Lisbon School of Economics & Management
Universidade de Lisboa

MASTER OF SCIENCE IN FINANCE

MASTERS FINAL WORK PROJECT

EQUITY RESEARCH:
A.P. MOLLER MAERSK

JOÃO DINIS LIMA

SUPERVISOR:
PEDRO RINO VIEIRA

OCTOBER 2021

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Abstract

A.P. Moller Maersk is a Danish integrated transport and logistics company that operates in more than 120 countries. Thus, the Group´s services range from shipping and cargo services, supply chain and freight forwarding services. Maersk is the global leading player in this segment, with 4.1M TEU and a total revenue of $39.7bn in FY20.

The analysis conducted in the Equity Research Report led to a **BUY** recommendation, with a FY22 target price per share of $ 3,113.14, which represents a 13% upside potential from the 1st October 2021 closing price, considering medium risk.

The undervaluation of Maersk can be related to several phenomenon's as (i) the Covid-19 pandemic that caused an downward movement in the demand (ii) the fluctuation of the freight rates and (iii) the uncertainty generated by the IMO 2020 and the next steps companies would have to apply in order to redirect their business. Hence, those factors brought uncertainty in the investors' perspective.

Notwithstanding, Maersk has showed an outstanding performance during the pandemic period, with an increase in revenues of 2.2% when compared with FY19. Moreover, the Group´s integrated strategy is starting to have the desirable impact in Maersk performance, as showed by the 16.7% increase in the Logistics & Services segment.

Therefore, as a result of the strong performance during FY2020, Maersk decided to increase the dividend per share from 150 DKK to 300 DKK. Allied to this, since the 2Q2019, the Group initiated a share buy back up to DKK 10bn over a period of 15 months to reward shareholders.

JEL classification: G10 ; G32; G34;

Keywords: A.P.Moller Maersk; Sea Transport industry; Valuation; Mergers & Acquisitions; M&A; Ocean Segment

Resumo

A.P. Moller Maersk é uma empresa dinamarquesa de transporte e logística integrada que opera em mais de 120 países. Os serviços do Grupo vão desde a expedição e serviços de carga, cadeia de fornecimento e serviços de expedição de mercadorias. A Maersk é líder mundial neste segmento, com 4,1 milhões de TEU e registou uma receita total de 39,7 mil milhões de dólares em 2020.

A análise realizada no Equity Research Report levou a uma recomendação de investimento de “COMPRA”, com um preço alvo por ação de $ 3,113.14 para o final do ano de 2022, o que representa um potencial de aumento de 13%, comparativamente ao preço de fecho a 1 de Outubro de 2021, considerando o risco como sendo médio.

A subvalorização da Maersk pode estar relacionada com vários fenómenos como (i) a pandemia de Covid-19 que provocou um movimento descendente na procura (ii) a flutuação das taxas de transporte de mercadorias via marítima e (iii) a incerteza gerada pela IMO 2020 e os próximos passos que as empresas teriam de aplicar para redirecionar os seus negócios. Assim, estes fatores trouxeram incerteza na perspectiva dos investidores.

Não obstante, a Maersk mostrou um desempenho notável durante o período pandémico, com um aumento das receitas de 2.2% quando comparado com o ano de 2019. Além disso, a estratégia integrada do Grupo está a começar a ter o impacto desejável no desempenho da Maersk, tal como demonstrado pelo aumento de 16.7% no segmento de Logística & Serviços.

Portanto, como resultado do forte desempenho durante o ano de 2020, a Maersk decidiu aumentar o dividendo por ação de 150 DKK para 300 DKK. Aliado a isto, desde o 2T2019, o Grupo iniciou uma recompra de ações até 10 mil milhões de DKK ao longo de um período de 15 meses, no sentido de recompensar os acionistas.

JEL classification: G10 ; G32; G34;

Keywords: A.P.Moller Maersk; Indústria de Transportes Marítimos; Avaliação; Fusões e Aquisições; Segmento Marítimo

Acknowledgements

Throughout the writing of this Equity Research I have received a great deal of support and assistance.

I would first like to thank my supervisor, Professor Pedro Rino Vieira, whose expertise was invaluable in formulating the research questions and methodology. Your insightful feedback pushed me to sharpen my thinking and brought my work to a higher level.

Secondly, I would like to acknowledge my girlfriend, Carolina, for the incredible support that gave me through this journey, by always encourage me to push forward and overcome this challenge.

Last but not least, I would also like to thank my parents and sister, for giving me the chance to enroll in the Master´s in Finance and for believing in me and to successfully complete my dissertation.

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List of Abbreviations

TEU	Twenty-foot equivalent unit
IMO	International Maritime Organization
M&A	Mergers and Acquisitions
PEPP	Pandemic Emergency Purchase Programme
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization
ESG	Environmental, Social and Corporate Governance
NGL	Natural gas liquids
EDI	Electronic Data Interchange
MCI	Maersk Container Industry
FCFF	Free Cash Flow to the Firm
FCFE	Free Cash Flow to Equity
FY	Fiscal Year
HFSO	High Fuel Sulphur Oil
VLFSO	Very Low Fuel Sulphur Oil
WACC	Weighted Average Cost of Capital
EBIT	Earnings Before Interest and Taxes
EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
GDP	Gross Domestic Product
CAPEX	Capital Expenditure
OPEC	Organization of the Petroleum Exporting Countries
CAPM	Capital Asset Pricing Model
CAGR	Compound Annual Grow th Rate
EV	Enterprise Value
APV	Adjusted Present Value Method
DDM	Dividend Discount Model
YTM	Yield to maturity
CCFI	China Containerized Freight Index
PP&E	Property, Plant and Equipment

A.P. Moller Maersk

Buy

Medium risk

15 October 2021

Portugal

Research Snapshot

Maersk has been revealing a strong resilient performance throughout the pandemic, which is corroborated by a 41% price appreciation in 2020, when compared to the end of 2019. As a result, the Group was able to outpace the OMXC25 performance at the end of 2020.

Allied to the economic recovery and more favorable international trade, world transactions are getting back to pre-pandemic levels. Consequently, these conditions favored Maersk's integration strategy, which was further accelerated by the successful acquisitions within the Logistics and Services segment. In this regard, the segment is expected to grow at 7.4% CAGR between 2021 and 2026.

Due to IMO 2020, companies had to adapt their vessels in order to be aligned with the new Sulphur maximum limits. Maersk has been a pioneer in this matter, having signed an agreement to acquire the first ever carbon neutral container vessel by July 2021. Accordingly, Maersk has been able to meet the needs of environmentally conscious consumers which has also contributed to enlarge its clients base as well as to boost the financial performance of its business segments throughout the latest years.

The Group is truly engaged with the digitalization of its business, as the e-commerce assumes a key role in the sea transport industry. Therefore, Maersk has been investing in its digital apps, aiming to accommodate the increasing demand for online orders. TradeLens emerges as the most successful digital app of Maersk during the pandemic, having registered a 300% increase in usage during 2020 when compared to the previous year. This evolution signals the importance of the digital sales channel as a driver of Maersk's business growth for the upcoming years.

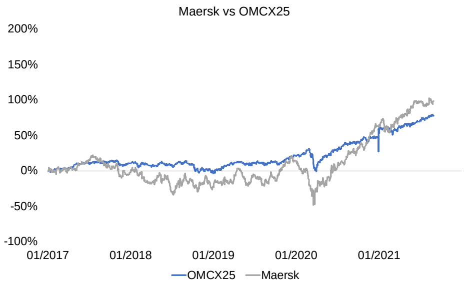
Regarding the evolution of freight rates, it is expected a market recovery in 2021, surpassing 2020 figures. According to CCFI Index (China Containerized Freight Index), freight rates grew from 897.5 pts in January 2020 to 3,079 pts in August 2021, representing a double digit growth. The expectations for 2021, point to a good momentum in freight rates, benefiting Maersk business.

Maersk revenues registered a new record in 2020 of $39.7bn, mainly explained by the increasing demand that helped to overcome the decrease in freight rates during this period. From 2021 until 2025, it is expected a 5.3% CAGR in revenues and a decrease in EBIT margin from 9.3% in 2020 to 7.8% in 2025. Consequently, in 2025 will be reached a ROE of 8%, which represents a 0.1% increase from 2020.

Recommendation:	**BUY**
Upside Potential	*13.4%*
Price Target FY22:	**3,113.14 $**
Dividend Yield	*2.4%*
Price (as of 01-Oct-21)	**2,696.32 $**
Bloomberg: AMKBF	

52-week range (€)	1,435,29-3,063.90
Market Cap (€m)	54,007
Outstanding Shares (m)	20.03
Fiscal Year End Date	December, 31st

Source: Yahoo Finance



Source: Yahoo Finance

(Values in $ millions)	2020	2021F	2022F
Revenues	39740	42097	44936
EBITDA	8235	6566	7017
Net Profit	2459	2297	2510
EPS	150.2	103.6	108.7
EBITDA Margin	20.7%	15.6%	15.6%
EV/EBITDA	8.3x	11.2x	11.1x
EV/EBIT	18.5x	23.7x	23.0x
Debt Ratio	49%	56%	55%
Net Debt/EBITDA	1.3x	2.1x	2.0x
ROE (%)	8.0%	7.5%	7.9%
ROIC (%)	5.9%	5.2%	5.5%

Source: Maersk Annual Reports and Author Analysis

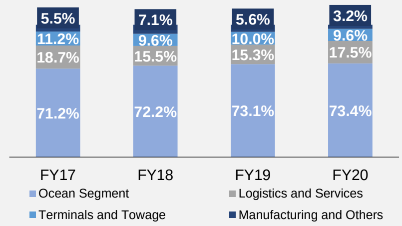
Business Description

The Company

Founded in 1904, A.P. Moller Maersk is a Danish integrated sea transport and logistics company that operates in more than 120 countries and had a total of 83,624 employees by the end of 2020. The Company´s services range from shipping and cargo services, supply chain and freight forwarding services, being divided into four reported business segments: Ocean, Logistics and Services, Terminals and Towage, and Manufacturing & Others.

Maersk is currently the global largest player in the sea cargo transport industry with a Twenty-foot Equivalent Unit (TEU) of 4.1M and a total revenue of $39.7bn in 2020. Among its four business segments, the Ocean segment is the jewel of the crown of Maersk, representing 70% of the group's total revenue and turning Maersk into the largest ocean carrier in the world in terms of capacity with a 17% market share in 2020 (Figure 1).

Figure 1: Maersk Revenues



Source: Maersk Annual Reports

One of the company's biggest future goals is to dramatically reduce its footprint in order to meet the customers' decarbonization targets. Thus, Maersk plans to become a pioneer in this regard, having signed a contract to manufacture the first carbon neutral vessel (Refer to Decarbonization and ESG Metrics Section) during 2021. According to Morten Bo Christiansen, Maersk's Vice President and Head of Decarbonization, nearly 45% of top customers have a zero-carbon target, a number that is expected to grow in the near-term, creating more commercial opportunities for Maersk. In addition, recently, Maersk settled a strategic partnership with BP, which will accelerate the development of new alternative fuels and low carbon solutions and, consequently, will differentiate Maersk from competitors.

In addition, Maersk has an inorganic growth strategy in place in order to scale operations by shipping higher volumes and enlarging the clients portfolio and, ultimately, to consolidate its market position. This strategy, which resulted into a group currently composed by 760 integrated companies, started in 1979 with the acquisition of Svitzer, followed by EACBen Container Line in 1993 that turned Maersk into the largest shipping container company in the world.

Table 1: Maersk latest acquisitions

Year	Acquisition Details
2017	Hamburg Süd for $3.7b
2018	Joint Venture with International Business Machines (IBM)
2019	Vandegrift (value not disclosed) Stake in Traxens
2020	KGH Custom Services for $279M
2021	Visible Supply Chain Management for $838M HUUB (value not disclosed)

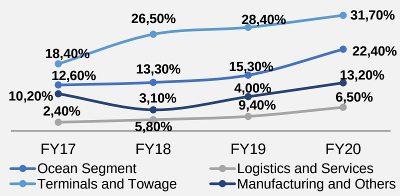
Source: Maersk Report

More recently, in 2016, the company has completely redirected its strategy from a conglomerate to become a more efficient and integrated business by separating its oil and gas related businesses. In line with this, the company sold Maersk Oil to TOTAL S.A in 2018 and acquired Hamburg Sud (2017, recently sold in March 2021) and KGH Custom Services (2020), which were further integrated within the Logistics Services segment. Accordingly, Maersk plans to diverge their investments from flow logistics into an omnichannel and e-commerce business with the capability to scale up (Table 1).

Maersk Business Segments

The company has its business structured into four segments that are strictly connected between each order in order to bring more value to the supply chain.

Figure 2: Maersk Operating Margins



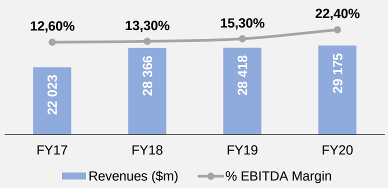
Source: Maersk Annual Reports

This strategy is settled by leveraging the operational synergy between the Ocean and Logistics segments in order to optimize the Group's cost structure and enhance asset allocation, consequently, raising the shareholders' return. Besides, the integration strategy followed by Maersk also comprises the synergy between the Ocean and Terminals segments, which emerges from the use of terminals to drive efficiency and reliability to the ocean network. Therefore, both synergies seek to deliver to customers a complete end-to-end delivery and to reduce costs (Figure 2).

Ocean

The Ocean segment offers container shipping services that comprise hub and ocean activities. These activities are carried out through Maersk Liner business unit under Maersk Line, Safmarine, Sealand and Hamburg Sud brands. On the other hand, within the hub activities, the company provides port services through the APM Terminals brand in major transshipment ports, including Algeciras, Rotterdam, Tangier, Maasvlakte-II, Port Said, Tangier-Med II, and a joint ventures.

Figure 3: Ocean Segment Historical Performance



Source: Maersk Annual Reports

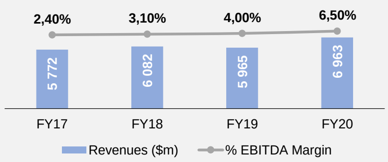
As of December 2020, the segment operated 706 vessels (including owned and chartered ones) with a capacity of 4.1M TEU. In FY20, the segment transported 26,600 million TEU and its total revenue accounted for 73.1% of the Group's revenue, amounting to $29.2bn.

Following the Covid-19 pandemic, Maersk faced a reduction in loaded volumes, which was more than offset by the increase in freight rates. Furthermore, in 2020, there was a 48% increase in EBITDA to $6.5bn, mostly due to the higher revenue and lower cost base resulting from the efficient capacity deployment combined with a lower bunker price and consumption (Figure 3).

Logistics & Services

The Logistics & Services segment offers supply chain management, logistics and freight forwarding services under Maersk Logistics & Services brand, which is the core element of Maersk's integration strategy. Additionally, the segment includes container inland and financial services, full container storage, bonded warehousing, empty depot, transportation services and provides airfreight services on behalf of UPS through Star Air.

Figure 4: Logistics & Services Segment Historical Performance



Source: Maersk Annual Reports

During the pandemic, this business segment showed its resilience, having improved the overall turnover up to $7bn in 2020 (17.8% of the company's total revenue), offsetting the decrease in sea freight forwarding volume. Hence, the EBITDA Margin has also scaled 2.5 p.p. from 2019 to 2020, supporting the sound financial performance of Logistics & Services segment (Figure 4).

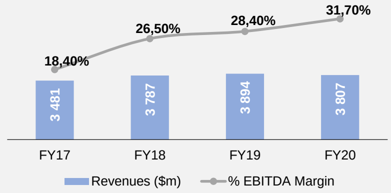
In February 2020, the company acquired Performance Team, a specialized third party logistic distribution, focusing on doubling the combined warehousing and distribution capacity in North America. Moreover, in September 2020, Maersk acquired KGH Custom Services which increased the number of clearances in Europe by five times and enhanced the customer experience in an end-to-end basis.

Terminals & Towage

The Terminals & Towage segment offers offshore towage and salvage services under Svitzer brand. Furthermore, this business unit also provides customized marine services to ports and oil and gas terminals.

In FY20, the Terminals & Towage segment reported a total revenue of $3.8bn, which is 3% lower than in FY19, due to the pandemic adverse effects on volumes shipped. However, Maersk was able to overcome this volume shortfall through an increased revenue per move of 7% and an overall cost reduction in several terminals. Hence, this segment registered a $1.2bn EBITDA, surpassing FY19 results (Figure 5).

Figure 5: Terminals & Towage Segment Historical Performance



Source: Maersk Annual Reports

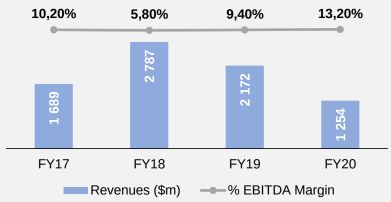
In the Terminals sub-segment, the company made important agreements to increase the capacity in existent ports, namely in Yokohama-Kawasaki International Port Corporation (YKIP), with two additional modern berths that are capable to handle more 20,000 TEU vessels. In addition, during 2020, Maersk started the construction of two new ports in Vado (Italy) and Tema (Ghana).

Regarding the Towage sub-segment, Maersk aims to renegotiate certain contracts, extending to 10Y the marine service contract in Sakhalin (Russia) and to 5Y the Egyptian LNG and Point Tupper contracts. Moreover, the optimization strategy implemented in FY19 started to materialize, improving the segment's performance.

Manufacturing & Others

The Manufacturing & Others segment includes not only the operations of Maersk Container Industry, that manufactures dry containers and reefer containers, but also the activities of Maersk Training focused on providing training services to the oil & gas, maritime, offshore wind and crane industries. Moreover, this segment also includes the company's oil trading business that sells marine fuels and lubricants to external parties including Maersk Tankers.

