.250		Expectation of growth of the cost in line with inflation
Other operational cost	547	600	600	600	600	600	600	600	Assumption for fixed other operational costs - Not dependable on other variables
SGA and other costs	523	533	544	555	566	577	589		Expectation of growth of the cost in line with inflation
Total Operating Costs	**2.487**	**2.615**	**2.648**	**2.682**	**2.717**	**2.752**	**2.788**		
EBITDA	**1.334**	**1.306**	**1.391**	**1.479**	**1.570**	**1.664**	**1.762**		
EBITDA margin	34,9%	33,3%	34,4%	35,5%	36,6%	37,7%	38,7%		
EBIT	**995**	**980**	**1.010**	**1.040**	**1.072**	**1.104**	**1.137**		
EBIT margin	26,0%	25,0%	25,0%	25,0%	25,0%	25,0%	25,0%	25,0%	
Other Metrics									
CAPEX	428	700	700	700	700	700	700	700	Various investments worldwide for capacity increase, expansion, and operation's enhancements
Depreciation	339	326	381	439	498	560	624		
Terminal volumes - financially cons. (moves in '000)	12.199	12.443	12.691	12.945	13.204	13.468	13.738	2%	This segment is subject to active reinvestment in improving capacity - previous 5 years CAGR 2,3%; Consideration of CAGR for the following years of 2% in terminal volumes.
Terminal revenue per move (USD)	312	315	318	321	325	328	331	1%	Inflation expectations of 2% - Expected revenue increase per move of around 1% OECD (2024), Inflation forecast (indicator). doi: 10.1787/598f4aa4-en (Accessed on 13 February 2024)

Appendix A4: SOTP Estimates

In this section, is presented the calculation estimates for the consolidation of the Segments into the Group main factors of the Income Statement, following the estimates determined in the previous appendixes. As for the other/eliminations information, it was observed the values determined by Maersk previous reports and determined a rule for the future estimates.

Values in Million USD

Revenue | Segments	2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Est.	Notes
Ocean	28.366	28.782	29.175	48.232	64.299	33.148	27.858	28.983	30.154	31.372	32.640	33.959		
Logistics & Services	6.082	6.331	6.963	9.830	14.423	14.005	14.705	15.440	16.212	17.023	17.874	18.768		
Terminals	3.772	3.948	3.807	4.000	4.371	3.821	3.921	4.039	4.161	4.287	4.416	4.550		
Towage &Maritime Services	2.787	1.376	1.254	2.082	2.293	2.149	1.945	1.964	1.984	2.004	2.024	2.044		
Other/Elimin.	- 1.727	- 1.547	- 1.459	- 2.357	- 3.857	- 2.391	- 2.179	- 2.269	- 2.363	- 2.461	- 2.563	- 2.669	4,5%	Around prev. Years
Group	39.280	38.890	39.740	61.787	81.529	50.733	46.249	48.158	50.149	52.225	54.391	56.651		
Eli	4,2%	3,8%	3,5%	3,7%	4,5%									

Direct Costs | Segments	2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Est.	Notes
Ocean	21.576	21.498	20.186	23.962	27.642	26.479	26.136	26.786	27.455	28.143	28.850	29.578		
Logistics & Services	5.891	6.115	6.509	8.923	13.045	12.694	13.235	13.896	14.591	15.321	16.087	16.891		
Terminals	2.774	2.830	2.602	2.545	2.836	2.487	2.615	2.648	2.682	2.717	2.752	2.788		
Towage &Maritime Services	2.624	1.240	1.089	1.726	1.924	1.833	1.673	1.689	1.706	1.723	1.740	1.758		
Other/Elimin.	2.434	1.199	787	417	- 727	- 2.294	- 2.132	- 2.215	- 2.302	- 2.393	- 2.488	- 2.586		
Group	35.299	32.882	31.173	37.573	44.720	41.199	41.526	42.805	44.133	45.511	46.942	48.428		
Eli	-7,4%	-3,8%	-2,6%	-1,1%	1,6%									

EBITDA | Segments		2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Est.	Notes
Ocean		3.782	4.436	6.545	21.432	33.770	6.669	1.722	2.197	2.699	3.229	3.789	4.381		
Logistics & Services		191	216	454	907	1.378	1.311	1.471	1.544	1.621	1.702	1.787	1.877		
Terminals		998	1.118	1.205	1.455	1.535	1.334	1.306	1.391	1.479	1.570	1.664	1.762		
Towage &Maritime Services		163	136	165	356	369	316	272	275	278	281	283	286		
Other/Elimin.		- 1.153	102	198	64	- 243	- 96	- 48	- 54	- 61	- 68	- 75	- 83	1%	Around prev. Years
Group		3.981	6.008	8.567	24.214	36.809	9.534	4.723	5.353	6.016	6.714	7.449	8.222		
	Eli	22,5%	-1,7%	-2,4%	-0,3%	0,7%									

EBIT | Segments		2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Est.	Notes
Ocean		N/A	N/A	3.196	17.963	29.149	2.401	- 1.064	- 702	- 317	92	525	985		
Logistics & Services		76	19	264	623	814	513	882	926	973	1.021	1.072	1.126		
Terminals		N/A	N/A	609	532	515	995	980	1.010	1.040	1.072	1.104	1.137		
Towage &Maritime Services							429	233	236	238	240	243	245		
Other/Elimin.							- 318	- 48	- 54	- 61	- 68	- 75	- 83		
Group		254	1.721	4.127	19.620	30.849	4.019	985	1.416	1.874	2.358	2.870	3.411		
	Eli	0,0%	0,0%	0,0%	0,0%	0,0%	7,3%	4,6%	3,7%	3,1%	2,8%	2,6%	2,4%		