Figure 6: Manufacturing & Others Segment Historical Performance

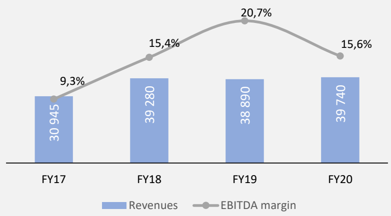


Source: Maersk Annual Reports

In FY20, the Manufacturing & Others segment reported a total revenue of $1.3bn, and an EBITDA of $165M. Despite the revenue decline in FY20, this segment reported the strongest financial year of its core marine reefer business, with the majority of revenue related to third-party customers. Nonetheless, this is considered to be a residual segment, accounting for only 3% of the Group's total revenues (Figure 6).

Financial Highlights

Figure 7: Group´s Financial Highlights



Source: Maersk Annual Reports

Despite the Covid-19 pandemic, Maersk managed to outpace the expectations and reached $39.7bn in revenues and an $8.2bn EBITDA, resulting into a global operating margin of 10.4%. Moreover, from a historical perspective, it is important to highlight the exponential revenue growth during 2017 and 2018 with a 13% and 27% increase, respectively, a trend that is expected to be continued from 2021 onwards.

Regarding net income, Maersk recorded net losses of $1.9bn and $1.2bn in 2016 and 2017, respectively, following the integration strategy started in 2016 that required a significant increase in Capex. In addition, in 2018, the Group registered the all-time high figure of $3.2bn and, since then, the net income has been positive throughout the latest years. Hence, despite the economic downturn during 2020, Maersk recorded a $2.9bn net income as a result of the positive performance of key business segments, namely the Ocean segment that registered the highest growth within Maersk's segments, with an increase of $393M in revenues (Figure 7).

In terms of Debt-to-Equity Ratio (D/E), the Group has been showing a stable ratio throughout the years near 50%. Nevertheless, in 2020, there was a decrease in D/E of 10 p.p. when compared to 2019 due to the company's debt repayment schedule.

Key Drivers of Profitability

Sea transport is a highly competitive industry with several players distributed across Europe, North America and Asia, which drives margins down in case of lack of differentiation among peers.

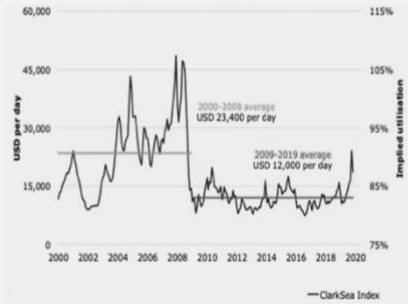
Concerning the major drivers of Maersk´s revenue, the main cash inflow is **freight revenue**. Accordingly, this source of revenue can be divided in two different types of transactions: **freight contract**, where the shipper requests the service from the shipowner and agrees a fixed price per ton of cargo beforehand; and the **time charter**, where the ship is hired for each day of use (Figure 8).

During recession periods, the company looks for alternative sources of cash as **demolition market**, where old or obsolete vessels are sold to scrap dealers. Thus, this segment has been supported by an increase in average scrapping age from 23 years in 2016 to 27 years in 2019. This increase added two additional years of earnings to older vessels secondhand prices (Figure 9).

Lastly, the Covid-19 pandemic has widely affected the sea transport industry, which led the major companies to redirect their focus to **e-commerce business**, aiming to digitalize their processes and accommodate the increasing online orders demand (Figure 10).

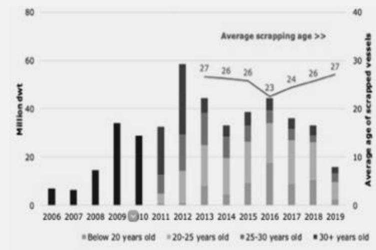
Accordingly, major shipping firms, namely A.P. Moller Maersk, CMA CGM and Evergreen Line, have settled partnerships with Alibaba that enable clients to directly book cargo space using OneTouch platform. The investment in more advanced technologies has been improving efficiency, allowing fast and tactical capacity cuts via blank sailings, service suspensions, slow steaming and idling capacity. Besides, the reliance on e-commerce platforms during the pandemic led to high record demand for digital solutions. Hence, TradeLens showed a record 300% increase in usage.

Figure 8: Evolution of Freight Rates (2000-2020)



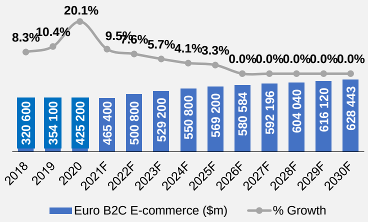
Source: Clarksons, Danish Ship Finance

Figure 9: Evolution of Average Scrapping Age (2006-2019)



Source: Clarksons, Danish Ship Finance

Figure 10: Europe B2C E-commerce Market



Source: Statista

Strategy

Started in 2016, the new strategy of Maersk focus on becoming a global integrator in container logistics and is based on three main drivers (Figure 11) :

1. Creating a portfolio of end-to-end products/services

In the process of becoming a more integrated business, the company strategy aims to strength the logistics product portfolio by improving and innovating existing products as well by acquiring businesses that could bring more value to the supply chain.

During 2020, Maersk acquired Performance Team, a US-based warehousing and distribution company, bringing new capabilities to retail, wholesale and direct distribution to consumers by widening the presence in North America. Accordingly, the company increased the presence in US and Canada with 20 new facilities.

2. Seamless customer engagement

Maersk has been strongly investing in its digital engagement solutions to effectively serve customer´s needs through a unique and suitable experience. Since the company is dealing with different product portfolios, the process of finding the right container to a specific product in terms of capacity and accommodation can be time consuming and risky. Therefore, the company is seeking for an online solution that would be capable to ensure that each customer will have a tailored solution while Maersk is becoming increasingly efficient.

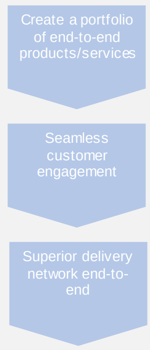
Consequently, Maersk has been investing in its technology stack, which includes Maersk.com and other online offerings such as Twill that is a solution for small and mid-size costumers, enabling them to directly book for cargo space. Following this strategy, there was an increase of 13x of weekly volumes in 2020, when compared to 2019. In addition, in 2018, Maersk and IBM developed the first platform to truly digitalize supply chain paperwork, which was a game changer in the sea transport industry by increasing the efficiency of the process up to 15% in 2020.

3. Superior delivery network end-to-end

The third pillar of Maersk strategy is to ensure that consumer’s needs are fulfilled on time, at the right place and at a fair price with the minimum environmental impact. Therefore, in 2020, the company started a total review of their sustainability policies, beginning the path to become Net Zero in 2050. This strategy has already led to a reduction of 46,3% in CO_2 emissions from shipping during 2020 in relation to 2008, which contrasts with 44,9% in 2019 (Refer to Regulation section).

The Company long-term goal aims to be aligned with the decarbonization plans of the Paris Agreement and it is also becoming a fundamental requirement that customers are looking for. Hence, nowadays, Maersk´s customers are in the

Figure 11: Maersk Integrated Strategy



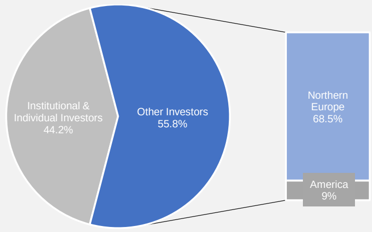
Source: Maersk Annual Reports

process of setting science-based or zero carbon targets covering their supply chain.

Ownership Structure

A.P. Moller Maersk, traded in the Copenhagen Stock Exchange (CSE) under the ticker “MAERSK-B.CO”. The company has a market capitalization of $ 56,010 million as of 1st October 2021, represented by 8,811,915 shares, of which 21.91% are held by institutional holders, 55.80% by strategic entities and 22.29% by individual and other investors. Moreover, Maersk institutional and strategic shareholders are mainly from Northern Europe (68.52%) and North America (9%), being the four largest institutional investors, A.P. Moller Holding A/S (42,66%), Den A.P. Mollerske Stottefond (9.72%), A.P. Moller og Hustru Chastine Mc-Kinney Mollers Familiefond (3,42%), and Norges Bank Investment Management (2.39%) (Figure 12).

Figure 12: Ownership Structure



Source: Bloomberg

The company´s shares are divided into Class A shares that give the holder voting rights and Class B shares without voting rights. Note that, throughout the report, Maersk shares refer to the Class B.

Dividend Policy

Maersk’s dividend policy comprises an annual payout ratio ranging from 30% to 50% of underlying net result adjusted for gains, impairments and restructurings. As a consequence of the company’s strategy to become a global integrated business, it is expected a lower annual payout ratio for the upcoming years. Besides, the company decided that the dividend distribution to shareholders will be combined with share buybacks, which will be dependent on the assessment of the company’s future cash flow and capability to execute M&A transactions.

Table 2: Maersk Share

Key figures	2020	2019	2018	2017
Year-end share price (DKK, B share)	13 595	9 608	8 184	10 840
Share price range (DKK, B share)	9 081	3 410	4 005	3 990
Market capitalisation at year-end (USD bn, A and B share)	42	28	25,3	35,4
Earnings per share (USD)	145	-4	152	-58
Dividend per share (DKK, A and B share)	330	150	150	150
Dividend yield (B share)	2,4%	1,6%	1,8%	1,4%
Totsl dividends (USD m)	1092	468	479	503
Share buy-back programme (DKK bn)	5,4	5,3	-	-
Share buy-back programme (USD m)	806	791	-	-

Source: Maersk Annual Reports

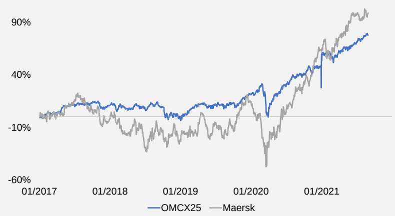
In 2020, Maersk proposed an ordinary dividend of DKK 330 per share and the payment took place on 26th March 2021, which represents a significant increase when compared to the DKK 150 dividend per share distributed during 2018 and 2019 (Table 2).

As one of the strategies to reward its shareowners, since 2Q19, Maersk’s Board of Directors authorized a share repurchase up to DKK 10bn over a period of 15 months with no expiration date. The decision to initiate the share buy-back was supported by the 2020 company’s strong earnings which has led to further deleveraging the company and to improve credit metrics.

Stock Performance

Maersk stock performance was driven by two major events from 2017 to 2021. Firstly, from 2018 to 2019, Maersk underperformed the market as a result of the trade wars between the US and China which imposed restrictions to global trade, driving down Maersk´s revenues, especially within the Ocean segment. (Refer to Global Trade Wars Sub-Section)

Figure 13: Maersk Stock Performance (vs OMXC25)



Source: Yahoo Finance

Finally, Maersk's returns reached the lowest point by the end of March 2020 due to the Covid-19 outbreak. Nevertheless, the global lockdown led to a sharp increase in the demand, as a result of the e-commerce boom and the strong financial performance during the second half of the year. Therefore, despite the adverse effects of the pandemic, Maersk – B share price increased by 41% when compared to the end of 2019, well above the 34% appreciation of the index OMXC25 (Figure 13).

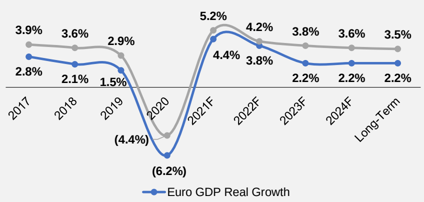
From 2017 and 2020, the Group's share price has been following OMCX25 index trend, meaning that Maersk is keeping up with the market performance. Notwithstanding, from 2020 onwards, Maersk was able to outperform the market for the first time, having reached the highest share price ever of DKK 19,050 by 12nd August 2021.

Economic Outlook

Global GDP

The Covid-19 pandemic came to twist the GDP growth since the beginning of 2020, due to the lockdown measures adopted worldwide. Accordingly, in 2020, the real GDP decreased 4.4% globally, while Europe presented also an overall recession of 4.3%. Although the uncertainty arising from the vaccination process and the consequent control of the pandemic, the FMI projects a near-term strong world recovery (6% and 4.4% in 2021 and 2022, respectively), with Europe growing 4.4% in 2021 and reaching pre-Covid levels by the end of 2022 (Figure 14).

Figure 14: Real GDP Growth (%)

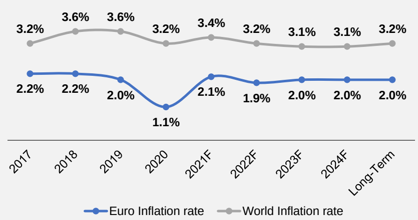


Source: Federal Reserve and IMF

Inflation

Regarding the inflation rate, the pandemic has been largely impacting fuel and services prices. Following the Pandemic Emergency Purchase Programme (PEPP), where ECB committed to buy debt titles from public and private sectors, there was an increase of liquidity in European countries. Hence, the PEPP led to an overall rise in purchasing power which, consequently, triggered inflationary pressures in Eurozone. According to Bureau of Labor Statistics, there has been a generalized increase in the price of several goods, where gasoline accounts for 56.2% of the change in latest 12-months prices. Nonetheless, this is seen as a short-term effect that is expected to vanish in the long-term. Therefore, it is estimated a 2% and 3% long-term inflation rate for the Europe and the world, respectively (Figure 15).

Figure 15: Inflation Rate (%)

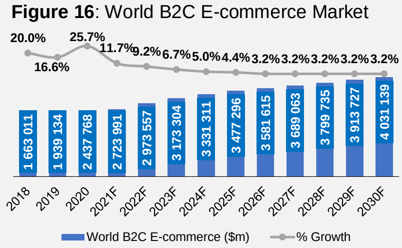


Source: Federal Reserve and IMF

E - Commerce

Furthermore, contrary to past financial crisis, the pandemic prompted e-commerce growth at a double-digit rate due to the in-shop restrictions imposed, accelerating the rise in logistics and related services demand. In addition, the traveling restrictions adopted worldwide led to a decline in airfreight capacity via commercial flights. Hence, businesses were looking for alternatives to deliver goods across the world, benefiting specialized air and ocean freight firms, namely Maersk through its Ocean segment, boosting margins and market share. According to Statista, it is estimated a 12% increase in retail e-commerce sales worldwide in 2021 and 10% in 2022 (Figure 16).

Figure 16: World B2C E-commerce Market



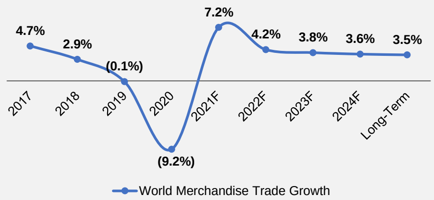
Source: Statista

Industry Analysis Outlook

Global Trade

Starting in China, the pandemic evolved rapidly and became a global game changer by the 1Q20. While disruptions such as natural disasters, conflicts, strikes and security incidents are common in maritime transport, the pandemic is exceptional, given its scale, speed and direct impact on global supply chains, transport and trade. Historically, there has never been a situation that resulted in a global lockdown, with restrictions on mobility, travel and economic activities. As a result, most of the countries closed their national borders, disrupting supply and suppressing global demand for goods and services.

Figure 17: World Trade Growth



Source: World Trade Organization

According to UNCTAD, more than 80% of the world merchandise trade volume is carried by sea, thus, the impact of the pandemic on maritime transport had huge implications. Furthermore, as China accounted for over 20% of world imports by sea, the world trade suffered a significant downturn during 1Q20, only recovering in June as lockdowns were eased. Notwithstanding, it is expected that trade growth will contract by over 10% until the end of 2020. Henceforth, trade volumes are projected to recover and reach pre-pandemic levels, increasing by 8% in 2021, as the world economy will rebound, and by slightly more than 4%, on average, in subsequent years (Figure 17).

Global Trade Wars

In 2016, Donald Trump was elected the President of the United States for a mandate of 4 years under the commitment of improving the trade deficit through the decline in imports, rising the demand for American products and, consequently, creating jobs. From 2018 onwards, the USA imposed tariffs to imports from China and Europe, which, in turn, retaliated, deteriorating the world trade growth for the last three years. These trade wars directly affect Maersk´s business, forcing the company to divert some routes, driving to major concerns in profitability as global trade restrictions were imposed.

Impact of Biden´s Election

In 2020, Joe Biden, representative of the Democratic Party, defeated the Republican Donald Trump in the US elections. Therefore, US started to mitigate international conflicts and to promote the free trade while fixing strategic alliances broken during Trump's mandate.

Maersk will benefit from the "free trade" policy since Maersk Ocean segment revenues rely on international trade - the fewer trade restrictions, the higher the volume of transactions, mainly B2B transactions, translating into higher margins. Besides, US future alliances with the EU may smooth the Group integration strategy, stimulating revenues growth, as trades with North America assume an important share of Ocean Revenues.

In addition, regarding environmental and sustainable policies, US rejoint Paris Agreement in February 2021, after a few years aside as a result of the previous mandate. Moreover, Biden plans to develop new strategies towards net-zero emissions by 2050, which is aligned with Maersk strategy for the upcoming years.

Regulation

On January 1st, 2020, the IMO's new regulation on sulphur emissions came into force, as a response to environmental concerns regarding the harmful emissions from ships. As a result, ships will only be allowed to use fuel types with a sulphur content of under 0.5%, compared with the 3.5% applied since 2012. The enforcement mechanism for this legislation is a ban on carrying non-compliant fuels on vessels, except for vessels where scrubbers are installed to clean exhaust gasses (Figure 18).

Figure 18: Limits on fuel sulphur content imposed by IMO, 2020

Source: Statista

Furthermore, the implications for refiners and shipowner's and other stakeholders in this industry is hard to measure. However, since marine fuels account for about 4% of global oil demand, the new IMO's regulations will have a global impact on oil prices. Consequently, it is expected an increase in the cost of imports and decline of exports costs, causing serious constraints on demand, as customers will not be able to keep up with the significant price gap between heavy fuel oil and low-sulphur fuel.

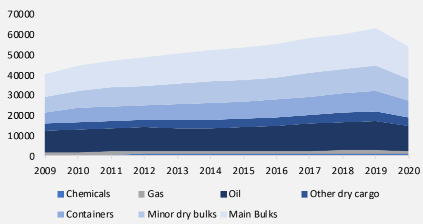
Companies are already looking for alternative fuels to meet the IMO's requirements, as Biodiesel, Methanol, Lignin Fuels and Ammonia. At the moment, Ammonia is considered in the Pole Position to be the elected fuel as it is fully zero emission and can be produced from renewable electricity alone. However, the Covid-19 outbreak has softened the impact of the shipping industry's move to a low sulphur fuel, as the enforcement by port State control authorities was limited. Thus, this situation conducted to a reduction in the number of inspections and contain the risk of spreading the coronavirus.

Sea Transport Demand

World Seaborne Trade

The demand side of global seaborne trade is heavily correlated to the prosperity of the global economy and trade volumes. As a result, global merchandise trade volumes have declined 14.3% in 1Q20 compared to the previous period, as Covid-19 containment measures affected economies around the world, recording an overall decline of 13% in 2020, according to WTO. Nonetheless, during 2021, with the completion of the vaccination process, the economy will be able to rebound to pre-pandemic levels, being expected a 4.2% increase in global trade in 2021 and 5% in the subsequent years (Figure 19).

Figure 19: World Seaborne trade in cargo ton-miles, 2009-2020



Source: Review of Maritime Transport 2020

During the 2Q20, fuel prices maintained the descending trend, registering a 35.1% decline, following the lower demand, the rising supply and the shrinkage in storage space. Hence, in April 2020, crude petroleum was being traded at a negative price in the intraday futures market. More recently, in 2021, fuel prices were boosted by economy rebound hitting a plateau in July, with an average price per gallon of regular gas established in $3.17. Over the coming months, it is expected a steady rise but at a slower pace when compared to the previous 12 months, as a result of the reestablishment of OPEC´s agreement that dramatically reduced volatility

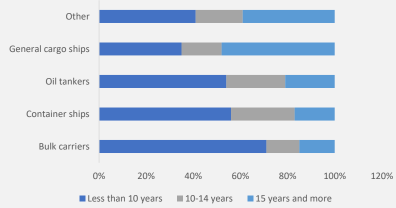
Sea Transport Supply

World Fleet

In the beginning of 2020, the total world fleet amounted to 98,140 ships of 100 or more gross tons, which is equivalent to almost 2bn dwt of capacity. Therefore, in 2020, the global commercial shipping fleet grew by 4.1%, registering the highest growth since 2014, but still below levels observed during the 2004–2012 period. The market segment that achieved the highest growth in 2020 was the gas carriers segment, followed by oil tankers, bulk carriers and container ships segments.

The average age of the world merchant fleet was **21.29 years in 2020.** However, this is not uniform across vessel types. Ships below 10 years represent a high proportion of the carrying capacity of bulk carriers (71%), followed by container ships (56%) and oil tankers (54%). Nonetheless, only 35% of the carrying capacity of general cargo ships and 41% of “other types” of vessels correspond to ships below 10 years, suggesting that these two segments are not undergoing fleet renewal (Figure 20).

Figure 20: Age Distribution of world merchant fleet by 2020



Source: Review of Maritime Transport 2020

Moreover, the fleet´s age of a company is considered to be a good indicator of its performance. Hence, companies with a fleet composed by old vessels usually have higher maintenance costs, being preferred younger vessels portfolios. Maersk Line average fleet´s age is around 10 years, which is far less than the average age of the world merchant fleet, indicating that Maersk´s fleet is young and future investments in CAPEX will be residual.

Besides, the Group investments in its fleet are also dependent on the transition to new vessels able to accommodate zero emission fuels. Hence, the company seeks to be aligned with IMO’s regulation in what concerns carbon fuels, and so it is working in its fleet renewal only composed by ships powered by non-polluting fuels.

Freight Rates

The fluctuations of freight rates assume a particular importance in this industry, as most of sea transport companies’ revenues are driven by good momentum in freight rates.

In early 2020, the Covid-19 impact on the global economy and seaborne trade strongly affected shipping freight rates which, in turn, continue to be determined by the way supply capacity is handled. In the case of container ships segment, companies practiced blank sailing and applied other capacity-management measures to adapt supply capacity to reduced demand for seaborne trade and allow freight rates to remain strong.

Since the beginning of the lockdown period, the demand for containerized goods has been declining, thus, shipping companies engaged with strategies to manage supply capacity and reduce costs to avoid freight rates from falling. According to the ClarkSea Index, which is a weighted average of earnings across the major shipping segments, despite the pandemic situation, in 2020, it is expected an overall value above $18,600 per day, above the average of 2009-

2019, indicating that some segments are seeing clear signs of improved market conditions. From 2021 onwards, it is forecasted a market normalization with freight rates returning to pre-pandemic growing trends.

Management and Corporate Governance

Governance Model

Maersk governance system consists of a two-tier management structure composed by a Board of Directors and Executive Board. Jim Snabe joined the Board of Directors in 2016 and, currently, he is the Chairman of the Board of Directors. Besides, the Executive Board is headed by Søren Skou, the Maersk´s CEO since June 2016 (Table 3).

Table 3: Governance Members

Søren Skou	Chief Executive Officer (CEO) of A.P. Møller - Mærsk A/S
Patrick Jany	Chief Financial Officer (CFO)
Vincent Clerc	Chief Executive Officer (CEO), Ocean & Logistics
Morten H. Engelstoft	Chief Executive Officer (CEO), APM Terminals
Henriette Hallberg Thygesen	Chief Executive Officer (CEO), Fleet & Strategic Brands
Jim Hagemann Snabe	Chairman of the Board of Directors
Ane Mærsk Mc-Kinney Uggla	Vice Chairman of the Board of Directors
Arne Karlsson	Chairman of the Audit Committee

Source: Maersk Report

Shareholders

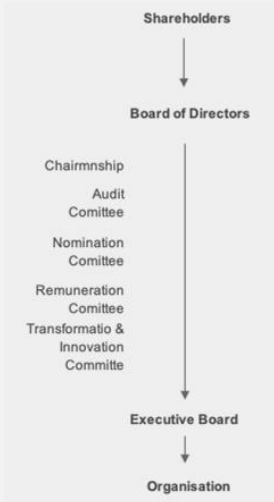
The company corporate governance framework starts with the General Meeting that is the major governance body of the group. Accordingly, Maersk's shareholders are in charge of electing the members of the Board of Directors by exercising their voting rights during these meetings. Furthermore, their importance is not just related with the election of new members, but also with the approval of the annual reports, dividends and other relevant proposals submitted by the management team.

Maersk has two types of shares: Class A shares that gives the holder voting rights and Class B shares without voting rights. Besides, the shares are listed at Nasdaq Copenhagen under the ticker MAERSK-B.CO.

Board of Directors

The Board of Directors establishes the general business and management principles and guarantees the proper organization and governance of the company. Moreover, the Board of Directors sets up the strategy and the risk policies and supervises their execution as well as the performance of the company and its management (Figure 21).

Figure 21: Framework of Corporate Governance



Source: Maersk Report

During 2020, the Board of Directors handled with several important matters not only regarding the company performance but also related to its strategic decisions. The BoD has coordinated M&A activities to ensure Logistics & Services segment growth through the acquisition of the Performance Team and KGH Custom Services. In addition, the Board is responsible for the transformation and reorganization of the company to become the 'Global integrator of container logistics', which has been Maersk's main purpose since 2016 .

The Board comprises four distinct committees: the Audit Committee, the Nomination Committee, the Remuneration Committee and Transformation & Innovation Committee. As at Dec-20, the Board was composed by 10 members, including the Chairman and Vice-Chairman, 5 independent members representing the Audit Committee and Transformation & Innovation Committee, and 3 other A.P. Moller – Maersk employees, elected for a period of 2 years subject to certain exceptions.

Executive Board

The Executive Board is appointed by the Board of Directors to supervise the day-to-day management of the business in accordance with the guidelines provided. Thus, the main functions executed by this unit comprises, beyond others, the business development and submission of strategy proposals to the Board of Directors and the implementation of the investment strategy of Maersk.

Remuneration Policy

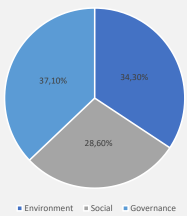
Maersk uses a compensation scheme in order to support the business plan and the need for executive leaders to focus on achieving the company's strategic goals, through a combination of short and long-term incentives. Despite the severe impacts of Covid-19, the Company managed to keep the remuneration unchanged of all members of the Board of Directors and Executive Board, as a result of the outstanding Maersk's financial performance in 2020.

BoD members receive a fixed annual fee based on their specific role. Accordingly, the Chairman and other board members receives a fixed amount, whereas the Vice Chairman receives fixed multiples. Moreover, the Executive Board member's remuneration corresponds to a fixed base salary, which includes a company pension contribution plan and car as well as other short-term and long-term incentives.

Decarbonization and ESG Metrics

Maersk is fully committed to meet the decarbonization target set by the Paris Agreement, with the purpose of delivering a sustainable path across the supply chain and securing a viable business for the future. Besides, the company is following the guidelines established by the IMO 2020, that determined a 0.5% global cap on the content of Sulphur, hence the company has to look for alternative fuels as Biodiesel, Methanol, Lignin Fuels and Ammonia. At the same time, the company remains engaged with its key partnerships with Road Freight Zero, The B Team and the Global Maritime Forum towards sustainable goals achievement as defined in its sustainability report.
As a result of the transitional process of becoming Net-Zero by 2050, the company took an important step further to reach this goal, by signing a contract for the first ever carbon neutral container vessel in July 2021. Hence, the ship is expected to be delivered by mid-2023, and marks the Maersk's convergence to IMO´s regulation (Figure 22).

Figure 22: Maersk ESG Score

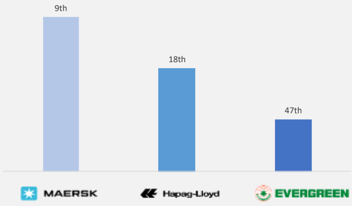


Source: Reuters

In 2020, ECO delivery products have increased 3x compared to 2019 and, by mid-2021, this figure has already reached prior year level, thus, Maersk expects it to triple until the end of the year. Furthermore, in 2021, the company closed a partnership with BESTSELLER, which is a top fashion group in the world, to deliver carbon-neutral ocean transport. Vicent Clerc, Executive Vice President and CEO Ocean & Logistics, A.P. Moller - Maersk, announced that "BESTSELLER, one of the top fashion and lifestyle groups in the world, has chosen Maersk ECO Delivery to reduce the company's carbon footprint in transportation at sea”.

Regarding the ESG metrics and, when compared with firms operating within the “Freight and Logistics Services” industry, Maersk stands at the 9th place out of 47 companies, which reinforces their objective to become a sustainable company. In addition, according to Reuters ESG Disclosure Score, Maersk presents an ESG Overall Score of 64.95 out of 100 in 2021, based on three pillars: Environment (75), Social (54) and Governance (63), weighting 34.3%, 28.6% and 37.1% on the overall score, respectively. Hence, there has been a clearly improvement and attention to this matters, as the Group has evolved from the 20th position in 2019 to the 15th in 2020, and, in 2021, stands at the 9th place. In comparison to its closer peers, Maersk shows the best results in this regard, followed by Hapag Lloyd that appears in 18th position and Evergreen in 47th position (Figure 23).

Figure 23: ESG Score Position (2021) – Peer Companies



Source: Reuters

Industry Overview and Competitive Positioning

Group of Peer Companies

The Sea Transport industry is divided in two main segments: Cargo Transport and Passengers Transport. Considering the core business of Maersk, companies that focus exclusively (or mostly) on the transport of passengers, NGL, oil and other dangerous substances were disregarded within the peer group analysis.

Within the Cargo Transport segment, Maersk’s close peers are those dedicated to containers transportation that also provide other logistics-related services. Therefore, to define Maersk’s peers, it was taken into account the market capitalization of the top 20 world largest sea transport companies and core business similarities, resulting into 5 relevant peers (Table 4).

Table 4: Peer Companies

Ranking	Company Name	Relevant Peer
1	**A.P. Moller Maersk**	□
2	**Hapag Lloyd**	□
3	**COSCO Shipping**	□
4	China Merchants Energy Shipping	□
5	COSCO Shipping Energy	□
6	SITC International Holdings	□
7	Nippon Yusen KK	□
8	**Orient Overseas (International)**	□
9	**Evergreen Marine**	□
10	Mitsiu OSK Lines Ltd	□
11	Shangai Zhonggu Logistics	□
12	Kirby Corp	□
13	Atlas Corp (Canada)	□
14	Hainan Strait Shipping	□
15	Dfds AS	□
16	HMM Co Ltd	□
17	Matson Inc	□
18	Qatar Navigation QPSC	□
19	Transcoal Pacific Tbk PT	□
20	Wan Hai Lines Ltd	□

Source: Reuters and Author analysis

Therefore, 2 out of 5 relevant peers were considered Maersk’s close peers due to similarities in EV/EBIT and EBIT margin, namely the Asian company Evergreen and the German Hapag Lloyd.

Competitors Main Strategies

Evergreen

Evergreen is engaged into cargo container shipping business and logistics, operating in Taiwan, Americas, Europe and Asia.

The company´s strategy is mainly focused on upgrading its fleet and reducing operating costs, while taking advantage of the Alliance settled with Maersk. Moreover, Evergreen is also committed with the creation of a sustainable global container transportation system – environmentally, socially and economically responsible, meeting the competitors’ strategies in this matter.

As Maersk, the company strategy is fully committed with strategic M&A transactions in order to consolidate and increase its market share in sea transport industry. Thus, recently, Evergreen acquired 60% the Chilean, Green Andes Shipping Company Agency.

Hapag Lloyd

Hapag-Lloyd is a shipping and container logistics company, headquartered in Hamburg that operates in America, EMEA and Asia-Pacific.

The company's strategy is based on a cost optimization process, establishment of terminal partnerships and further improvements in procurement and container steering. At the same time, Hapag-Lloyd aims to become a dynamic and analytically driven organization. Hence, the company targets a 15% online business volume share via web channel until 2023.

In line with Maersk, the company is in a process of digitalization of the business through Bilateral EDI (Electronic Data Interchange), which is a directly connected electronic data interchange that helps customers to ask for quotations, book requests and provides container tracing services.

Maersk's SWOT Analysis

Regarding Maersk's SWOT, although the company maintains a leading position within the sea transport market, it cannot ignore the threats and weaknesses that may face (Table 5).

In terms of **strengths**, Maersk shows a diversified strategy, as its operations are spread by more than 120 countries and it provides a wide range of activities within the transport, energy, offshore, retail, and manufacturing industries. Accordingly, this strategy represents a competitive advantage over its competitors, protecting Maersk against demand fluctuations in certain geofigureies.

Furthermore, the company is also supported by robust integrated operations, as it holds a strong fleet of vessels that are able to offer a wide variety of services as shipping and transportation services. This strength allows Maersk to boost its margins by promoting an effective utilization of assets and enlarging its customer's base.

In what concerns Maersk major **weaknesses**, the company presents low liquidity ratios, which limits its future growth perspectives. Although the slight increase in the current ratio to 1.3x in FY20, this is considered a low figure when compared to the industry average (1.82x). Besides, this weaker liquidity position is an indicator of the company's decreasing ease in funding, which restrains the company ability to fund any growth prospect that comes up in the market.

In terms of **opportunities**, the Group is seeking to explore strategic acquisitions to improve its market position and to support the transition to an integrated strategy. Recently, Maersk completed the acquisition of Performance Team LLC, an US warehouse and distribution company, in order to strength and boost the performance of the Logistics segment by offering end-to-end supply chain solutions.

Moreover, the company seeks to expand its operations through the launch of a new digital supply chain management platform and a research center for decarbonized shipping to reduce carbon emissions around the world by 2050. Thus, this will enable Maersk to serve new customers that are seeking for

Table 5: SWOT Analysis

Strengths
▻ Diversified strategy, with operations spread by more than 120 countries. Protects Maersk against demand fluctuactions.
▻ Robusted integrated operat strong fleet of vessels able to offer a wide variety of services as shipping and transportation services.

Weeknesses
▻ Low liquidity ratios, which limits its capabilities of future growth perspectives.
▻ Indicator of the company's decreasing ease in funding which limits the ability of the company to fund any growth prospect that comes up in the market.

Opportunities
▻ The Group is seeking to explore strategic acquisitions to improve its market position.
▻ Launch of a new digital supply chain management platform.

Threats
▻ The intense competition across the global shipping industry.
▻ International laws and regulation leads to several constraints in Maersk´s operations.

Source: Author analysis

sustainable alternatives through their logistics network and modernize their processes.

Lastly, regarding the major **threats** that Maersk may face, the intense competition across the global shipping industry leads to intense pricing pressures on freight rates. Besides, as the product differentiation is low, players seek to differentiate their services by offering faster delivery times and extended services to increase market share.

Additionally, marine shipping industry is also vulnerable to international laws and regulation, which leads to several constraints in Maersk´s operations. The Group is subject to the regulatory regimes of each country in which it operates, including scrutiny from government and other competition agencies, generating additional costs. (Refer to Investment risks – Compliance Sector).