Depreciation | Segments		2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Est.	Notes
Ocean		N/A	N/A	3.438	3.570	4.762	4.265	2.786	2.898	3.015	3.137	3.264	3.396		
Logistics & Services		N/A	N/A	228	297	517	798	588	618	648	681	715	751		
Terminals		N/A	N/A	609	532	515	339	326	381	439	498	560	624		
Towage &Maritime Services		N/A	N/A	110	204	179	113	39	39	40	40	40	41		
Other/Elimin.		N/A	N/A	55	- 9	- 13	-	-	-	-	-	-	-		Null assump.
Group		3.727	4.287	4.440	4.594	5.960	5.515	3.739	3.936	4.142	4.357	4.579	4.811		
	Eli	N/A	N/A	-1,3%	0,2%	0,2%									

CAPEX | Segments		2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Est.	Notes
Ocean		2.279	1.172	609	2.003	2.620	1.945	2.500	2.500	2.500	2.500	2.500	2.500		
Logistics & Services		47	126	153	460	657	747	800	800	800	800	800	800		
Terminals		556	532	457	304	516	428	700	700	700	700	700	700		
Towage &Maritime Services		337	204	33	203	350	293	150	150	150	150	150	150		
Other/Elimin.		-	1	70	6	20	-	-	-	-	-	-	-		Null assump.
Group		3.219	2.035	1.322	2.976	4.163	3.413	4.150	4.150	4.150	4.150	4.150	4.150		
	Eli	0,0%	0,0%	-5,6%	-0,2%	-0,5%									

Appendix A5: Consolidated Income Statement

USD million

Income Statement	2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assump.	Notes
Revenue	**39.280**	**38.890**	**39.740**	**61.787**	**81.529**	**50.733**	**46.249**	**48.158**	**50.149**	**52.225**	**54.391**	**56.651**		
Costs	- 35.299	- 32.882	- 31.173	- 37.573	- 44.720	- 41.199	- 41.526	- 42.805	- 44.133	- 45.511	- 46.942	- 48.428		
EBITDA	**3.981**	**6.008**	**8.567**	**24.214**	**36.809**	**9.534**	**4.723**	**5.353**	**6.016**	**6.714**	**7.449**	**8.222**		
Depreciation & Amortization	- 3.727	- 4.287	- 4.440	- 4.594	- 5.960	- 5.515	- 3.739	- 3.936	- 4.142	- 4.357	- 4.579	- 4.811		
EBIT	254	1.721	4.127	19.620	30.849	4.019	985	1.416	1.874	2.358	2.870	3.411		
Interest	- 425	- 754	- 820	- 893	- 618	- 782	- 792	- 792	- 770	- 744	- 769	- 769	5%	* Assumption of 5% interest over last year total Debt
Profit/Loss before tax	- 171	967	3.307	18.727	30.231	3.237	192	624	1.104	1.614	2.101	2.642		
Tax	- 398	- 458	- 407	- 697	- 910	- 475	- 484	- 494	- 504	- 514	- 524	- 535	4%	** Tonnage Tax Estimation of 4% of Loaded volumes (FEU in '000)
Extraordinary Items	3.787	- 553	-	-	-	-	-	-	-	-	-	-		Assumption of no relevance
Net Income	3.218	- 44	2.900	18.030	29.321	2.762	- 292	130	600	1.100	1.576	2.107		
Effective tax rate	233%	-47%	-12%	-4%	-3%	-15%	-252%	-79%	-46%	-32%	-25%	-20%		

* Maersk has most of it's borrowing and Lease Liabilities (78%) ranging from 3-6%. Over the last years, the average is around 5%, so it will be assumed for the years to come.

** Assumption of 4% of the Loaded volumes (FEU in '000) considering that most of the taxes paid by Maersk is based on the Tonnage Tax. Based on the average of the last years, it was considered aroung 4%, and 2022 being an outlier.

Appendix A6: Consolidated Balance Sheet & Debt Structure

AP Moeller - Maersk A/S | Balance Sheet

in Millions of U.S. Dollars	2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assum.	Notes
Current Assets														
Cash and Short-Term Investments	5.311	4.770	5.866	11.835	10.999	10.382	8.527	7.505	5.900	6.942	8.564	11.335		
Cash	2.863	4.768	5.865	11.832	10.057	10.382	8.527	7.505	5.900	6.942	8.564	11.335		
Short Term Investments	2.448	2	1	3	942	0	0	0	0	0	0	0		
Accounts Receivable - Trade, Net	3.815	3.531	3.634	5.403	6.971	4.170	3.801	3.958	4.122	4.292	4.471	4.656		
Days Receivable Outstanding	35	33	33	32	31	30	30	30	30	30	30	30	30	Assumption of 30 days for accounts receivable
Total Receivables, Net	1.237	1.257	1.198	6.126	18.977	16.100	16.100	16.100	16.100	16.100	16.100	16.100		
Notes Receivable - Short Term	199	239	91	5.131	17.652	15.000	15.000	15.000	15.000	15.000	15.000	15.000		
Receivables - Other	1.038	1.018	1.107	995	1.325	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	Assuming around average of last years
Total Inventory	1.073	1.430	1.049	1.457	1.604	1.580	1.593	1.642	1.693	1.746	1.801	1.858		
Days Inventory Outstanding	11	16	12	14	13	14	14	14	14	14	14	14	14	Assumption of 14 days for inventory
Prepaid Expenses	554	520	464	542	1.245	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	Assuming that the value will be around of observed in 2022
Other Current Assets, Total	5.986	192	525	439	267	150	150	150	150	150	150	150		
Discontinued Operations - Current Asset	5.905	149	218	399	69	0	0	0	0	0	0	0	0	Perspective of No relevance
Other Current Assets	81	43	307	40	198	150	150	150	150	150	150	150	150	Assuming around average of last 3 years
Total Current Assets	17.976	11.700	12.736	25.802	40.063	33.382	31.172	30.355	28.965	30.230	32.085	35.099		