SWOT Analysis – Peer Companies

Regarding the SWOT analysis of Maersk main competitors, it is possible to have the perception of the Group's position when compared to its peers: Evergreen, Hapag Lloyd, which are some of the top companies in the sea transport industry.

Firstly, in terms of **strengths**, firms' scale and fleet capacity are the common analyzed factors that may differentiate companies. Both Hapag Lloyd and Maersk show a stronger position when compared to Evergreen, as their larger fleet enables them to undertake projects of various sizes and degrees of complexity.

In terms of **opportunities**, the two competitors seek to expand its business operations through strategic acquisitions in order to maintain their market position. Moreover, both of them are developing online platforms, which is seen as an opportunity, considering the digitalization process triggered by the pandemic.

Besides, sea transport companies' major **weakness** is their inability to manage profitability ratios due to their business nature, characterized by low margins and high levels of trade receivables arising from long-term contracts settled with customers.

Lastly, in terms of **threats**, Evergreen and Hapag Lloyd are strongly affected by cyberattacks to their digital platforms, which may cause breaches of confidential information. Furthermore, this industry is also threatened by the intense regulation regarding business licensing, taxation, and other specific laws divergent between the numerous countries where they operate.

Porter 5 Forces

Threat of Substitutes

Although substitute freight transport methods are a serious threat in this industry, they are usually unsuited to products that are transported by ship. According to MarketLine, the largest share of marine freight comprises non-perishables products (Figure 24).

Buyers in this industry are familiar with shipping transport times and have adapted their supply chains accordingly. Therefore, the change to an alternative method via air or land would not be worthwhile, as it would determine a price increase in a very cost-sensitive industry. Besides, the service disruption while switching suppliers would also be unfordable for buyers.

Recently, in 2018, it has been settled the first direct connection by train between China and Europe through Port of Antwerp. This train allows to reduce the time of the journey from 35 days by sea transport to 16 days. Hence, the train connection between Asia and Europe appears to be a major threat for the sea transport industry.

Overall, the threat of substitutes is moderate.

Bargaining Power of Suppliers

From the two main products supplied within the industry (fuel and containers), fuel suppliers hold the most power. Fuel is often supplied by large multinational oil corporations via distributors and subsidiaries such as BP and Royal Dutch Shell. Thus, fuel prices usually hold at the same level across the globe, and there is no price incentive to switch suppliers.

Besides, there are cases of backward integration within the sea transport industry. Focusing on Maersk's strategy to mitigate bargaining power, Maersk Container Industry (MCI) is a subsidiary A.P. Moeller-Maersk and it is involved in container manufacturing. As a result, this strategy reduces supplier power as the company is responsible for its own products.

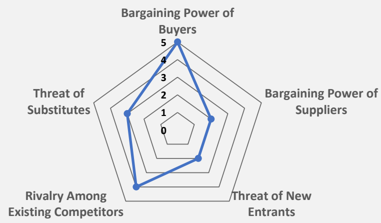
The overall supplier power is assessed as moderate.

Bargaining Power of Buyers

The major players in Sea transport industry sell their services primarily to large corporate customers that import and export huge quantities of raw materials. The scale of these organizations means they operate as an oligopoly, giving buyers a significant financial power and control over the industry players. Moreover, buyer power within this sector is enforced by the absence of a unique product and the limited potential for product differentiation. However, players also have access to a fairly large group of smaller buyers with lower bargaining power due to their reduced size and weaker financial performance.

The overall threat of substitutes is considered to be high.

Figure 24: Porter 5 Forces



Source: Author analysis

Rivalry Among Existing Competitors

The rivalry within this industry is strong as the increasing prevalence of alliances has led large and powerful industry players to gain financial and competitive strength. In recent years, the industry has experienced a consolidation trend, emerging numerous joint-ventures, mergers and acquisitions. Nevertheless, the industry is fairly close to saturation and is in process of recovering from the strong decline experienced in previous years.
Moreover, the fact that there are a top 5 strong companies operating within the industry intensifies rivalry. Additionally, rivalry in this industry is highly influenced by the lack of product differentiation and by the time and price-sensitive services provided of service.

Finally, the high fixed costs in the industry are forcing a certain level of competition for companies to remain profitable after heavy investment in larger ships.

The overall rivalry is considered to be high and is the most critical factor in this Porter's Analysis.

Threat of New Entrants

The threat of new entrants to the Sea Transport industry is limited by several factors. In recent years, the most important factor is the lack of industry growth, preventing new entrants. Thus, large companies within the industry such as Maersk and CMA CGM benefit from economies of scale, which will prevent the entry of smaller players into the market.

Furthermore, the high fixed costs combined with the uncertain future of the industry turn it unlikely that new companies will enter in the foreseeable future.

Also, marine freight market is highly regulated, with vessels and their crews subject to the regulation settled by governments, navigational procedures and levels of training. The International Maritime Organization (IMO) is a UN agency that specializes in regulating the international marine freight industry and provides some form of governance, turning new player's entry extremely difficult.

The overall threat of new entrants is weak.

Investment Summary

My recommendation on AP. Moller Maersk shares is to **BUY** with a price target of \$3,113.14/sh as at December 31st, 2022 based on a DCF approach using the Free Cash Flow to the Firm (FCFF). According to October 1st, 2021 closing price of \$2,696.32, there is a 13% upside potential, representing a medium-risk level profile (>5%). Both the DCF, APV method and the Relative Valuation support the **BUY** recommendation.

The Group's near-term profitability is likely to be at very high level, generating material cash flow surplus , which is expect to be used on a combination of share buybacks and M&A transactions. In what regards the foreseeable future, Maersk´s strategy is focused on the reduction of the exposure to spot freight rates in the Ocean Segment, and it is expected that future acquisitions in logistics may play an important role in the company growth. However, the outlook for Ocean becomes less positive from 2023 onwards, thus, the execution of the company´s integration process is critical to overcome potential constraints.

Furthermore, the ocean container industry volumes are expected to grow 4.3% in FY21 followed by 5% thereafter. As the current record high rates environment is likely to persist in 2Q21 and 3Q21, ocean carriers have incentives to order additional vessels, which will lead to overcapacity in FY23/24. Hence, the bargaining power of the ocean carriers has increased and this may be reflected in higher results through the cycle returns when compared to previous periods.

Investment Risks

Investors' decisions must take into account that Maersk business is exposed to several risks not directly managed by the Group that can materialize in adverse effects on the price target.

Downside risks that may jeopardize the previous recommendation range from: a lower than expected freight rates and container volume, increasing bunker prices going forward and less aggressive use of cash flows for share buybacks or M&A transactions. Regarding the evolution of freight rates, it is expected a market normalization to pre-pandemic levels, inverting the reduction of the capacity on major routes and shortages of empty containers arising from countries lockdown, that led to a temporary increase in shipping costs.

In January 2020, IMO regulation came to twist the previous relationship between Brent and High Sulphur Fuel Oil (HFSO), due to the imminent retirement of this grade of fuel that will be gradually replaced by Very Low Sulphur Fuel Oil (VLFSO). Hence, with the majority of the vessels switching to VLFSO, there was a market squeeze due to the spike in the demand for this product. During 1Q20, the premium for VLSFO over Brent averaged 35.5%, however, from 2021 onwards, it is expected a more stable relationship with the return to pre-pandemic levels.

Concerning the M&A transactions for the upcoming years, the Maersk's focus is to strength the Logistics and Services segment worldwide through strategic deals, aiming to successfully integrate the company's operations. Consequently, share buyback programs will depend on the cash remaining.

Valuation

In order to value A.P. Moller Maersk Class B shares (MAERSK-B.CO.), it was firstly used a Free Cash Flow to the Firm (FCFF) method as the main cash-flow proxy. From 2022 to 2030, it was performed an explicit forecast, in which the first five years performance was estimated with more detail, while the remaining years forecast was simplified, changing only the most relevant variables. From 2030 onwards, the value of the company was obtained using the perpetuity formula for the terminal value.

This approach led to a $3,113.14 price per share as at December 31st 2022, representing an upside potential of 13% from the $2,696.32/sh closing price in October 1st 2021. Notwithstanding, this valuation method is vulnerable to some factors that will further stressed out, namely, WACC rate assumptions and the long-run sustainable growth rate. (Refer to Sensitivity Analysis Section)

Business segments revenue forecast

Ocean Segment

This segment represents the largest share in Maersk revenues (73% of total revenues in FY20). Accordingly, with the fast pace vaccination process worldwide and the return of some key routes that were shut down due to the pandemic, it is expected an exponential growth of 6.5% in FY21 surpassing pre-Covid levels (Figure 25).

Ocean segment volumes are mainly driven by Ocean Freight market volumes and European GDP growth. Therefore, it was considered that before Covid-19 outbreak, ocean freight volumes growth had a higher average weight on the total Ocean revenues of 60% when compared to the 40% weight of European GDP growth. Nonetheless, during 2020, due to pandemic, it was given considerably more weight to the European GDP growth (90%), as revenues within this segment are severely impacted by the economic downturn. Afterwards, in FY21 and FY22, it was considered a recovery to pre-pandemic levels, with Ocean Freight market volumes growth representing 55% and 50%, respectively. From 2023 onwards, the Ocean segment revenues will be mainly driven by the European GDP growth (60%) with a weighted growth tending to 1.3% (Figure 26 and 27).

Note that the ocean freight market evolution is highly related to e-commerce growth, impacting Maersk revenues. According to Statista, e-commerce is expected to grow 11% in 2021 when compared to 2020, which is mainly explained by the increase in customers demand, since their expenditures from travelling and social events were diverted to shopping, boosting the need for shipping companies to transport those products.

In addition, ocean segment revenues are also driven by freight rates, that suffered a huge decline during the lockdown, although the fast recovery during the 3Q20 and 4Q20, arising from the e-commerce boost. Hence, from 2021 onwards, it is expected a normalized market, with freight revenues moving along the European long term inflation rate (2%).

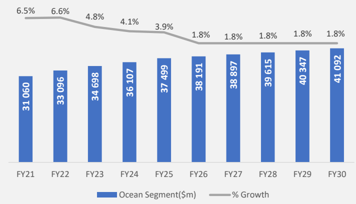
Logistics and Services

In FY20, the company registered the best performance ever in this segment, following the determinant role of container logistics services in the success of Maersk integration strategy (Figure 28).

Furthermore, it is expected a continuous growth in this segment throughout the upcoming years, emerging from the company's successful strategic M&A transactions. Therefore, it was assumed an expected growth of 7.8% in FY21, as a result of the acquisition of Performance Team and KGH in September that doubled the combined warehousing and distribution presence in the North America region. Consequently, the company is expected to strength its market share in this segment (Figure 29).

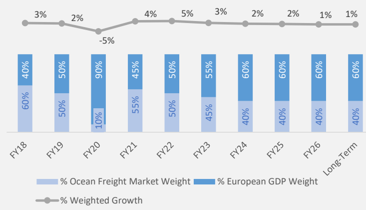
As per the revenues forecast, it was considered as main proxies the intermodal services and the freight forwarding global market size, since both jointly accounted for nearly 57% of this segment total revenues in FY20. Regarding intermodal revenues, it was considered a slight increase in Maersk market share from 17.2%

Figure 25: Ocean Segment Revenues Forecast



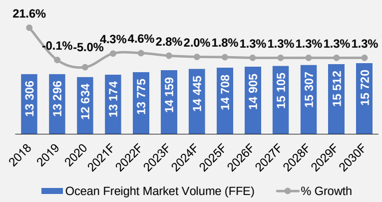
Source: Author Analysis

Figure 26: Ocean Segment Revenues Drivers



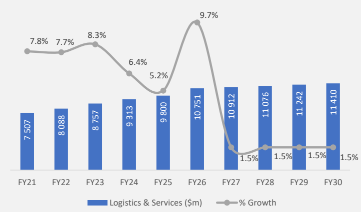
Source: Author Analysis

Figure 27: Ocean Freight Market Volumes Evolution



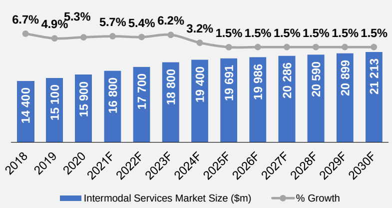
Source: Statista

Figure 28: Logistic & Services Segment Revenues Forecast



Source: Author Analysis

Figure 29: Intermodal Services Market Size ($m)

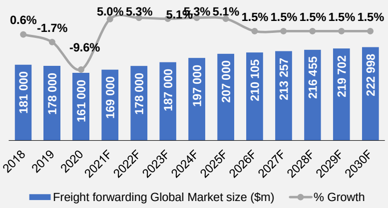


Source: Statista

in FY20 to 17.9% in FY24, as a consequence of further acquisitions in this sub-segment, stabilizing at 18.1% from 2025 onwards. Additionally, according to Statista forecasts, it is expected that the intermodal market will grow at a 4.4% CAGR from FY20 to FY25, reaching $20bn. As a result, revenues will grow at a 5.4% CAGR from FY20 to FY25 (Figure 30).

In what concerns freight forwarding revenue forecast, Maersk has the largest fleet among its competitors of 4.1M TEU, which shrinks their ability to undercome freight forwarding services in terms of available capacity. Thus, it was assumed a 5% yearly growth in market share from FY21 to FY25, reaching 1% and stabilizing at 1.2% thereafter. Moreover, regarding the freight forwarding global market size, it was assumed a 5.2% CAGR from FY20 to FY25, amounting to $207bn. Hence, freight forwarding revenues are expected to reach $2bn by FY25, which compares to $1.2bn in FY20.

Figure 30: Freight Forwarding Market Size ($m)



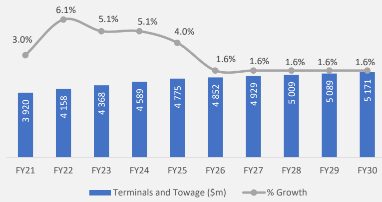
Source: Statista

Terminals and Towage

In this segment, it was assumed as main driver the revenue per move, which includes terminal revenue, storage income and government grants.

Following the pandemic adverse effects on traded volumes worldwide, Terminals and Towage segment faced a revenue decrease in FY20. However, EBITDA margin increased to 31% in FY20 when compared to 28% in FY19, as a consequence of a higher revenue per move and a cost reduction in several terminals. Besides, from FY21 until FY25, it was considered a positive variation in revenue per move at a 3% CAGR, which allied to a stable number of 15 yearly total moves led to a 21.8% increase in total revenues during this period (Figure 31).

Figure 31: Terminals & Towage Segment Revenues Forecast



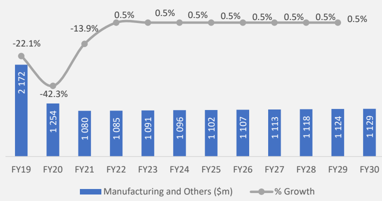
Source: Author Analysis

Moreover, this increase in revenue per move for the upcoming years is supported by several agreements to increase capacity in some ports as Yokohama-Kawasaki International Port, improving storage income. In addition, Maersk started the construction of two additional terminals in Ghana and Italy, that contributes to differentiate Maersk from its competitors.

Manufacturing and Others

Manufacturing and Others segment is regarded as a residual segment of the Group, with revenues mainly generated by Maersk Container Industry, which is a manufacturer of reefer containers.

Figure 32: Manufacturing & Others Segment Revenues Forecast



Source: Author Analysis

As per valuation purposes, it was considered the number of reefer containers manufactured per year as the main driver of the revenues. During FY20, there was a considerable revenue decrease in this segment, mainly explained by the lost production of the Star Cool Integrated (SCI) product, when the company's factory in Qingdao, China was forced to shut down during 1Q20 due to Covid-19 (Figure 32).

The Group is seeking to divest from this segment, as it is considered one of the less profitable between the four, with an EBITDA margin of 13.4% in FY20. Accordingly, for the upcoming years, it was forecasted a 0.5% growth in manufactured containers from FY21 onwards, representing 2% of Maersk total revenues by FY30 (which compares with 3.1% of total revenues by FY20).

Capital Structure

Cost of Equity

As most of Maersk investors are from Northern Europe (69%), it was assumed that the Maersk marginal investor is also European. Hence, it was used the OMXC25 index as the market portfolio which was further regressed against Maersk 5-year daily stock returns to compute the levered beta (βe) that was unlevered afterwards. Additionally, the process was repeated by using this methodology for the selected peers. Moreover, since Evergreen is based in Taiwan, TWII was used as market portfolio, whereas for Hapag Lloyd, a German-based company, it was considered the STOXX600.

In order to determine the cost of equity, it was used the CAPM model. Firstly, by re-levering the βu of 1.28 obtained through the average of the unlevered betas of Maersk, Hapag Lloyd and Evergreen, it was estimated a βe of 1.41 and a cost of equity (Re) of 8.69%. Despite being included in the analysis, COSCO and Orient Overseas were regarded as 2nd tier comparable firms and, thus, excluded from unlevered betas calculation, due to discrepancies verified during the computation of βu. Besides, in order to match Maersk´s cash flows duration, it was considered the -0.5% yield of a 10-year German Bund as a proxy for the risk-free rate. Lastly, according to Fernandez, Pablo survey, "*Market Risk Premium and Risk-Free Rate used for 81 countries in 2021",* it was assumed a market risk premium (MRP) of 6.5% as the average MRP in Germany (Table 6).

Table 6: Unlevered Beta (Peers Companies)

	bu
Maersk	1.36
Hapag Lloyd	0.99
Evergreen Marine	1.38
Orient Overseas	1.06
COSCO	1.63
Tier 1 Average bu	**1.28**
Tier 1 + 2 Average bu	**1.24**

Source: Author Analysis

(in millions of the local currency)	AMKBF	HLAG	Evergreen	Orient Overseas	COSCO	Average
be	1.68	1.10	1.68	1.25	1.90	
D	15 373	3 067	45 727	3 069	24 230	
E	30 854	6 722	101 494	5 642	78 697	
EV	46 227	9 789	147 221	8 711	102 927	
D/E	49,8%	45,6%	45,1%	54,4%	30,8%	
bu	1.36	0.99	1.38	1.06	0.97	**1.28**

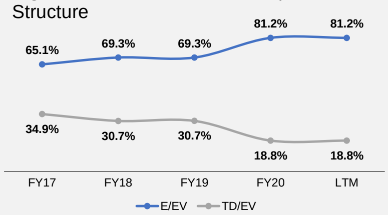
Cost of Debt

Maersk's cost of debt (Rd) was also obtained using the yield-to-maturity approach. Hence, the corporate bond used in the computations matures in 2030 and has a principal of $500 million, corresponding to a yield-to-maturity of 4.15%. In line with this, assuming a loss given default of senior unsecured bonds of 68.18% and an annualized 10-years Baa3 probability of default of 0.48%, it was reached a 4.25% Rd and an implied βd of 0.73.

WACC

From 2020 onwards, as mentioned before, Maersk will decrease its leverage ratio, thus, it is expected that the equity-to-enterprise value ratio will be kept at 81.2%, while the net debt-to-enterprise value ratio will tend to 18.8% in the long-term. These weights will ponder each cost of capital mentioned previously to further reach the WACC. Note that to determine it, it was used the after-tax cost of debt, in which the tax rate considered is the marginal tax rate of 25.7% obtained summing up the federal statutory rate (22%) to other state and local income taxes (3.7%). Moreover,

Figure 33: Maersk Historical Capital Structure



Source: Maersk Annual Reports and Author Analysis

it was considered a target debt to equity of 23.1%, having in mind the 2020 D/E and assuming that the company is not expecting to issue additional capital in the upcoming years, leading to a WACC of 7.65% (Table 7).

Terminal Value

The growth rate (g) was estimated to be the one that corresponds to a steady-state growth, in which the FCF growth matches the growth resulted by the product of the reinvestment rate (RR) and the return on new invested capital (RONIC). Moreover, the reinvestment rate is relatively stable in the last years of the forecast period, thus, a perpetuity formula can be safely used. Note that, the 2.3% growth rate estimation is in line with the long-term inflation rate for Europe (Table 8).

in millions dollars	2017	2018	2019	2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
NOPLAT	1 015	-341	1 276	2 459	2 297	2 510	2 735	2 849	2 969	6 236	6 327	6 467	6 612	6 761
Core invested capital	37 026	36 669	41 639	41 521	43 854	45 287	47 654	49 764	51 777	53 483	54 476	55 496	56 544	57 621
FCF	8 214	-225	-3 358	-16	1 111	406	783	1 006	3 083	5 349	5 465	5 585	5 710	4 699
ROIC	2,7%	-0,9%	3,1%	5,9%	5,1%	5,3%	5,5%	5,5%	5,6%	11,4%	11,4%	11,4%	11,5%	11,2%
RONIC		17,6%	-452,8%	23,8%	137,5%	9,1%	15,7%	4,8%	5,7%	162,3%	5,3%	14,1%	14,2%	14,2%
RR		-760,3%	104,7%	389,6%	-4,8%	101,5%	57,1%	86,6%	74,1%	67,8%	27,4%	15,7%	15,8%	15,9%
NOPLAT g		-133,6%	-474,0%	92,8%	-6,6%	9,3%	9,0%	4,2%	4,2%	110,1%	1,5%	2,2%	2,2%	2,3%
RR		34,1%	363,2%	100,7%	51,6%	83,8%	71,4%	64,7%	-3,9%	14,2%	13,6%	13,6%	13,6%	30,5%
RR		104,7%	389,6%	-4,8%	101,5%	57,1%	86,6%	74,1%	67,8%	27,4%	15,7%	15,8%	15,9%	15,9%
g		18,4%	-1764,4%	-1,1%	139,6%	5,2%	13,6%	3,6%	3,8%	44,4%	0,8%	2,2%	2,2%	2,3%

Valuation Methods

DCF Valuation

To determine Maersk equity value as at December 31st, 2022, it was deducted to the enterprise value the value of the net debt. Hence, it was determined an equity value of $62,356M. Furthermore, the cash flows were discounted using a WACC of 7.65%, following the company´s target debt to equity of 23.1%, in line with the FY20 D/E. Assuming a terminal growth rate of 2.3% and, after the computations, the Enterprise Value (EV) is $78,046M, and when deducted the Net Debt of $15,690M, it is reached an Equity Value of $62,356M. The price per share was calculated dividing the Equity Value by 20.03M of Class B shares outstanding, reaching a target price of $3,113.14/sh that corresponds to a 13% upside from the $2,692.32 closing price in 1st October 2021.

(in millions dollars, as of 31st December)	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
NOPLAT	2 510	2 735	2 849	2 969	6 236	6 327	6 467	6 612	6 761
Depreciation and Amortization	3 625	3 722	3 928	4 110	4 283	4 428	4 510	4 594	4 679
Gross Cash Flow	**6 135**	**6 457**	**6 777**	**7 079**	**10 518**	**10 755**	**10 977**	**11 206**	**11 440**
Changes in NWCR	34	39	44	50	-1 447	15	18	22	26
Capex, Net	-4 519	-5 609	-5 599	-5 694	-5 613	-5 184	-5 278	-5 374	-5 471
Change in other assets	-539	-482	-439	-429	-376	-236	-252	-268	-285
Unlevered FCF	**1 111**	**406**	**783**	**1 006**	**3 083**	**5 349**	**5 465**	**5 585**	**5 710**
@WACC	7,65%	7,65%	7,65%	7,65%	7,65%	7,65%	7,65%	7,65%	7,65%
Levered EV	**78 046**	**83 609**	**89 221**	**95 039**	**99 224**	**101 465**	**103 760**	**106 111**	
Net Debt	15 690	16 743	17 835	18 620	19 040	19 471	19 912	20 364	
Equity Market Value	**62 356**	**66 866**	**71 386**	**76 419**	**80 184**	**81 993**	**83 848**	**85 747**	
Shares Outstading (millions)	**20**								
Price Target	**3 113**								
Terminal Growth Rate	2,3%								

Table 7: Maersk Target Capital Structure

Target Capital Structure	
Debt and Debt Equivelents	**13 799**
Price per Share	$2226.65
Shares Outstanding (Millions)	20
Market Cap	**68 818**
EV	**101 790**
TD/EV	18.8%
E/EV	81.2%

Source: Maersk Annual Reports and Author Analysis

Table 8: WACC Computation (Long Term)

WACC	
Rf	-0.5%
be	1.41
MRP	6.5%
Re	8.69%
E/EV	81.2%
Rd	4.25%
ND/EV	18.8%
Marginal Tax Rate	25.7%
WACC	7.65%

Source: Author Analysis

APV Method

To assess if the DCF valuation was properly performed, it was conducted a valuation using the APV method aiming to reach the same price per share. The APV method uses the Unlevered Cost of Capital (Ru) to discount the cash flows and also takes into account the present value of the tax shields discounted at Ru. Through this method, it was obtained an Equity Value of $62,356M, which divided by the number of shares outstanding 20.03M, reach the same price per share of $3,113.14, leading to a **BUY** recommendation once again.

(in millions dollars, as of 31st December)	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Unlevered FCF	1 111	406	783	1 006	3 083	5 349	5 465	5 585	5 710
@Ru	7,85%	7,85%	7,85%	7,85%	7,85%	7,85%	7,85%	7,85%	7,85%
Unlevered EV	**74 764**	**80 229**	**85 747**	**91 476**	**95 577**	**97 734**	**99 945**	**102 209**	**104 526**
Tax Shield	151	160	172	183	195	204	208	213	218
@Ru	7,85%	7,85%	7,85%	7,85%	7,85%	7,85%	7,85%	7,85%	7,85%
Value of Tax Shield	3 282	3 380	3 474	3 563	3 648	3 730	3 815	3 901	3 990
Levered EV	**78 046**	**83 609**	**89 221**	**95 039**	**99 224**	**101 465**	**103 760**	**106 111**	**108 516**
Net Debt	15 690	16 743	17 835	18 620	19 040	19 471	19 912	20 364	
+Unlevered EV	74 764	80 229	85 747	91 476	95 577	97 734	99 945	102 209	
+Tax Shield	3 282	3 380	3 474	3 563	3 648	3 730	3 815	3 901	
-Net Debt	15 690	16 743	17 835	18 620	19 040	19 471	19 912	20 364	
Equity Market Value	**62 356**	**66 866**	**71 386**	**76 419**	**80 184**	**81 993**	**83 848**	**85 747**	
Shares Outstading (millions)	**20**								
Price Target	**3 113**								
Terminal Growth Rate	2,3%								

Reasons not to use FCFE and DDM

In order to value Maersk stock, it was assessed the possibility of using the DDM and FCFE methods. Nonetheless, since the beginning, those alternatives were disregarded after further assessment.

The DDM method, would be a plausible alternative in case of Maersk stock, as the company pays dividends on a regular basis (Refer to Dividend Policy Sector), however, the Group is facing a rising growth in the recent years, as a result of the success of its integration strategy. Hence, Maersk future dividend payments are strictly connected with the high growth momentum of the company, which turns extremely difficult to track record of dividend payments evolution.

Moreover, allied to this unpredictable situation, the DDM method takes a conservative approach by ignoring share buybacks, which contrasts with the company strategy, that authorized a share repurchase up to DKK 10bn in 2Q19. Thus, the computation of the method without considering this circumstance would lead to a considerable difference in terms of stock value.

Regarding the FCFE, since Maersk has an historical trend of dividends payment, this can lead to an overestimation of the equity cash flows, as the D/E ratio may rise upon the dividends distribution.
Thus, the lack of this adjustment in the computation of the cost of equity, may lead to an unexpected rise in the company value.

Relative Valuation

Regarding the relative valuation, there were considered two groups of comparable firms. The tier one is composed by Maersk´s closest comparable firms as Evergreen Marine Corp. and Hapag Lloyd, due to similarities in operating performance and business model. Furthermore, the tier two is composed by companies (namely COSCO and Orient Overseas), that operate in the same business line and offer

Table 9: Relative Valuation Multiples

(as of December 31st, 2022)	EV/Revenues	EV/EBITDA	EV/EBIT
Tier 1			
Maersk	1,5x	5,8x	10,0x
Evergreen Line	1,9x	8,9x	11,3x
Hapag Lloyd	2,7x	10,3x	16,2x

Multiples	1st Quartile	Median	3rd Quartile
EV/EBITDA	7,4x	8,9x	9,6x
EV/EBIT	10,7x	11,3x	13,8x
EV/Revenues	1,7x	1,9x	2,3x

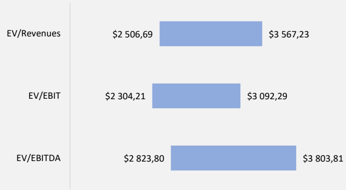
Price Per Share	1st Quartile	Median	3rd Quartile
EV/EBITDA	$2 823,80	$3 504,67	$3 803,81
EV/EBIT	$2 304,21	$2 465,50	$3 092,29
EV/Revenues	$2 506,69	$2 870,45	$3 567,23

Source: Author Analysis

similar products, however, they show discrepancies in terms of EBIT and EBITDA margin (Table 9).

Moreover, by using the last twelve months data from the three companies chosen as tier one peers (Maersk, Hapag Lloyd and Evergreen Marine Corp.), it was computed an EV-to-EBIT ranging from 10.7x and 13.8x in 1st and 3rd quartiles, respectively. Thus, this corresponds to a price per share ranging from $2,304.21 to $3,092.29. Besides, in what concerns EV-to-EBITDA multiple, the values range from 7.4x to 9.6x, which leads to a price per share of $2,823.80 and $3,803.81, meaning an overestimation of the company (Figure 34).

Figure 34: Football Field



Source: Author Analysis

Despite the computation of EV/Revenues, this multiple was disregarded from the analysis, since Maersk is not a growing company but a mature one. This multiple is more suitable for early stage companies as start-ups, that did not have enough time to consolidate in the market, and for that reason revenues are the only way to have a perception of the company worth.

Hence, taking into consideration that Maersk operates in a Capex intensive business line, as the major part of Maersk´s operations rely on its fleet capacity it was considered the EV-to-EBIT as the guiding multiple in this valuation. Having this in mind, it is possible to understand that the median multiple reached is settled below the fair multiple for Maersk since it has been outperforming the market during the pandemic crisis, exceeding investors' expectations as a result of its efficient management during peak.

Sensitivity Analysis

The DCF model is highly sensitive to the terminal growth rate and to WACC. The minimum and maximum values of WACC used were obtained from the stress test to Re and Rd. A variation in the WACC of -39 bps would lead to the same recommendation, while the opposite change of 39 bps would lead to a **sell** recommendation (Table 10). Furthermore, an increase in the terminal growth rate will have a positive impact in share price, reinforcing the current **buy** recommendation. Therefore, it is clear that the model is highly sensitive to changes in these two variables.

Lastly, it was assessed the variation of the share price, taking into account the changes in Re and Rd (Table 11). The minimum Rd used in the range was assumed to be a hypothetical scenario, where the probability of default would be zero, thus, Rd would be equal to the 4.58% YTM of Maersk Corporate Bond. Besides, the maximum value of Rd corresponds to a downgrade scenario in the company´s rating from Baa3 to Ba1, amounting to 3.99%. In addition, a change in the Re of -50 bps would maintain a **buy** recommendation, whereas the opposite change of 50 bps would lead to a **sell** recommendation. Therefore, an increase in both Rd and Re would have a negative impact in price per share (Table 12).

Table 10: Variation of Share Price with WACC and g

		WACC				
	$3 113,14	6,80%	7,22%	7,65%	8,08%	8,51%
g	1,9%	$3 628,77	$3 232,02	$2 894,32	$2 600,84	$2 345,92
	2,1%	$3 782,93	$3 358,70	$2 999,81	$2 689,53	$2 421,24
	2,3%	$3 950,70	$3 495,61	$3 113,14	$2 784,33	$2 501,39
	2,5%	$4 133,96	$3 644,03	$3 235,22	$2 885,88	$2 586,85
	2,7%	$4 334,97	$3 805,48	$3 367,10	$2 994,95	$2 678,16

Source: Author Analysis

Table 11: Variation of Share Price with Re and Rd

		Re				
	$3 113,14	7,69%	8,19%	8,69%	9,19%	9,69%
Rd	3,99%	$3 950,70	$3 513,75	$3 143,95	$2 827,05	$2 552,59
	4,12%	$3 929,14	$3 495,61	$3 128,49	$2 813,73	$2 540,99
	4,25%	$3 907,75	$3 477,61	$3 113,14	$2 800,49	$2 529,46
	4,41%	$3 881,68	$3 455,66	$3 094,41	$2 784,33	$2 515,37
	4,58%	$3 855,86	$3 433,90	$3 075,83	$2 768,29	$2 501,39

Source: Author Analysis

Table 12: Variation of WACC with Re and Rd

		Re				
	7,65%	7,69%	8,19%	8,69%	9,19%	9,69%
Rd	3,99%	6,80%	7,21%	7,61%	8,02%	8,42%
	4,12%	6,82%	7,22%	7,63%	8,04%	8,44%
	4,25%	6,84%	7,24%	7,65%	8,05%	8,46%
	4,41%	6,86%	7,26%	7,67%	8,08%	8,48%
	4,58%	6,88%	7,29%	7,69%	8,10%	8,51%

Source: Author Analysis

Scenario Analysis

Best-Case Scenario

In the best case scenario there were assumed several assumptions: economic recovery to outpace initial projections, e-commerce demand to keep high levels as it was observed during the pandemic, increase in freight rates over the expectations of the market, lower capital requirements (as a % of revenues) and orderbook showing a good momentum (Figure 35).

Despite recent data pointing to a GDP recovery in Europe to pre-pandemic levels only by the end of 2022, in this scenario it was assumed a faster than expected recovery. Thus, the reopening of the world trade would translate into higher volumes traded worldwide and, consequently, into an increase in Maersk revenues and operating margins.

Moreover, it was also assumed that e-commerce would continue to grow at an increasing pace, even after the worldwide conclusion of the vaccination process and the reopening of physical shops. Additionally, in this scenario, it was given a particular importance to the successful implementation of the online platforms, following the 300% increase in usage of Maersk spot and Maersk app during 2020.

Furthermore, in what concerns the evolution of freight rates, it is expected a favorable evolution, after a slight downturn during the beginning of 2020. According to CCFI, SCFI and Freightos indices, container freight rates remain strong and have been showing a rising trend in Shangai Containerized Freight Index (SCFI) and China Containerized Freight Index (CCFI) up to 11% and 25% since the end of 2020, respectively.

Despite the continuous investment process that will be conducted by the company related to its fleet renewal in line with IMO regulation, it was assumed a better asset efficiency (74% vs 76% PP&E over revenue in the long-run) when compared to the base-case.

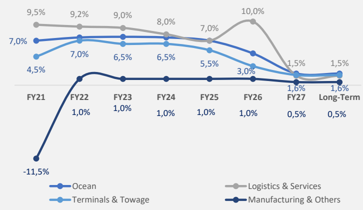
Lastly, the best-case scenario considers the rise in the orderbooks for the upcoming periods. Thus, during 2021, orderbooks have been around 17% of the current total fleet due to several large ship orders, which is a strong recovery from the bottom line reached by October 2020 (8.3%). Hence, in this scenario it was assumed that the favorable market circumstances will keep up orderbooks at a high level and not resulting in an immediate pressure on supply as most of the capacity is scheduled to be delivered in 2023/24.