(Non-current assets in next page)

in Millions of U.S. Dollars	2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assum.	Notes
Non- Current Assets														
Property/Plant/Equipment, Total - Gross	56.371	61.085	61.648	66.833	70.171	72.605	75.805	78.974	82.111	85.216	88.290	91.334		
Machinery/Equipment - Gross	48.122	51.830	52.948	55.750	56.908	58.612	61.134	64.303	67.440	70.545	73.619	76.663	1%	Last year construction added next year; -1% disposal
Construction in Progress - Gross	1.600	795	377	1.177	2.296	3.140	3.818	3.818	3.818	3.818	3.818	3.818	92%	For simplification, CAPEX considering in progress
Right-of-use Assets - Gross	6.649	8.460	8.323	9.906	10.967	10.853	10.853	10.853	10.853	10.853	10.853	10.853		Values shall vary according to Lease contracts established
Property/Plant/Equipment, Total - Net	31.107	35.976	34.804	37.209	39.161	37.906	39.290	40.545	41.668	42.657	43.509	44.220	5%	
Accumulated Depreciation, Total	-25.264	-25.109	-26.844	-29.624	-31.010	-34.699	-36.515	-38.429	-40.443	-42.559	-44.782	-47.114	95%	Assuming 95% of Dep. With 5% disposal
Goodwill, Net	645	637	968	1.561	5.205	5.205	5.205	5.205	5.205	5.205	5.205	5.205		
Goodwill - Gross	1.039	1.060	1.422	1.928	5.554	5.554	5.554	5.554	5.554	5.554	5.554	5.554	5.554	Basis assumption of no new Goodwill (no acquisition)
Accumulated Goodwill Amortization	-394	-423	-454	-367	-349	-349	-349	-349	-349	-349	-349	-349	-349	
Intangibles, Net	3.633	3.582	4.177	4.208	5.580	5.577	5.722	5.858	5.982	6.097	6.200	6.291		
Intangibles - Gross	4.676	4.804	5.633	5.916	7.399	7.672	8.004	8.336	8.668	9.000	9.332	9.664	8%	Assuming 8% of CAPEX
Accumulated Intangible Amortization	-1.043	-1.222	-1.456	-1.708	-1.819	-2.095	-2.282	-2.478	-2.686	-2.903	-3.132	-3.373	5%	Assuming 5% of Dep, with no Impairments, disposals, etc.
Long Term Investments	2.131	2.219	2.318	2.739	2.395	2.350	2.350	2.350	2.350	2.350	2.350	2.350		
LT Investment - Affiliate Companies	2.087	2.141	2.211	2.421	2.018	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	
LT Investments - Other	44	78	107	318	377	350	350	350	350	350	350	350	350	
Note Receivable - Long Term	444	478	371	215	733	0	0	0	0	0	0	0		
Other Long-Term Assets, Total	686	807	743	537	543	500	500	500	500	500	500	500		
Pension Benefits - Overfunded	285	409	225	148	134	150	150	150	150	150	150	150	150	
Deferred Income Tax - Long Term Asset	267	237	249	356	399	350	350	350	350	350	350	350	350	Assuming around average of last 3 years
Other Long-Term Assets	134	161	269	33	10	0	0	0	0	0	0	0	0	Perspective of no relevance
Total Non-Current Assets	38.646	43.699	43.381	46.469	53.617	51.539	53.068	54.457	55.705	56.808	57.763	58.566		
Total Assets	56.622	55.399	56.117	72.271	93.680	84.921	84.239	84.812	84.670	87.038	89.848	93.666		

in Millions of U.S. Dollars	2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assum.	Notes
Current Liabilities														
Accounts Payable	5.281	5.567	5.156	6.241	6.804	6.772	6.826	7.036	7.255	7.481	7.716	7.961		
Days Payable Outstanding (DPO)	55	62	60	61	56	60	60	60	60	60	60	60	60	Assumption of 60 days for accounts payable
Current Port. of LT Debt/Capital Leases	1.994	2.003	2.149	2.867	3.287	3.250	3.701	4.271	3.250	3.250	3.250	3.750		
Other Current liabilities, Total	4.124	2.265	2.749	2.985	3.230	2.945	2.945	2.945	2.945	2.945	2.945	2.945		
Customer Advances	181	168	121	110	102	120	120	120	120	120	120	120	120	Assuming around average of last years
Income Taxes Payable	427	307	305	424	569	425	425	425	425	425	425	425	425	Assuming around average of last years
Other Payables	938	1.170	1.279	1.333	1.696	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	Assuming around average of last 3 years
Discontinued Operations - Curr Liability	1.949	75	91	244	9	0	0	0	0	0	0	0	0	Perspective of no relevance
Other Current Liabilities	629	545	953	874	854	900	900	900	900	900	900	900	900	Assuming around average of last 3 years
Total Current Liabilities	11.399	9.835	10.054	12.093	13.321	12.967	13.472	14.253	13.450	13.676	13.911	14.656		
Non-Current Liabilities														
Total Long-Term Debt	9.894	14.750	13.224	12.468	12.356	12.600	12.149	11.128	11.628	12.128	12.128	11.628		
Long Term Debt	8.036	7.455	5.868	4.315	3.774	4.100	3.649	2.628	3.128	3.628	3.628	3.128		
Capital Lease Obligations	1.858	7.295	7.356	8.153	8.582	8.500	8.500	8.500	8.500	8.500	8.500	8.500		
Deferred Income Tax	372	362	525	520	883	900	900	900	900	900	900	900	900	Estimation around last year value (integration of other business)
Minority Interest	771	739	1.004	1.080	1.041	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	Assuming around average of last 3 years
Other Liabilities, Total	1.577	1.615	1.460	1.602	2.088	1.700	1.700	1.700	1.700	1.700	1.700	1.700		
Provisions	728	636	556	692	842	750	750	750	750	750	750	750	750	Assuming around average of last years
Pension Benefits - Underfunded	259	272	297	215	191	200	200	200	200	200	200	200	200	Maintenance of the value of 2022
Other Long-Term Liabilities	590	707	607	695	1.055	750	750	750	750	750	750	750	750	Assuming around average of last years
Total Non-Current Liabilities	12.614	17.466	16.213	15.670	16.368	16.200	15.749	14.728	15.228	15.728	15.728	15.228		
Total Liabilities	24.013	27.301	26.267	27.763	29.689	29.167	29.221	28.981	28.677	29.404	29.639	29.884		

in Millions of U.S. Dollars	2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assum.	Notes
Shareholders' Equity														
Common Stock, Total	3.774	3.774	3.632	3.513	3.392	3.392	3.392	3.392	3.392	3.392	3.392	3.392		
Retained Earnings (Accumulated Deficit)	29.756	25.117	26.698	41.787	61.646	53.361	52.626	53.440	53.601	55.242	57.817	61.390		
Unrealized Gain (Loss)	-202	-4	-6	135	212	0	0	0	0	0	0	0		
Other Equity, Total	-719	-789	-474	-927	-1.259	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	Average Assumption
Translation Adjustment	-616	-692	-432	-767	-1.232									
Other Comprehensive Income	-103	-97	-42	-160	-27									
Total Equity	32.609	28.098	29.850	44.508	63.991	55.753	55.018	55.832	55.993	57.634	60.209	63.782		
Total Liabilities & Shareholders' Equity	56.622	55.399	56.117	72.271	93.680	84.921	84.239	84.812	84.670	87.038	89.848	93.666		

in Millions of U.S. Dollars	2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assum.	Notes
[Total Debt]	11.888	16.753	15.373	15.335	15.643	15.850	15.850	15.399	14.878	15.378	15.378	15.378		
	-6,34%	-4,89%	-5,81%	-4,03%	-5,00%	-5%	-5%	-5%	-5%	-5%	-5%	N/A		
			TOTAL	1.443	1.053	1.000	1.000	1.000	1.000	1.000	1.000	1.000		
	Bank and other Credit Inst.		Current	469	255	250	250	250	250	250	250	250		Considering a revolving debt around 1B
			Non-Current	974	798	750	750	750	750	750	750	750		
			TOTAL	3.341	2.976	3.350	3.350	2.899	2.378	2.878	2.878	2.878		
	Issued Bonds		Current	0	0	0	451	1.021	0	0	0	500		Bonds are repayable in 2025 and 2026.
			Non-Current	3.341	2.976	3.350	2.899	1.878	2.378	2.878	2.878	2.378		
			TOTAL	10.551	11.614	11.500	11.500	11.500	11.500	11.500	11.500	11.500		
	Leases		Current	2.398	3.032	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	Considering high need for continued leases
			Non-Current	8.153	8.582	8.500	8.500	8.500	8.500	8.500	8.500	8.500	8.500	Considering high need for continued leases

Appendix A7: Consolidated Cash-Flow

AP Moeller - Maersk A/S | Cash Flow

in Millions of U.S. Dollars	2018	2019	2020	2021	2022	E2023	E2024	E2025	E2026	E2027	E2028	E2029	Assump.	Notes
Cash Flow-Operating Activities														
EBIT	221	1.725	4.186	19.674	30.860	4.019	985	1.416	1.874	2.358	2.870	3.411		
Depreciation/Depletion	3.727	4.287	4.440	4.594	5.960	5.515	3.739	3.936	4.142	4.357	4.579	4.811		
Non-Cash Items	3.967	-450	-135	-54	246	0	0	0	0	0	0	0		
Changes in Working Capital	-711	486	-239	-1.638	-1.789	2.833	861	575	-1.018	3	2	502		
Accounts Receivable	0	195	-115	-1.909	-1.018	2.801	369	-157	-164	-171	-178	-186		
Inventory	0	0	0	0	0	24	-13	-49	-51	-53	-55	-57		
Prepaid Expenses	0	0	0	0	0	245	0	0	0	0	0	0		
Other Current Assets	0	0	0	0	0	117	0	0	0	0	0	0		
Accounts Payable	0	0	0	0	0	-32	54	210	218	227	235	244		
Accrued Expense	0	0	0	0	0	-37	451	571	-1.021	0	0	500		
Other Current Liabilities	0	0	0	0	0	-285	0	0	0	0	0	0		
Other Adjustment on Working Capital	-711	291	-124	271	-771	0	0	0	0	0	0	0		
Taxes paid	-381	-501	-424	-582	-801	-475	-484	-494	-504	-514	-524	-535		
Cash from Operating Activities	6.823	5.547	7.828	21.994	34.476	11.892	5.099	5.434	4.494	6.203	6.927	8.189		
Cash Flow-Investing Activities														
Capital Expenditures	-3.219	-2.035	-1.322	-2.976	-4.163	-3.413	-4.150	-4.150	-4.150	-4.150	-4.150	-4.150		
Other Investing Cash Flow Items, Total	3.865	2.909	298	-5.366	-17.456	3.544	918	950	981	1.013	1.044	1.074		
Acquisition of Business	-39	-84	-437	-815	-4.820	0	0	0	0	0	0	0	0	Assumption of no new Acquisition
Sale of Business	0	46	36	3	221	0	0	0	0	0	0	0	0	Assumption of no new Sale
Sale of Fixed Assets	432	186	435	205	303	592	618	650	681	713	744	774		
Sale of other equity investments	3.033	2.617	5	8	31	0	0	0	0	0	0	0	0	Assumption of no new Sale
Investment, Net	0	-153	82	-5.049	-13.518	2.652	0	0	0	0	0	0		
Dividends Received	439	297	177	282	327	300	300	300	300	300	300	300	300	Assuming Average of last years
Cash from Investing Activities	646	874	-1.024	-8.342	-21.619	131	-3.232	-3.200	-3.169	-3.137	-3.106	-3.076		