Therefore, as a result of a better operating and capital efficiency, Maersk is expected to create more value to its shareholders than in the base case. Thus, the implied price for this scenario would be $3,402.94 per share (Figure 36).

Worst- Case Scenario

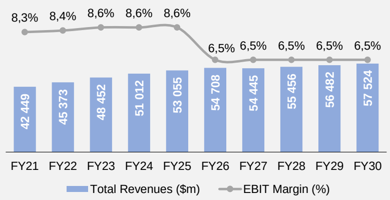
The worst-case scenario considers the pandemic would last more than expected, resulting in more restrictions imposed by governments to non-essential business activities throughout the world. These factors, allied to the economic uncertainty triggered by the pandemic could adversely impact the world seaborne trade and, ultimately, Maersk operations. Moreover, Maersk's operating costs are mainly driven by bunker costs, especially within Ocean and Logistics Services, as it assumes the largest share of the company costs. Thus, in this adverse scenario it was assumed an increase in fuel costs as a result of the transition to VLSFO, and an unsuccessful hedging strategy conducted by the company (Figure 37).

Figure 35: Best-Case Scenario Revenues Growth



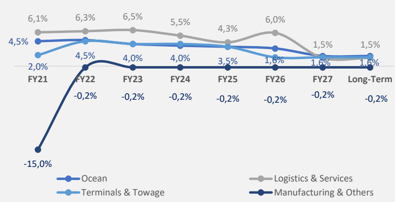
Source: Author Analysis

Figure 36: Best-Case Scenario Revenues and EBIT Margin Forecast



Source: Author Analysis

Figure 37: Worse-Case Scenario Revenues Growth



Source: Author Analysis

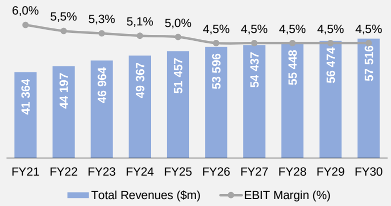
Furthermore, since the company integrating strategy is supported by several M&A transactions in the last years (namely through the integration of Performance Team and KGH Custom Services within the Logistics and Services segment), it was incorporated in this scenario the failure to integrate one or more companies into the existing business. Hence, this situation could result in a slower consolidation of Maersk strategy and, thus, revenues in this segment would be postponed to further periods.

Besides, considering the 2017 cyberattack to Maersk that resulted in $300M losses, this scenario considers the risks of information breaches and the failure of the implementation of the cyber security 3-year program. Accordingly, this could not only require additional capital, threatening Maersk investment strategy, but also could drive Maersk revenue growth downwards when compared to the base-case (3.7% vs 4.2% by FY25).

Furthermore, it was also incorporated a different assumption that considers a decrease of the Group's overall operational efficiency, requiring additional capital expenditures to follow-up with the sales level. Thus, the net PPE plus intangibles will tend to 79.5% of total revenues by FY30 when compared to 76% in the base case scenario.

The worse-case scenario assumes that Maersk would generate lower return to shareholders compared to the base case. Thus, the implied share price would be $2,754.25 (Figure 38).

Figure 38: Worse-Case Scenario Revenues and EBIT Margin Forecast



Source: Author Analysis

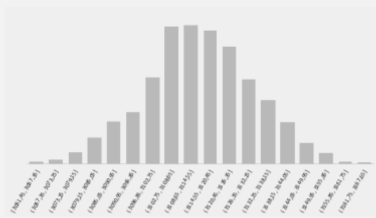
Monte-Carlo Simulation

Monte-Carlo Simulation aims to randomly determine share prices using computational algorithms. Therefore, using our price per share determined using the DCF valuation of $ 3,113.14 and assuming a market daily volatility of 0.12% (average volatility of the peer companies), it was randomly assessed daily share prices for 1000 days, using inverse cumulative normal function of excel. Afterwards, the initial price was reached again through the mean of those 1000 days share prices.

As a result of Monte-Carlo analysis, it was obtained a mean price of $ 3,114.16, which is similar to the one obtained through the DCF computation and, consequently, supports the **BUY** recommendation. It is important to note that following the law of big numbers, the largest the sample size, the more precise is the share price determination (Figure 39).

Figure 39: Monte-Carlo Simulation

Starting price	$3 113,14
Volatility of of Peer Companies Stock	1,85%
Daily Volatility	0,12%
Mean Price	$3 112,41
Median Price	$3 111,94



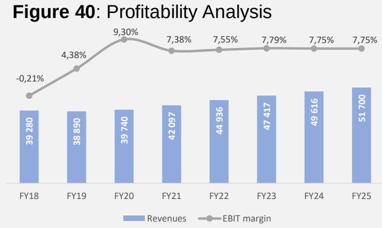
Source: Author Analysis

Financial Analysis

Profitability Ratios

Between FY18 to FY20, Maersk registered a continuous improvement in revenues from $39,280M in 2018 to $39,740M in 2020, corresponding to a 0.6% CAGR as a result of the Group's good response to the lower volumes caused by the pandemic. Afterwards, due to favorable market circumstances, it was considered an upward evolution of the freight rates, which will lead to an increase at a CAGR of 5.3% between FY21 and FY25, approaching $51,700M in revenues (Figure 40).

Figure 40: Profitability Analysis



Source: Maersk Annual Reports and Author Analysis

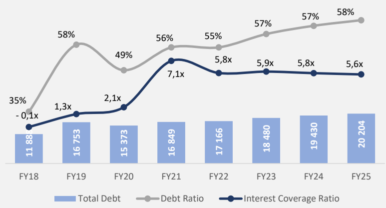
In what concerns the EBIT margin, it showed a strong rising trend from a negative ratio of -0.2% in FY18 to 9.3% in FY20. From FY21 until FY25, Maersk is expected to record a slight increase throughout the years reaching 7.8% in FY25. This results from the Group's cost reduction as % of the revenues, especially in terminal and staff costs, as they assume a large share of Maersk total costs.

Solvency Ratios and Capital Structure

Regarding Maersk solvency ratios, they are considered one of the major goals of improvement for the near-term. Between FY18 and FY20, the company recognized a strong increase in interest coverage ratio from -0.1x in FY18 to 2.1x in FY20. Moreover, this ratio is expected to reach a plateau of around 5.7x from FY21 to FY25, as a consequence of the financial expenses reduction.

Maersk's capital structure is expected to remain stable throughout the upcoming years. Despite the increase in the debt ratio from 35% in FY18 to 49% in FY20, the company will reach 58% in FY25, as a result of the company's deleveraging strategy carried out previously (Figure 41).

Figure 41: Solvency Analysis



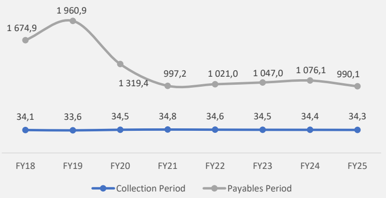
Source: Maersk Annual Reports and Author Analysis

Efficiency Ratios

Maersk's efficiency ratios show a significant positive gap between the average payable period and average receivable period. Between FY18 and FY20, the company registered an average collection period of around 34 days and an average payable period of around 1,652 days, meaning that Maersk is able to retain its funds for a longer period, allowing the company to use them to maximize the shareholders return. Moreover, the short collection period of around 34 days implies that customers pay on time and the cash inflow can be immediately put back into the business.

For the upcoming years, Maersk conversion cycle will show similar performance as until FY20, with an average collection period around 35 days between FY21 and FY25 and a slight reduction of average payable period to 1026 days within the same period (Figure 42).

Figure 42: Efficiency Analysis



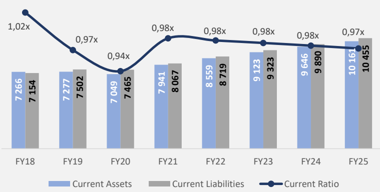
Source: Maersk Annual Reports and Author Analysis

Liquidity Ratios

Regarding liquidity ratios, Maersk presents a weak liquidity position, which narrows the company future growth perspectives. Thus, the Group's current ratio has been fluctuating around 1x between FY18 to FY20 and it is expected to remain in the same range of values until FY25. Therefore, when compared to the industry average of around 1.8x, Maersk has an aggressive investing strategy in place, implying an increased risk in relation to its peers.

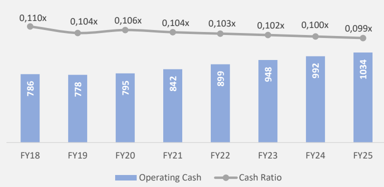
Furthermore, in what concerns the cash ratio, it ranged from 0.11x in FY18 to 0.10x in FY20, stabilizing at that same figure until FY25. Nonetheless, Maersk showed a strong cash generation between FY21 and FY25, with operating cash growing at a 5% CAGR that contrasts with the 1% CAGR verified between FY18 and FY20 (Figure 43 and 44).

Figure 43: Liquidity Analysis



Source: Maersk Annual Reports and Author Analysis

Figure 44: Operating Cash Analysis

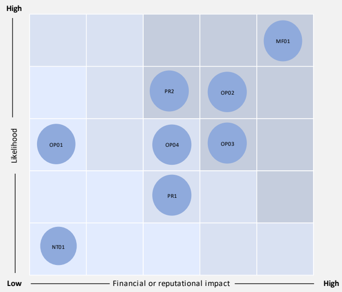


Source: Maersk Annual Reports and Author Analysis

Investment risks

Maersk faces **both internal and external** risks that could have a material impact on their business. Taking into account external risks - not directly managed by the companies - it is possible to include natural, political and regulatory risks and market and financial risks (Figure 45).

Figure 45: Key Risk Analysis



Source: Author Analvsis

Natural Risks

Environmental Risks (NT01)

This industry is very exposed to environmental risks that affect the different market segments. During 2019, there were some setbacks, namely disruptions to iron ore trade caused by Cyclone Veronica in Australia and the severe disruption caused by Vale dam incident in Brazil.

More recently, as at Mar-21, a 20,000 TEU ship from Evergreen blocked the Suez Canal for 6 days, harming the global trade between Europe, Asia and the Middle East. This event was triggered by strong winds that buffeted the ship and caused the obstruction of the canal leading to estimated losses of US$9.6 billion in world trade.

Therefore, these kinds of natural incidents force shipping companies to divert their routes, leading companies to incur in additional unexpected costs.

Market and Financial Risks

Currency Risk (MF01)

Maersk's currency risk is related to the fact that while income from Ocean activities is mainly denominated in USD, the related expenses are incurred in both USD and a wide range of other currencies (EUR, CNY, DKK, HKD, SGD and CAD). However, as the net income is in USD, this is regarded as the primary financing currency.

Moreover, income and expenses from other activities, including Terminals & Towage, are mainly denominated in local currencies, increasing the Group's exposure to these currencies, upon financial consolidation.

The main purpose of hedging the company currency risk is to hedge the USD value of the Group's net cash flow and reduce fluctuations in the Group's profit. In order to mitigate this risk, Maersk uses financial derivatives, including forwards, option contracts and cross-currency swaps.

Operational Risks

Blanked Sailings (OP01)

The sea transport industry involves many operational risks such as blanked sailings that since global pandemic outbreak have been at a very low level, causing problems through the logistics chain. Despite the large number of containers shipped, accidents are relatively rare. Consequently, operational risks in this industry also include delay or loss of cargo, and more remotely, the case of fire at sea.

In order to mitigate this risk, the company made a partnership with IBM in 2018 to develop the first platform that truly digitalize paperwork in the supply chains, improving the efficiency of the processes and, consequently, reducing costs.

Technology Roadmap (OP02)

Maersk's growth strategy and its implementation is strictly dependent on its ability to execute digital solutions. In case of a serious delay or failure to modernize technology, execute the Technology roadmap and standardize core business processes, it might result in a potential risk for Maersk, as it will be unable to generate value and stable revenue streams via its tech platforms. Moreover, with expanding and business integration process, Maersk is transforming the engagement model between technology and business platform owners to drive greater cross functional collaboration and accountability to mitigate this risk.

Cyber – Attack (OP03)

As the company progresses in the digitalization process and their path to interconnect the different segments through digital platforms, cyber-attack risk arises as a consequence of the implementation of the process mentioned before.
Besides, as A.P. Moller - Maersk becomes increasingly digitalized, more devices and control systems are virtually connected, resulting in a wider technology surface across the Information Technology and Operational Technology infrastructure, which could be compromised. In case of a successful cyberattack materialize, there could be breaches of important and confidential data about clients.
Moreover, in March 2017, the Global *Petya* Cyberattack affected all companies' networking systems, mainly Maersk Line, APM Terminals and Damco that were forced to cease operations for a few weeks, leading to an estimated loss of 300 M€ in revenues.
Ever since this cyberattack, there has been given a particular importance to this matter with the implementation of several measures to improve the security. In line with this, the company created a three-year cyber security program that was concluded in 2020, to mitigate this risk. Hence, Maersk has been given significant attention to this matter, and so run a cyberattack wargame exercise to test the plan and teamwork reaction to these situations. As a result of this implementation, the company already prevented an attack from a more complex virus during this period.

Mergers and Acquisitions (OP04)

The company integration process is driven by strategic M&A transactions that aim to bring more value to the supply chain and to the clients. Maersk uses this strategy to drive long-term growth by acquiring new capabilities and increasing the scale of the business as a prerequisite to serve customers end-to-end.
The main risk attached to this strategy is related to the failure to integrate one or more companies into the existing business, which may create a risk arising from a potential unsuccessful execution of A.P. Moller - Maersk integrating strategy.
Therefore, to control and mitigate this risk, the company has established a post-merger office to develop and manage integration processes and embed learnings.

Political and Regulatory Risks

Compliance (PR1)

Maersk operates in a highly regulated business, so it is imperative for the company to conduct its business in compliance with legislation and regulatory standards. The regulatory landscape is becoming increasingly complex, and Maersk could be hit by

a major compliance case in respect of violations of anti-corruption laws, anti-trust regulations, and/or international sanctions.
Besides, Maersk is one of the biggest carrier companies in the world, operating in high-risk geofigureies and high-risk sectors in terms of corruption and money laundering. Therefore, the company implemented a robust compliance program for anti-corruption in order to overcome this risk and to ensure that global requirements on compliance awareness are in place.

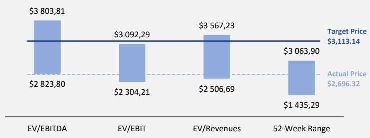
Decarbonization (PR2)

Decarbonization is becoming a business necessity and a license to operate. Maersk is working on decarbonizing the end-to-end supply chain in order to meet customers' and investors' expectations, having a commitment to achieve carbon neutrality by 2050.
Besides, the increasing demand from customers and investors for sustainable products implies zero emissions through all production steps. Consequently, the company is looking further to innovate sustainable supply chain solutions and accelerate its decarbonization initiatives.
In 2020, a strategic review of climate scenarios and transition pathways was conducted by the company with the conclusion that climate action is a strategic imperative for A.P. Moller - Maersk. Therefore, a new Decarbonization program has been launched in 2021 to further accelerate the decarbonization agenda, including the coordination of efforts in order to reduce the climate impact of operations and develop sustainable offerings to clients (Refer to Decarbonization and ESG Metrics Section).

Final Recommendation

According to the DCF valuation, Maersk stock will be traded at $3,113.14, as of December 31st, 2022. Furthermore, it was assessed a DCF Valuation as the first guiding method in the analysis, since it is the one that captures the underlying fundamental drivers of a business and eliminates the subjective accounting policies involved in reported earnings. Furthermore, the target price reached through the DCF valuation is bounded in the range of prices of the Relative Valuation. Therefore, as of October 1st , 2021 the final recommendation is to **BUY** Maersk's stock, which corresponds to a 13% upside from the $2,696.32v closing price by 1st October 2021 (Figure 46).

Figure 46: Maersk Football Field



Source: Author Analysis

Appendices

Appendix 1: Forecast Balance Sheet

(in million dollars, as 31st December)	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
Operating Cash	778	795	842	899	948	992	1 034	1 069	1 089	1 109	1 130	1 150	1 209
%revenues	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Trade Receivables	3 531	3 634	3 888	4 150	4 379	4 583	4 775	4 937	5 028	5 122	5 217	5 313	5 581
Avg Receivable Period	33	33	34	34	34	34	34	34	34	34	34	34	34
Tax receivables	161	238	174	186	196	205	214	221	225	230	234	238	250
Avg Number of days	2	2	2	2	2	2	2	2	2	2	2	2	2
Prepayments	520	464	563	601	634	663	691	715	728	741	755	769	808
Avg Number of days	5	4	5	5	5	5	5	5	5	5	5	5	5
Inventories	1 430	1 049	1 546	1 733	1 920	2 109	2 308	2 004	2 144	2 293	2 452	2 622	2 754
Avg Holding Period	523	260	268	282	296	310	326	342	359	377	396	416	416
Other receivable	857	869	928	990	1 045	1 093	1 139	1 178	1 200	1 222	1 245	1 268	1 332
Avg Number of days	8	8	8	8	8	8	8	8	8	8	8	8	8
Operating Current Assets	**7 277**	**7 049**	**7 941**	**8 559**	**9 123**	**9 646**	**10 161**	**10 124**	**10 414**	**10 717**	**11 032**	**11 360**	**11 934**
Provisions	458	725	421	449	474	496	517	534	544	555	565	575	604
% Revenues	1%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Trade payables	5 567	5 156	5 478	6 023	6 547	7 056	7 572	6 451	6 768	7 101	7 449	7 814	8 619
Avg Payable Period	2 036	1 279	950	979	1 008	1 038	1 069	1 101	1 134	1 168	1 203	1 240	1 302
Tax payables	307	305	391	405	415	422	427	428	424	419	414	410	430
% revenues	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Other payables	1 170	1 279	1 777	1 841	1 886	1 916	1 939	1 557	1 540	1 523	1 506	1 489	1 564
Avg Payable Period	428	317	308	299	290	282	274	266	258	251	243	236	236
Operating Current Liabilities	**7 502**	**7 465**	**8 067**	**8 719**	**9 323**	**9 890**	**10 455**	**8 971**	**9 276**	**9 597**	**9 934**	**10 288**	**11 218**
Net Working Capital Requirements	**-225**	**-416**	**-127**	**-161**	**-200**	**-244**	**-294**	**1 153**	**1 138**	**1 120**	**1 098**	**1 073**	**716**
%revenues	0	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	
Property, plant and equipment	31 735	31 626	33 257	34 151	36 037	37 709	39 292	40 622	41 378	42 146	42 926	43 718	45 926
%revenues	82%	80%	79%	76%	76%	76%	76%	76%	76%	76%	76%	76%	76%
Rights of use assets	8 460	8 323	9 261	9 886	10 432	10 916	11 374	11 759	11 978	12 200	12 426	12 655	13 294
%revenues	22%	21%	22%	22%	22%	22%	22%	22%	22%	22%	22%	22%	22%
Investments in joint ventures	1 204	1 260	1 087	982	887	801	724	654	590	533	482	435	393
%growth	-10%	5%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%
Investments in associated companies	937	951	1 003	1 073	1 148	1 228	1 314	1 406	1 505	1 610	1 723	1 843	1 972
%growth	24%	1%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Other Assets, Net	-697	-639	-754	-805	-850	-889	-927	-958	-976	-994	-1 012	-1 031	-1 083
%revenues	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%	-2%
Core Invested Capital	**41 639**	**41 521**	**43 854**	**45 287**	**47 654**	**49 764**	**51 777**	**53 483**	**54 476**	**55 496**	**56 544**	**57 621**	**60 503**
Other equity investments	78	107	78	78	78	78	78	78	78	78	78	78	78
Derivatives	-211	59	-211	-211	-211	-211	-211	-211	-211	-211	-211	-211	-211
Pensions, net assets	137	-72	137	137	137	137	137	137	137	137	137	137	137
Securities	2	1	2	2	2	2	2	2	2	2	2	2	2
Assets held for sale, net	74	127	74	74	74	74	74	74	74	74	74	74	74
Loans receivable	399	227	399	399	399	399	399	399	399	399	399	399	399
Non Core Invested Capital	**479**	**449**	**479**	**479**	**479**	**479**	**479**	**479**	**479**	**479**	**479**	**479**	**479**
Total Invested Capital	**41 893**	**41 554**	**44 206**	**45 605**	**47 934**	**50 000**	**51 963**	**55 115**	**56 093**	**57 095**	**58 121**	**59 172**	**61 698**
Short-term debt	721	758											
Long-term debt	7 455	5 868											
Leases Liabilities	8 577	8 747											
Total Debt	**16 753**	**15 373**	**16 849**	**17 166**	**18 480**	**19 430**	**20 204**	**20 418**	**17 987**	**15 506**	**12 974**	**10 388**	**9 279**
Excess Cash	-3 990	-5 070	-2 808	-2 861	-3 080	-3 238	-3 367	-3 403	-2 998	-2 584	-2 162	-1 731	-1 546
%Net Debt	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Debt	**12 763**	**10 303**	**14 041**	**14 305**	**15 400**	**16 192**	**16 837**	**17 015**	**14 989**	**12 922**	**10 812**	**8 657**	**7 732**
Deferred income	168	121	128	137	144	151	157	163	166	169	172	175	184
%revenues	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Deferred Taxes, net	125	276	135	144	152	159	166	172	175	178	182	185	194
%revenues	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shareholder's equity	28 098	29 850	29 135	30 224	31 411	32 639	33 910	36 798	39 719	42 703	45 752	48 870	52 214
Transactions with Shareholders	-4 650	-1 256	-1 037	-1 088	-1 187	-1 228	-1 271	-2 888	-2 921	-2 984	-3 050	-3 117	-3 344
Payout Ratio	-33	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Non-controlling interests	739	1 004	766	795	826	858	892	968	1 045	1 123	1 203	1 285	1 373
% shareholder's equity	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Equity and Equity equivalents	**29 130**	**31 251**	**30 165**	**31 300**	**32 534**	**33 808**	**35 126**	**38 100**	**41 104**	**44 173**	**47 309**	**50 515**	**53 966**
Total Sources of Funds	**41 893**	**41 554**	**44 206**	**45 605**	**47 934**	**50 000**	**51 963**	**55 115**	**56 093**	**57 095**	**58 121**	**59 172**	**61 698**

Appendix 2: Forecast Income Statement

(in million dollars, as 31st December)	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F
Revenues	38 890	39 740	42 097	44 936	47 417	49 616	51 700	53 450	54 445	55 456	56 482	57 524	60 429
Costs of goods sold	-998	-1 471	-2 105	-2 247	-2 371	-2 481	-2 585	-2 138	-2 178	-2 218	-2 259	-2 301	-2 417
%revenues	-3,7%	-5,4%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-4,0%	-4,0%	-4,0%	-4,0%	-4,0%	-4,0%
Bunker costs	-4 628	-3 820	-4 631	-4 943	-5 216	-5 458	-5 687	-5 879	-5 989	-6 100	-6 213	-6 328	-6 647
%revenues	-17,0%	-14,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%
Terminal costs	-6 775	-6 425	-7 156	-7 639	-8 061	-8 435	-8 789	-7 483	-7 622	-7 764	-7 907	-8 053	-8 460
%revenues	-24,8%	-23,6%	-17,0%	-17,0%	-17,0%	-17,0%	-17,0%	-14,0%	-14,0%	-14,0%	-14,0%	-14,0%	-14,0%
Intermodal costs	-4 151	-3 699	-4 210	-4 494	-4 742	-4 962	-5 170	-5 345	-5 445	-5 546	-5 648	-5 752	-6 043
%revenues	-15,2%	-13,6%	-10,0%	-10,0%	-10,0%	-10,0%	-10,0%	-10,0%	-10,0%	-10,0%	-10,0%	-10,0%	-10,0%
Port costs	-2 265	-2 146	-2 947	-3 145	-3 319	-3 473	-3 619	-3 207	-3 267	-3 327	-3 389	-3 451	-3 626
%revenues	-8,3%	-7,9%	-7,0%	-7,0%	-7,0%	-7,0%	-7,0%	-6,0%	-6,0%	-6,0%	-6,0%	-6,0%	-6,0%
Rent and lease costs	-1 502	-1 295	-2 105	-2 247	-2 371	-2 481	-2 585	-2 672	-2 722	-2 773	-2 824	-2 876	-3 021
%revenues	-5,5%	-4,7%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%
Staff costs	-4 955	-5 209	-6 736	-7 190	-7 587	-7 939	-8 272	-8 017	-8 167	-8 318	-8 472	-8 629	-9 064
%revenues	-18,2%	-19,1%	-16,0%	-16,0%	-16,0%	-16,0%	-16,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%
Other	-7 856	-7 739	-5 894	-6 291	-6 638	-6 946	-7 238	-6 414	-6 533	-6 655	-6 778	-6 903	-7 252
%revenues	-28,8%	-28,4%	-14,0%	-14,0%	-14,0%	-14,0%	-14,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%
Income from joint ventures	93	122	102	113	123	132	143	154	165	178	191	205	221
%growth	-19,8%	31,2%	10,0%	10,0%	9,0%	8,0%	8,0%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%
Income from associated companies	136	177	150	165	181	199	219	241	265	292	321	353	388
%growth	-218,3%	30,1%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%
Operating EBITDA	**5 989**	**8 235**	**6 566**	**7 017**	**7 416**	**7 774**	**8 117**	**12 688**	**12 953**	**13 224**	**13 503**	**13 789**	**14 508**
% EBITDA Margin	**15,4%**	**20,7%**	15,6%	15,6%	15,6%	15,7%	15,7%	23,7%	23,8%	23,8%	23,9%	24,0%	24,0%
Depreciation, amortisation and impairment losses, net	-4 287	-4 541	-3 459	-3 625	-3 722	-3 928	-4 110	-4 283	-4 428	-4 510	-4 594	-4 679	-4 765
%PPE+Intangible Assets (t-1)	-13,5%	-14,4%	-10,9%	-10,9%	-10,9%	-10,9%	-10,9%	-10,9%	-10,9%	-10,9%	-10,9%	-10,9%	-10,9%
Operating EBIT	**1 702**	**3 694**	**3 107**	**3 392**	**3 694**	**3 846**	**4 007**	**8 405**	**8 525**	**8 714**	**8 909**	**9 110**	**9 742**
% EBIT Margin	**4,4%**	**9,3%**	7,4%	7,5%	7,8%	7,8%	7,8%	15,7%	15,7%	15,7%	15,8%	15,8%	16,1%
Operating taxes	-453	-1 078	-800	-873	-951	-990	-1 032	-2 164	-2 195	-2 244	-2 294	-2 345	-2 508
%Marginal Tax Rate	26,3%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%
Increase (decrease) in deferred taxes	27	-157	-10	-9	-8	-7	-7	-6	-3	-3	-3	-3	-9
NOPLAT	**1 276**	**2 459**	**2 297**	**2 510**	**2 735**	**2 849**	**2 969**	**6 236**	**6 327**	**6 467**	**6 612**	**6 761**	**7 225**
Other income	623	290	623	623	623	623	623	623	623	623	623	623	623
Other costs	-671	0	-671	-671	-671	-671	-671	-671	-671	-671	-671	-671	-671
Financial income	511	895	511	511	511	511	511	511	511	511	511	511	511
Gain on sale of non-current assets, etc, net	71	202	71	71	71	71	71	71	71	71	71	71	71
Profit/loss for the year- discontinued operations	-553	0	-553	-553	-553	-553	-553	-553	-553	-553	-553	-553	-553
OCI: Foreign currency translation	-75	259	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75	-75
OCI: Other equity investments	0	0	0	0	0	0	0	0	0	0	0	0	0
OCI: Income from joint ventures and associated companies	-1	5	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
OCI: Cash flow hedges	-23	43	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23	-23
OCI: Actuarial gains/losses on defined benefit plans, tec.	91	-207	91	91	91	91	91	91	91	91	91	91	91
OCI: Other equity instruments (FVOCI)	165	2	165	165	165	165	165	165	165	165	165	165	165
Nonoperating result before taxes	**138**	**1 489**	**138**	**138**	**138**	**138**	**138**	**138**	**138**	**138**	**138**	**138**	**138**
Nonoperating taxes	-339	377	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36	-36
%Marginal Tax Rate	-2,2%	-2,2%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%
Total Nonoperating result	**-201**	**1 866**	**102**	**102**	**102**	**102**	**102**	**102**	**102**	**102**	**102**	**102**	**102**
NPLAT	**1 074**	**4 325**	**2 399**	**2 612**	**2 837**	**2 951**	**3 071**	**6 338**	**6 429**	**6 570**	**6 714**	**6 863**	**7 327**
Financial expenses	-1 269	-1 774	-438	-587	-623	-667	-712	-758	-792	-809	-828	-847	-866
%Debt (t-1)	10,7%	10,6%	4,3%	4,3%	4,3%	4,3%	4,3%	4,3%	4,3%	4,3%	4,3%	4,3%	4,3%
Tax Shield	334	457	113	151	160	172	183	195	204	208	213	218	228
%Marginal Tax Rate	26,3%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	26,3%
Financial Result	**-935**	**-1 317**	**-325**	**-436**	**-462**	**-495**	**-529**	**-563**	**-588**	**-601**	**-615**	**-629**	**-638**
Total Comprehensive Income	**139**	**3 008**	**2 074**	**2 177**	**2 375**	**2 456**	**2 542**	**5 775**	**5 842**	**5 968**	**6 099**	**6 235**	**6 689**

Appendix 3: Forecast Revenues Summary

(in million dollars, as 31st December)	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
By Type												
Ocean	28 418	29 175	31 060	33 096	34 698	36 107	37 499	38 191	38 897	39 615	40 347	41 092
Logistics & Services	5 965	6 963	7 507	8 088	8 757	9 313	9 800	10 751	10 912	11 076	11 242	11 410
Terminals & Towage	3 894	3 807	3 920	4 158	4 368	4 589	4 775	4 852	4 929	5 009	5 089	5 171
Manufacturing & Others	2 172	1 254	1 080	1 085	1 091	1 096	1 102	1 107	1 113	1 118	1 124	1 129
Unallocated activities and eliminations	-1 559	-1 459	-1 469	-1 491	-1 496	-1 489	-1 475	-1 451	-1 406	-1 362	-1 319	-1 278
Total	**38 890**	**39 740**	**42 097**	**44 936**	**47 417**	**49 616**	**51 700**	**53 450**	**54 445**	**55 456**	**56 482**	**57 524**
%growth	*-1,0%*	*2,2%*	*5,9%*	*6,7%*	*5,5%*	*4,6%*	*4,2%*	*3,4%*	*1,9%*	*1,9%*	*1,9%*	*1,8%*

Appendix 4: Capital Structure

	2017	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Price Per Share	1 434	1 066	1 385	2 227										
#Shares	21	21	21	20										
Market Capitalization	29 779	22 133	28 759	44 600	59 734	63 400	67 919	72 478	77 204	80 604	82 424	84 289	86 198	88 153
Net Debt	15 961	9 811	12 763	10 303	13 799	14 646	15 690	16 743	17 835	18 620	19 040	19 471	19 912	20 364
E/EV	65%	69%	69%	81%	81%	81%	81%	81%	81%	81%	81%	81%	81%	81%
D/EV	35%	31%	31%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
D/E	54%	44%	44%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%
EV	45 740	31 943	41 522	54 903	73 533	78 046	83 609	89 221	95 039	99 224	101 465	103 760	106 111	108 516

Appendix 5: Revenues Breakdown

(in million dollars, as 31st December)	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Ocean	**28 418**	**29 175**	**31 060**	**33 096**	**34 698**	**36 107**	**37 499**	**38 191**	**38 897**	**39 615**	**40 347**	**41 092**
%Growth	*0,2%*	*2,7%*	6,5%	6,6%	4,8%	4,1%	3,9%	1,8%	1,8%	1,8%	1,8%	1,8%
Ocean Freight Market Volume (FFE)	13 296	12 634	13 174	13 775	14 159	14 445	14 708	14 905	15 105	15 307	15 512	15 720
%Growth	*-0,1%*	*-5,0%*	*4,3%*	*4,6%*	*2,8%*	*2,0%*	*1,8%*	*1,3%*	*1,3%*	*1,3%*	*1,3%*	*1,3%*
Ocean Freight Market Volume Growth	*3%*	*4%*	*4%*	*5%*	*4%*	*3%*	*2%*	*1%*	*1%*	*1%*	*1%*	*1%*
% weight	*50,0%*	*10,0%*	*55,0%*	*50,0%*	*45,0%*	*40,0%*	*40,0%*	*40,0%*	*40,0%*	*40,0%*	*40,0%*	*40,0%*
European GDP Growth	*1,5%*	*-6,2%*	*4,4%*	*3,8%*	*2,2%*	*1,7%*	*1,7%*	*1,7%*	*1,7%*	*1,7%*	*1,7%*	*1,7%*
% weight	*50,0%*	*90,0%*	*45,0%*	*50,0%*	*55,0%*	*60,0%*	*60,0%*	*60,0%*	*60,0%*	*60,0%*	*60,0%*	*60,0%*
%weighted growth	*2,3%*	*-5,2%*	*4,3%*	*4,6%*	*2,8%*	*2,0%*	*1,8%*	*1,3%*	*1,3%*	*1,3%*	*1,3%*	*1,3%*
Price (USD/FFE)	*2,14*	*2,31*	*2,36*	*2,40*	*2,45*	*2,50*	*2,55*	*2,56*	*2,58*	*2,59*	*2,60*	*2,61*
%Growth	*0,26%*	*8,04%*	*2,1%*	*1,9%*	*2,0%*	*2,0%*	*2,0%*	*0,5%*	*0,5%*	*0,5%*	*0,5%*	*0,5%*
Logistics & Services	**5 965**	**6 963**	**7 507**	**8 088**	**8 757**	**9 313**	**9 800**	**10 751**	**10 912**	**11 076**	**11 242**	**11 410**
%Growth	*-1,9%*	*16,7%*	*7,8%*	*7,7%*	*8,3%*	*6,4%*	*5,2%*	*9,7%*	*1,5%*	*1,5%*	*1,5%*	*1,5%*
Intermodal Revenues	**2 527**	**2 736**	**2 920**	**3 107**	**3 333**	**3 474**	**3 561**	**3 618**	**3 672**	**3 727**	**3 783**	**3 840**
%Growth	*-1,6%*	*8,3%*	*6,7%*	*6,4%*	*7,3%*	*4,2%*	*2,5%*	*1,6%*	*1,5%*	*1,5%*	*1,5%*	*1,5%*
Intermodal Services Market Size (value)	15 100	15 900	16 800	17 700	18 800	19 400	19 691	19 986	20 286	20 590	20 899	21 213
%Growth	*4,9%*	*5,3%*	*5,7%*	*5,4%*	*6,2%*	*3,2%*	*1,5%*	*1,5%*	*1,5%*	*1,5%*	*1,5%*	*1,5%*
% Market Share	16,7%	17,2%	17,4%	17,6%	17,7%	17,9%	18,1%	18,1%	18,1%	18,1%	18,1%	18,1%
Freght Forwarding	**1 004**	**1 240**	**1 367**	**1 511**	**1 667**	**1 844**	**2 035**	**2 521**	**2 559**	**2 597**	**2 636**	**2 676**
%Growth	*-20%*	*24%*	*10%*	*11%*	*10%*	*11%*	*10%*	*24%*	*1%*	*1%*	*1%*	*1%*
Freight forwarding Global Market size (val	178 000	161 000	169 000	178 000	187 000	197 000	207 000	210 105	213 257	216 455	219 702	222 998
%Growth	*-1,7%*	*-9,6%*	*-5,1%*	*5,3%*	*5,1%*	*5,3%*	*5,1%*	*1,5%*	*1,5%*	*1,5%*	*1,5%*	*1,5%*
% Market Share	*0,6%*	*0,8%*	*0,8%*	*0,8%*	*0,9%*	*0,9%*	*1,0%*	*1,2%*	*1,2%*	*1,2%*	*1,2%*	*1,2%*
Other (including inland services)	2 434	2 987	3 220	3 470	3 757	3 995	4 204	4 612	4 681	4 751	4 822	4 895
%Weight	*69%*	*75%*	*75%*	*75%*	*75%*	*75%*	*75%*	*75%*	*75%*	*75%*	*75%*	*75%*
Terminals & Towage	3 894	3 807	3 920	4 158	4 368	4 589	4 775	4 852	4 929	5 009	5 089	5 171
%Growth	*2,8%*	*-2,2%*	*0,7%*	*6,1%*	*5,1%*	*5,1%*	*4,0%*	*1,6%*	*1,6%*	*1,6%*	*1,6%*	*1,6%*
Total moves	15	14	14	14	14	15	15	15	15	15	15	15
%Growth (total moves)	*-1%*	*-7%*	*-1%*	*2%*	*2%*	*2%*	*2%*	*1%*	*1%*	*1%*	*1%*	*1%*
Revenue Per Move	263	275	286	297	306	316	322	324	327	330	332	335
%Growth	*4%*	*5%*	*4%*	*4%*	*3%*	*3%*	*2%*	*1%*	*1%*	*1%*	*1%*	*1%*
Manufacturing & Others	**2 172**	**1 254**	**1 080**	**1 085**	**1 091**	**1 096**	**1 102**	**1 107**	**1 113**	**1 118**	**1 124**	**1 129**
%Growth	*-22,07%*	*-42,27%*	*-13,89%*	*0,50%*	*0,50%*	*0,50%*	*0,50%*	*0,50%*	*0,50%*	*0,50%*	*0,50%*	*0,50%*
Number of Containers	307	377	309	310	312	313	315	316	318	319	321	323
%Growth (number of containers)	*1%*	*23%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
Revenue per container	7,1	3,3	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5	3,5
Unallocated activities and eliminations	**-1 559**	**-1 459**	**-1 469**	**-1 491**	**-1 496**	**-1 489**	**-1 475**	**-1 451**	**-1 406**	**-1 362**	**-1 319**	**-1 278**
%revenues remaining segments	*-3,9%*	*-3,5%*	*-3%*	*-3%*	*-3%*	*-3%*	*-3%*	*-3%*	*-3%*	*-2%*	*-2%*	*-2%*
Total	**38 890**	**39 740**	**42 097**	**44 936**	**47 417**	**49 616**	**51 700**	**53 450**	**54 445**	**55 456**	**56 482**	**57 524**