Cash Flow-Financing Activities														
Financing Cash Flow Items	-697	-793	-842	-736	-785	-782	-792	-792	-770	-744	-769	-769		
Total Cash Dividends Paid	-517	-469	-430	-1.017	-6.847	-8.796	-829	88	-39	-180	-330	-473	30%	"Paying dividends based on pay-out ratio of 30-50% of underlying net profit"
Issuance (Retirement) of Stock, Net	0	-791	-776	-1.934	-2.707	-2.000	-2.000	-2.000	-1.000	-1.000	-1.000	-1.000		
Sale of Treasury Shares	0	0	30	22	31	0	0	0	0	0	0	0		
Purchase of Treasury Shares	0	-791	-806	-1.956	-2.738	-2.000	-2.000	-2.000	-1.000	-1.000	-1.000	-1.000	-2000	Programme 12B over 2022-2025 or 3B annually initially, but taken a more conservative approach through 2023
Issuance (Retirement) of Debt, Net	-5.651	-2.747	-3.570	-4.213	-3.797	0	0	-451	-1.021	0	0	0		
Debt Issued	0	1.077	1.303	563	83	3.250	3.250	3.250	3.250	3.250	3.250	3.250		
Debt Reduction	-5.651	-3.824	-4.873	-4.776	-3.880	-3.250	-3.250	-3.701	-4.271	-3.250	-3.250	-3.250		
Cash from Financing Activities	-6.865	-4.800	-5.618	-7.900	-14.136	-11.578	-3.621	-3.156	-2.830	-1.924	-2.099	-2.242		

Foreign Exchange Effects	-1.904	-12	-80	-79	-249	-100	-100	-100	-100	-100	-100	-100	100	Average of last 4 years
Net Change in Cash	-1.300	1.609	1.106	5.673	-1.528	345	-1.854	-1.022	-1.605	1.042	1.622	2.772		

Appendix B: DCF Model

Appendix B1: Regression Estimates for Beta

For the CAPM model, several regression models were generated for the selection of the best fitting model for Maersk Returns. To this end monthly stock returns were retrieved from Refinitv and additional data for the estimations were obtained from the Kenneth French's library.

In first order, the focus was to obtain the model with the higher explanatory power, with the highest R^2, that is the 5FF. Nevertheless, after analyzing the statistical relevance of each added variables in 3FF and 5FF, it was possible to understand that the variables were not statistically significant at a 5% confidence level.

To that end, it was considered that the CAPM model is more adequate for its simplicity of the model. Nonetheless, additional tests were generated with different periods of data, to understand how the passage and historic events influence the model. In conclusion, the CAPM model with 5 years data was the model with the better significance.

	(1)	(2)	(3)	(4)	(5)
VARIABLES	CAPM_10Y	CAPM_5Y	CAPM_3Y	FF3_5Y	FF5_5Y
RMW					1.518
					(1.264)
CMA					0.405
					(1.206)
SMB				0.336	0.605
				(0.581)	(0.799)
HML				0.127	0.499
				(0.297)	(0.705)
MktRF	1.252***	1.346***	1.217***	1.303***	1.259***
	(0.168)	(0.224)	(0.339)	(0.241)	(0.273)
Constant	-0.0771	0.472	0.0273	0.539	0.275
	(0.687)	(1.029)	(1.295)	(1.022)	(1.174)
Observations	120	60	36	60	60
R-squared	0.392	0.496	0.421	0.500	0.522

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Reference:	
RMW	Robust Minus Weak
CMA	Conservative Minue Weak
SMB	Small Minus Big
HML	High Minus Low
MktRF	Excess return on the Market
Constant	Estimated Alpha

Appendix B2: WACC Estimates

in Millions of U.S. Dollars	02/11/2023	01/03/2024	31/12/2024
Equity Market Value	31.445	24.065	67%
Debt Market Value	15.509	15.662	33%
	46.954	39.727	100%

	02/11/2023	01/03/2024	31/12/2024	
Tax Rate - Marginal (Denmark)	22%	22%	22%	
Risk Free Rate (rf) - 10Y US Gov Bond	4,669%	4,182%	4,182%	
Long Term Growth Rate (perpetual growth)*	1,00%	1,00%	1,00%	
Exchange Rate	6,7447	6,8938	6,8938	
A shares - 2 votes per share----------[MAERSKa.CO]	10,1	10,1	10,1	in Millions
B shares - without voting right----------[MAERSKb.CO]	7,5	7,5	7,5	in Millions

*OECD & ECB have projections of real GDP growth of 1,5% for the Euro Area

Cost of Debt Estimation	02/11/2023	01/03/2024	31/12/2024	
1) Default Spread				
Risk Free Rate (rf) - 10Y US Gov Bond	4,669%	4,182%	4,182%	Since the accounts and most business is conducted in USD, we should consider the US long term rate
Long Term Rating		BBB+		As per quoted in thesis from S&P
Spread estimated	2,00%	1,47%	1,47%	Estimations from Damodaran - Posted in January 2023 and 2024 - adjusted for the analysed year
	6,669%	5,652%	5,652%	
2) Market Value of interest rate of quoted Bonds	4,622%	4,622%	4,622%	
Kd - Cost of Debt	5,645%	5,137%	5,137%	

Cost of Equity Estimation	02/11/2023	01/03/2024	31/12/2024	
Estimated Beta CAPM (5 years data Regression)	1,346	1,346	1,346	Further information on the estimation models - Consult STATA Appendix
Reported Market Beta (31/12/2023) - Refinitiv	1,41	1,41	1,41	Takes into account 5 years data
Adjusted Future Beta	1,231	1,231	1,231	Under the assumption that over time, the beta will tend closer to the mean of the market - to 1.
Risk Free Rate (rf) - 10Y US Gov Bond	4,669%	4,18%	4,18%	
Market Risk Premium - US	5,94%	4,60%	4,60%	Values obtained from Damodaran
Market Risk Premium - Denmark	5,94%	4,60%	4,60%	
Ke - Cost of Equity	11,980%	9,843%	9,843%	

WACC Estimation	02/11/2023	01/03/2024	31/12/2024	
Kd - Cost of Debt	5,645%	5,137%	5,137%	
Ke - Cost of Equity	11,980%	9,843%	9,843%	
Equity Market Value	31.445	24.065	67%	Assumption of maintaining a ratio of 1/3 to 2/3
Debt Market Value	15.509	15.662	33%	
Tax Rate - Marginal (Denmark)	22%	22%	22%	
WACC	9,48%	7,54%	7,90%	The WACC for the target price (31/12/2024) was calculated with the data available as of 01/03/2024

Appendix B3: Complete DCF Estimates

in Millions of U.S. Dollars		E2023	E2024	E2025	E2026	E2027	E2028	E2029 - TV
	FCFF	8.070	1.217	1.466	436	2.049	2.670	3.824
	PV FCFF 2023	1.286	1.096	1.206	327	1.405	1.673	28.264
	PV FCFF 03/2024	-	957	1.283	355	1.550	1.879	41.117
	PV FCFF 12/2024	-	-	1.359	375	1.631	1.970	40.898
		02/11/2023	**01/03/2024**	**31/12/2024**				
	Enterprise Value	**35.257**	**47.140**	**46.232**				
	Expected Debt 2023	**15.509**	**15.850**	**15.850**				
	Implied Equity Value	**19.748**	**31.290**	**30.382**				
			Target					
	Implied Share Price in USD	*1.124*	*1.781*	*1.729*				
	Implied Share Price in DKK	*7.581*	*12.278*	*11.919*				

Appendix B4: Sensitivity Guidance

In the following tables are shown the details of the estimates for the Sensitivity Analysis summary presented in Table 17. For each scenario, it was created in the possibility of impacts in factors that are considered crucial to the core business of the company as with factors that were estimated in the course of the valuation process, such as the WACC.

Sensitivity Analysis - Share Price in DKK	Terminal Value Growth				
Discount Rate - WACC	0,0%	0,5%	1%	1,50%	2,00%
6,90%	12.588	13.884	15.408	17.214	19.385
7,40%	11.147	12.250	13.526	15.022	16.793
7,90%	9.893	10.837	**11.919**	13.174	14.642
8,40%	8.790	9.603	10.534	11.602	12.829
8,90%	7.811	8.528	9.327	10.244	11.285

Discount Rate - WACC Steps	0,5%
Terminal Value Growth steps	0,5%

Sensitivity Analysis - Share Price in DKK	Container Freight Volumes FEU in '000				
Freight Rate USD/FEU	11.112	11.612	12.112	12.612	13.112
1.800	- 10.630	- 6.570	- 2.509	1.544	5.605
1.900	- 4.012	345	4.702	9.058	13.415
2.000	2.613	7.266	**11.919**	16.573	21.233
2.100	9.231	14.181	19.137	24.087	29.044
2.200	15.849	21.102	26.355	31.601	36.854

Container Freight Volume FEU	500
Freight Rate Steps USD/FEU	100

Sensitivity Analysis - Share Price in DKK	Bunker Consumption (Tonne in '000)				
Bunker Prices USD/Tonne	9.295	9.795	10.295	10.795	11.295
410	22.288	22.281	22.274	22.260	22.253
510	17.117	17.110	17.097	17.083	17.076
610	11.947	11.933	**11.919**	11.906	11.892
710	6.777	6.763	6.749	6.728	6.715
810	1.606	1.592	1.572	1.551	1.537

Bunker Consumption (Tonne in '000)	500
Bunker Prices USD per Tonne	100

Sensitivity Analysis - Share Price in DKK	Risk Free Rate (rf) - 10Y US Gov Bond				
Tax Rate - Marginal (Denmark)	3,2%	3,7%	4,182%	4,68%	5,18%
20,0%	14.491	13.071	11.823	10.706	9.713
21,0%	14.546	13.126	11.871	10.754	9.755
22,0%	14.608	13.181	**11.919**	10.803	9.803
23,0%	14.663	13.236	11.975	10.851	9.844
24,0%	14.725	13.291	12.023	10.899	9.893

Risk Free Rate Steps	0,5%
Tax Rate - Denmark	1,0%

Sensitivity Analysis - Share Price in DKK	Debt Weight				
Equity Weight	23%	28%	33%	38%	43%
57%					13.822
62%				12.829	
67%			**11.919**		
72%		11.085			
77%	10.320				

Weight change of Capital Structure	5%

Appendix C: Peer Analysis

Appendix C1: Peer Analysis Data as of 02/11/2023 – Historical Data

Values in M USD			31/12/2022								
Segment	RIC	Name	EBITDA	Revenue	CAPEX	MV 3 Year Hist. Growth	ROE - Total	ROIC	Cash	Debt	EV
Marine Freight & Logistics	MAERSKb.CO	AP Moeller - Maersk A/S	37.470	82.661	4.740	12,54%	56,08%	44,12%	10.027	15.596	35.740
	HLAG.DE	Hapag Lloyd AG	20.673	36.866	1.442	32,42%	77,33%	62,72%	16.261	5.803	14.962
	601919.SS	COSCO Shipping Holdings Co Ltd	27.170	56.254	1.296	36,86%	65,66%	34,56%	34.073	13.482	- 3.498
	9101.T	Nippon Yusen KK [ONE - Ocean Network Exp.]	8.725	17.286	2.005	87,98%	86,28%	48,75%	1.766	6.126	17.186
	9104.T	Mitsui O.S.K. Lines Ltd [ONE - Ocean Network Exp.]	6.296	9.620	1.172	63,04%	76,44%	35,45%	757	7.584	16.244
	9107.T	Kawasaki Kisen Kaisha Ltd [ONE - Ocean Network Exp.]	5.398	5.737	570	88,89%	116,50%	58,48%	1.875	3.209	10.284
	0316.HK	Orient Overseas (International) Ltd	10.980	19.892	520	57,89%	86,58%	55,17%	9.360	2.081	1.009
	2603.TW	Evergreen Marine Corp Taiwan Ltd	13.997	20.409	666	79,47%	76,04%	72,19%	12.749	4.390	- 1.130
	011200.KS	HMM Co Ltd	9.038	14.696	258	104,14%	78,28%	51,48%	3.938	5.186	6.655
	2609.TW	Yang Ming Marine Transport Corp	8.332	12.230	264	130,18%	62,63%	54,75%	4.862	1.585	1.328
Freight & Logistics Services (General)	UPS.N	United Parcel Service Inc	18.717	100.338	3.902	14,19%	67,85%	32,00%	5.602	19.662	116.755
	CNR.TO	Canadian National Railway Co	6.672	12.626	2.025	8,85%	23,20%	15,36%	616	11.387	81.054
	FDX.N	FedEx Corp	9.555	93.512	6.762	4,50%	15,55%	15,70%	6.897	20.264	75.531
	CSX.OQ	CSX Corp	7.656	14.853	2.008	4,60%	31,92%	9,67%	1.958	18.047	76.144
	DHLn.DE	Deutsche Post AG	13.562	100.789	4.121	0,12%	25,35%	13,72%	4.045	23.143	68.807
	DSV.CO	DSV A/S	4.256	33.822	177	10,62%	24,13%	16,78%	1.458	5.594	38.577
	KNIN.S	Kuehne und Nagel International AG	4.969	42.584	201	9,61%	72,00%	48,58%	2.309	1.837	32.788
	002352.SZ	S.F. Holding Co Ltd	4.245	38.478	2.272	19,67%	7,30%	4,64%	5.907	9.208	29.005
	PST.MI	Poste Italiane SpA	3.545	27.622	316	-3,44%	14,35%	1,64%	11.560	91.694	93.219
	SAIA.OQ	Saia Inc	628	2.792	410	31,95%	25,53%	24,69%	187	62	9.900
	XPO.N	XPO Inc	785	7.718	401	-19,48%	61,95%	18,72%	460	2.532	11.147

Values in M USD			02/11/2023							
Segment	**RIC**	**Name**	**Price / Earnings Ratio**	**Price**	**Market Cap**	**Sales 12M Forward**	**EBITDA 12M Forward**	**EV / Revenue**	**EV / EBITDA**	**12M EPS**
Marine Freight & Logistics	MAERSKb.CO	AP Moeller - Maersk A/S	1,7	1.734,80	30.171	49.125	7.089	0,73x	5,04x	50,505
	HLAG.DE	Hapag Lloyd AG	2,1	144,63	25.420	17.118	3.404	0,87x	4,40x	6,317
	601919.SS	COSCO Shipping Holdings Co Ltd	2,6	1,33	17.093	26.487	5.136	-0,13x	-0,68x	0,169
	9101.T	Nippon Yusen KK [ONE - Ocean Network Exp.]	2,6	25,14	12.826	14.393	1.890	1,19x	9,09x	2,599
	9104.T	Mitsui O.S.K. Lines Ltd [ONE - Ocean Network Exp.]	4,1	26,00	9.417	10.026	1.391	1,62x	11,68x	3,343
	9107.T	Kawasaki Kisen Kaisha Ltd [ONE - Ocean Network Exp.]	6,6	35,69	8.949	6.048	857	1,70x	12,00x	2,91
	0316.HK	Orient Overseas (International) Ltd	1,5	12,55	8.287	8.536	2.042	0,12x	0,49x	2,307
	2603.TW	Evergreen Marine Corp Taiwan Ltd	1,7	3,42	7.229	7.770	1.234	-0,15x	-0,92x	0,226
	011200.KS	HMM Co Ltd	1,6	11,06	5.408	6.481	1.333	1,03x	4,99x	1,311
	2609.TW	Yang Ming Marine Transport Corp	2,2	1,32	4.604	4.100	461	0,32x	2,88x	-0,002
Freight & Logistics Services (General)	UPS.N	United Parcel Service Inc	14,4	141,99	102.695	97.104	14.946	1,20x	7,81x	10,165
	CNR.TO	Canadian National Railway Co	20,3	108,51	70.283	12.696	6.553	6,38x	12,37x	5,777
	FDX.N	FedEx Corp	15,2	247,25	62.164	91.240	11.196	0,83x	6,75x	19,927
	CSX.OQ	CSX Corp	16,1	30,39	60.055	14.879	7.441	5,12x	10,23x	1,973
	DHLn.DE	Deutsche Post AG	10,2	40,12	49.709	91.982	12.166	0,75x	5,66x	3,66
	DSV.CO	DSV A/S	17,9	157,26	34.441	22.612	3.259	1,71x	11,84x	8,502
	KNIN.S	Kuehne und Nagel International AG	18,3	275,43	33.259	28.861	2.871	1,14x	11,42x	12,162
	002352.SZ	S.F. Holding Co Ltd	23,5	5,25	25.704	44.016	4.134	0,66x	7,02x	0,297
	PST.MI	Poste Italiane SpA	7,3	10,02	13.084	12.922	3.651	7,21x	25,53x	1,527
	SAIA.OQ	Saia Inc	30,0	377,62	10.025	3.102	740	3,19x	13,38x	15,627
	XPO.N	XPO Inc	261,7	78,25	9.075	8.059	1.076	1,38x	10,36x	3,295

Appendix C2: Peer Analysis Data as of 01/03/2024

Values in M USD			31/12/2023								
Segment	**RIC**	**Name**	**EBITDA**	**Revenue**	**CAPEX**	**MV 3 Year Hist. Growth**	**ROE - Total**	**ROIC**	**Cash**	**Debt**	**EV**
Marine Freight & Logistics	MAERSKb.CO	AP Moeller - Maersk A/S	11.595	52.118	3.403	-9,74%	6,50%	6,01%	6.708	14.828	32.237
	HLAG.DE	Hapag Lloyd AG	5.733	19.806	2.100	13,68%	12,60%	11,04%	6.418	5.557	24.849
	601919.SS	COSCO Shipping Holdings Co Ltd	7.320	24.738	2.276	0,94%	12,03%	8,07%	25.703	11.898	4.663
	9101.T	Nippon Yusen KK [ONE - Ocean Network Exp.]	8.657	18.556	1.452	93,36%	48,30%	35,50%	1.453	4.923	19.758
	9104.T	Mitsui O.S.K. Lines Ltd [ONE - Ocean Network Exp.]	6.604	11.434	2.620	78,95%	49,73%	29,96%	666	8.182	19.998
	9107.T	Kawasaki Kisen Kaisha Ltd [ONE - Ocean Network Exp.]	5.286	6.686	397	114,55%	57,91%	42,63%	1.755	2.495	13.035
	0316.HK	Orient Overseas (International) Ltd	2.304	8.368	1.226	14,07%	11,13%	10,25%	6.726	1.438	4.936
	2603.TW	Evergreen Marine Corp Taiwan Ltd	3.347	9.016	394	15,07%	7,12%	5,74%	5.547	4.910	10.512
	011200.KS	HMM Co Ltd	1.619	6.523	1.504	28,08%	4,67%	4,51%	2.523	3.655	10.585
	2609.TW	Yang Ming Marine Transport Corp	1.113	4.582	369	24,58%	1,54%	1,64%	2.278	1.333	4.483
Freight & Logistics Services (General)	UPS.N	United Parcel Service Inc	12.724	90.958	5.600	-2,71%	36,17%	18,54%	3.206	22.264	126.670
	CNR.TO	Canadian National Railway Co	6.846	12.762	2.406	2,50%	27,11%	16,58%	701	14.010	97.008
	FDX.N	FedEx Corp	10.233	90.155	5.627	-2,24%	15,54%	9,83%	6.856	20.579	75.346
	CSX.OQ	CSX Corp	7.311	14.657	2.286	-0,63%	30,03%	14,20%	1.353	18.533	92.078
	DHLn.DE	Deutsche Post AG	11.554	90.316	4.369	1,82%	16,09%	9,05%	4.031	25.096	78.184
	DSV.CO	DSV A/S	3.442	22.344	335	2,45%	17,56%	12,19%	956	5.941	40.130
	KNIN.S	Kuehne und Nagel International AG	3.274	28.336	358	12,61%	39,24%	26,79%	893	2.160	36.372
	002352.SZ	S.F. Holding Co Ltd	4.249	36.436	1.707	-21,27%	9,20%	5,97%	5.918	9.280	29.236
	PST.MI	Poste Italiane SpA	4.040	14.223	358	7,14%	21,17%	2,01%	9.812	105.379	111.537
	SAIA.OQ	Saia Inc	648	2.881	429	34,86%	20,16%	19,65%	296	49	15.161
	XPO.N	XPO Inc	863	7.744	621	-5,81%	16,59%	7,83%	412	3.404	16.995

Values in M USD			01/03/2024							
Segment	**RIC**	**Name**	**Price / Earnings Ratio**	**Price**	**Market Cap**	**Sales 12M Forward**	**EBITDA 12M Forwardx**	**EV / Revenue**	**EV / EBITDA**	**12M EPS**
Marine Freight & Logistics	MAERSKb.CO	AP Moeller - Maersk A/S	6,2	1.398,68	24.116	47.702	5.924	0,68x	5,44x	-37,594
	HLAG.DE	Hapag Lloyd AG	3,7	146,28	25.709	17.018	2.594	1,46x	9,58x	4,146
	601919.SS	COSCO Shipping Holdings Co Ltd	2,7	1,45	18.467	26.673	4.360	0,17x	1,07x	0,149
	9101.T	Nippon Yusen KK [ONE - Ocean Network Exp.]	9,8	31,93	16.288	14.515	2.137	1,36x	9,25x	2,922
	9104.T	Mitsui O.S.K. Lines Ltd [ONE - Ocean Network Exp.]	6,8	34,47	12.483	10.224	1.428	1,96x	14,00x	3,324
	9107.T	Kawasaki Kisen Kaisha Ltd [ONE - Ocean Network Exp.]	15,0	51,61	12.296	6.156	923	2,12x	14,12x	3,433
	0316.HK	Orient Overseas (International) Ltd	1,9	15,48	10.223	8.553	1.803	0,58x	2,74x	1,844
	2603.TW	Evergreen Marine Corp Taiwan Ltd	5,6	5,22	11.148	8.622	1.593	1,22x	6,60x	0,262
	011200.KS	HMM Co Ltd	4,3	13,72	9.454	7.192	1.182	1,47x	8,96x	0,929
	2609.TW	Yang Ming Marine Transport Corp	8,2	1,55	5.428	4.145	438	1,08x	10,24x	0,019
Freight & Logistics Services (General)	UPS.N	United Parcel Service Inc	19,0	148,06	107.612	93.860	13.425	1,35x	9,44x	8,527
	CNR.TO	Canadian National Railway Co	20,7	130,38	83.699	13.229	6.822	7,33x	14,22x	6,043
	FDX.N	FedEx Corp	14,6	246,60	61.623	91.108	11.379	0,83x	6,62x	20,633
	CSX.OQ	CSX Corp	20,7	38,23	74.898	15.147	7.495	6,08x	12,29x	2,01
	DHLn.DE	Deutsche Post AG	12,7	46,10	57.119	93.007	12.316	0,84x	6,35x	3,671
	DSV.CO	DSV A/S	19,1	160,48	35.145	22.096	3.261	1,82x	12,31x	8,485
	KNIN.S	Kuehne und Nagel International AG	18,9	290,72	35.105	27.832	2.858	1,31x	12,73x	12,249
	002352.SZ	S.F. Holding Co Ltd	23,2	5,29	25.875	43.652	4.354	0,67x	6,71x	0,31
	PST.MI	Poste Italiane SpA	7,6	12,23	15.970	13.163	3.791	8,47x	29,42x	1,612
	SAIA.OQ	Saia Inc	43,7	579,56	15.409	3.328	806	4,56x	18,82x	16,744
	XPO.N	XPO Inc	75,3	120,60	14.003	8.380	1.266	2,03x	13,42x	3,699

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