Appendix 6: Forecast Free Cash Flow Map

(in million dollars, as 31st December)	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
NOPLAT	1 276	2 459	2 297	2 510	2 735	2 849	2 969	6 236	6 327	6 467	6 612	6 761
Depreciation and Amortization	4 287	4 541	3 459	3 625	3 722	3 928	4 110	4 283	4 428	4 510	4 594	4 679
Gross Cash Flow	**5 563**	**7 000**	**5 756**	**6 135**	**6 457**	**6 777**	**7 079**	**10 518**	**10 755**	**10 977**	**11 206**	**11 440**
Changes in NWCR	337	191	-99	34	39	44	50	-1 447	15	18	22	26
Capex, Net	-637	-4 432	-4 981	-4 519	-5 609	-5 599	-5 694	-5 613	-5 184	-5 278	-5 374	-5 471
Change in other assets	-8 620	9	-693	-539	-482	-439	-429	-376	-236	-252	-268	-285
Operating Free Cash Flow	**-3 358**	**2 768**	**-16**	**1 111**	**406**	**783**	**1 006**	**3 083**	**5 349**	**5 465**	**5 585**	**5 710**
Total Non-Operating Result	-201	1 866	102	102	102	102	102	102	102	102	102	102
Changes in Non-Operating Assets, Net	6 217	30	0	0	0	0	0	0	0	0	0	0
Non-Operating Free Cash Flow	**6 016**	**1 896**	**102**	**102**	**102**	**102**	**102**	**102**	**102**	**102**	**102**	**102**
Free Cash Flow to Investors	**2 658**	**4 664**	**86**	**1 213**	**509**	**885**	**1 108**	**3 186**	**5 451**	**5 567**	**5 688**	**5 812**
Interest Expense, Net interest income	-1 269	-1 774	-438	-587	-623	-667	-712	-758	-792	-809	-828	-847
Tax Shield	334	457	113	151	160	172	183	195	204	208	213	218
Changes in Debt	4 865	-1 380	96	317	1 313	951	774	213	-2 431	-2 480	-2 532	-2 586
Changes in Excess Cash	-1 913	-1 080	1 182	-53	-219	-158	-129	-36	405	413	422	431
Net Changes in Equity	-4 675	-887	-1 039	-1 042	-1 141	-1 182	-1 225	-2 801	-2 838	-2 899	-2 963	-3 029
Fee Cash Flow from Investors	**-2 658**	**-4 664**	**-86**	**-1 213**	**-509**	**-885**	**-1 108**	**-3 186**	**-5 451**	**-5 567**	**-5 688**	**-5 812**

Appendix 7: Scenario Analysis Assumptions

Best Case	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Revenues Growth	6,8%	7,8%	7,8%	7,6%	6,9%	5,8%	1,9%	1,9%	1,9%	1,8%
Ocean	7,0%	7,5%	7,6%	7,5%	7,0%	5,0%	1,8%	1,8%	1,8%	1,8%
Logistics and Services	9,5%	9,2%	9,0%	8,0%	7,0%	10,0%	1,5%	1,5%	1,5%	1,5%
Terminals and Towage	4,5%	7,0%	6,5%	6,5%	5,5%	3,0%	1,6%	1,6%	1,6%	1,6%
Manufacturing and Others	-11,5%	1,0%	1,0%	1,0%	1,0%	1,0%	0,5%	0,5%	0,5%	0,5%
Unallocated activities and eliminations	1,5%	2,0%	0,5%	0,2%	0,3%	0,1%	-3,1%	-3,1%	-3,1%	-3,1%
EBIT	3523	3811	4167	4387	4563	3556	3539	3605	3671	3739
EBIT Margin	8,3%	8,4%	8,6%	8,6%	8,6%	6,5%	6,5%	6,5%	6,5%	6,5%
Marginal Tax Rate (%)	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%
NPPE + Intangibles (% revenues)	77,0%	75,0%	75,0%	75,0%	75,0%	74,0%	74,0%	74,0%	74,0%	74,0%
Depreciation (%NPPE&Intangibles (t-1))	10,9%	10,9%	10,9%	10,9%	10,9%	10,9%	10,9%	10,9%	10,9%	10,9%
NWCR (% revenues)	-0,6%	-1,0%	-0,3%	-0,4%	-0,4%	-0,5%	-0,6%	2,2%	2,1%	2,0%
Other Assets, Net Other Liabilities (% of Revenues)	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%

Worst Case	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Revenues Growth	4,1%	5,0%	4,5%	4,1%	3,7%	3,7%	1,8%	1,8%	1,8%	1,8%
Ocean	4,5%	4,7%	4,0%	3,7%	3,5%	3,2%	1,8%	1,8%	1,8%	1,8%
Logistics and Services	6,1%	6,3%	6,5%	5,5%	4,3%	6,0%	1,5%	1,5%	1,5%	1,5%
Terminals and Towage	2,0%	4,5%	4,0%	4,0%	3,5%	1,6%	1,6%	1,6%	1,6%	1,6%
Manufacturing and Others	-15,0%	-0,2%	-0,2%	-0,2%	-0,2%	-0,2%	-0,2%	-0,2%	-0,2%	-0,2%
Unallocated activities and eliminations	0,1%	0,5%	-1,0%	-0,8%	-1,2%	-2,3%	-3,1%	-3,1%	-3,1%	-3,1%
EBIT	2482	2431	2489	2518	2573	2412	2450	2495	2541	2588
EBIT Margin	6,0%	5,5%	5,3%	5,1%	5,0%	4,5%	4,5%	4,5%	4,5%	4,5%
Marginal Tax Rate (%)	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%	25,7%
NPPE + Intangibles (% revenues)	82,0%	81,5%	81,0%	80,5%	80,0%	79,5%	79,5%	79,5%	79,5%	79,5%
Depreciation (%NPPE&Intangibles (t-1))	10,9%	10,9%	10,9%	10,9%	10,9%	10,9%	10,9%	10,9%	10,9%	10,9%
NWCR (% revenues)	-0,6%	-1,0%	-0,3%	-0,4%	-0,4%	-0,5%	-0,6%	2,2%	2,1%	2,0%
Other Assets, Net Other Liabilities (% of Revenues)	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%	-1,8%

Appendix 8: Financial Ratios

Key Financial Ratios	Units	2018	2019	2020	2021F	2022F	2023F	2024F	2025F
Liquidity Ratios									
Current Ratio	times	1,016	0,970	0,944	0,984	0,982	0,979	0,975	0,972
Quick Ratio	times	0,866	0,779	0,804	0,793	0,783	0,773	0,762	0,751
Cash Ratio	times	0,110	0,104	0,106	0,104	0,103	0,102	0,100	0,099
Efficiency Ratios									
Accounts Receivables Turnover	times	10,69	10,86	10,57	10,47	10,54	10,58	10,60	10,65
Collection Period	days	34	34	35	35	35	34	34	34
Inventory Turnover	times	0,94	0,81	1,13	1,28	1,23	1,18	1,12	1,20
Days in Inventory	days	386	453	322	284	297	310	325	304
Payables Turnover	times	0,22	0,19	0,28	0,37	0,36	0,35	0,34	0,37
Payables Period	days	1675	1961	1319	997	1021	1047	1076	990
Operating Cycle	days	421	487	356	319	331	345	359	339
Fixed Assets Turnover	times	1,24	1,23	1,19	1,23	1,32	1,32	1,32	1,32
Profitability Ratios									
EBITDA Margin	%	9,3%	15,4%	20,7%	15,6%	15,6%	15,6%	15,7%	15,7%
EBIT Margin	%	-0,2%	4,4%	9,3%	7,4%	7,5%	7,8%	7,8%	7,8%
Net Profit Margin	%	-0,9%	3,3%	6,2%	5,5%	5,6%	5,8%	5,7%	5,7%
ROE	%	-1,1%	4,2%	8,0%	7,5%	7,9%	8,2%	8,3%	8,1%
Solvency Ratios									
Debt to Equity Ratio	times	0,35	0,58	0,49	0,56	0,55	0,57	0,57	0,58
Debt to EBITDA	times	3,25	2,80	1,87	2,57	2,45	2,49	2,50	2,49
Interest Coverage Ratio	times	-0,06	1,34	2,08	7,09	5,78	5,93	5,77	5,63

Appendix 9: Assumptions

	Notes	2021F	2022F	2023F	2024F	2025F	2026F	Assumption
INCOME STATEMENT								
Revenues:	YoY							
Ocean	% Growth	6,5%	6,6%	4,8%	4,1%	3,9%	1,8%	It is expected an increase of 6,5% in the revenues in 2021, explained by the higher volumes across the ocean business explained by the economy recovery to pre-pandemic levels. Neverthless, this segment is expected to grow in the following years assuming an increase in freight rates. From 2022F onwards, it was considered an increase in market share of Maersk in this segment. *See in more detail Sheet: Forecast Revenues*
Logistics & Services	% Growth	7,8%	7,7%	8,3%	6,4%	5,2%	9,7%	The Logistics & Services segment is expected to increase 8%, suported by the acquisition of Performance Team and KGH in September, offseting the decrease in the other segments. From 2022F onwards, it was considered an increase in market share of Maersk in this segment. *See in more detail Sheet: Forecast Revenues*
Terminals & Towage	% Growth	0,7%	6,1%	5,1%	5,1%	4,0%	1,6%	It is expected a increase of aproximately 1% in 2021, as a result ofseveral Terminals and port acquisitions that will boost revenue growth per move and cost reduction. Since 2022F it was considered an increase in market share of Maersk in this segment supported by the Maersk strategy of business integration. See in more detail *Sheet: Forecast Revenues*
Manufacturing & Others	% Growth	-13,9%	0,5%	0,5%	0,5%	0,5%	0,5%	It is expected decrease in this segment of aproximately 14% in 2021F, which is lower than the decrease in 2020, which can be supported by an increase in sale of Star Cool Units by the company that started in 2020. See in more detail *Sheet: Forecast Revenues*
Unallocated activities and eliminations	% Growth	-3%	-3%	-3%	-3%	-3%	-3%	Considered the same % of the revenues in the remaining segments as 2020. *See in more detail Sheet: Forecast Revenues*
Bunker Costs	% Revenues	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	The Company´s aim for the following years is to increase the efficiency, and to reach that goal, they are implementing a digital platform TradeLens, so that customers can book directly from the platform. This strategy has the objective of decreasing the company costs, that showed high values in the previous years. For that reason, there was assumed a decrease in company´s costs for the following years. The reduction assumed in bunker costs is related with the reduction of fuel consumption conducted by the company, in line with IMO 2020.
Terminal Costs	% Revenues	-17%	-17%	-17%	-17%	-17%	-14%	
Intermodal Costs	% Revenues	-10,00%	-10,00%	-10,00%	-10,00%	-10,00%	-10,00%	
Port Costs	% Revenues	-7,0%	-7,0%	-7,0%	-7,0%	-7,0%	-6,0%	
Rent and Lease Costs	% Revenues	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	
Staff Costs	% Revenues	-16,0%	-16,0%	-16,0%	-16,0%	-16,0%	-15,0%	
Income from joint ventures	% Revenues	10,0%	10,0%	9,0%	8,0%	8,0%	7,5%	Considered an increase of 10%, due to the expectation of the company to acquire of Port Towage in the following years. In 2020 the company will acquire the remainig 50% of the Port Towage Amsterdam.
Income from associated companies	% Revenues	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	
Operating Taxes	% Marginal Tax Rate	25,75%	25,75%	25,75%	25,75%	25,75%	25,75%	The operating taxes were calculated by using the marginal tax rate of 26,29%.
Other Comprehensive Income	%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	All the components in other comprehensive income were considered to be equal to 2020.
Tax Shield	% Marginal Tax Rate	25,75%	25,75%	25,75%	25,75%	25,75%	25,75%	Calculated by multiplying the financial expenses of the forecasted years by the marginal tax rate.
Financial Expenses	% Debt	4,3%	4,3%	4,3%	4,3%	4,3%	4,3%	The financial expenses were forecasted, by multiplying the net debt of each of the forecasted years by the cost of debt of 4,25%.
Marginal Tax Rate	%	26,3%	26,3%	26,3%	26,3%	26,3%	26,3%	Taking into account the deferred tax assets and liabiities, it was calculated a statuatory tax rate of 21,7% in 2019, in line with the previous years. By adding the foreign tax deviations, the marginal tax rate is 26,29%. *See the detail in sheet "Adjustments".*
D&A	%PP&E and Intangible Assets	-11%	-11%	-11%	-11%	-11%	-11%	It was considered a decrease in the depreciations, in line with the average of the last 3 historical years.

BALANCE SHEET								
Operating Cash	%	2,00%	2,00%	2,00%	2,00%	2,00%	2,00%	The operating cash is considered to be 2% of the revenues of the year, since it is the amount required to run the core business of the company. Source: *The Determinants and Implications of Corporate Cash Holdings, Journal of Financial Economics.*
Trade Receivables	Avg Receivable Period	33,7	33,7	33,7	33,7	33,7	33,7	Equal to the average number of days calculated in 2019.
Tax Receivables	Avg number of days	1,5	1,5	1,5	1,5	1,5	1,5	
Prepayments	Avg number of days	5	5	5	5	5	5	
Inventories	Avg holding period	268	282	296	310	326	342	
Other receivables	Avg number of days	8	8	8	8	8	8	
Property, Plant and Equipment	% Revenues	79,0%	76,0%	76,0%	76,0%	76,0%	76,0%	Taking into account the Maersk guidance for 2020, there was assumed that the PP&E was 75% of the revenues, in order to reach the objetives defined by the company. With the goal of being neutral in 2050, the replacement of the ships due to enable the use of alternative fuels will lead to an increase in investment in PP&E. *See in detail in sheet CAPEX*
Non Core Invested Capital	%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	Equal to the carrying amount of the year 2020.
LIABILITIES								
Provisions	% Revenues	1,00%	1,00%	1,00%	1,00%	1,00%	1,00%	Considered to be equal to the % revenues and average payable period of 2019.
Trade Payables	Avg Payable Period	950	979	1008	1038	1069	1101	
Tax Payables	% Revenues	0,93%	0,90%	0,88%	0,85%	0,83%	0,80%	
Other Payables	Avg Payable Period	308	299	290	282	274	266	
Short and Long Term Debt								Firstly, notice that the valuation used market value of debt, while the total debt in the balance sheet is a book value determined by difference to close the the balance sheet.
EQUITY								
Deferred Income	% Revenues	0,30%	0,30%	0,30%	0,30%	0,30%	0,30%	Considered the same % revenues as of the year 2019
Deferred Taxes	% Revenues	0,32%	0,32%	0,32%	0,32%	0,32%	0,32%	
Shareholder´s equity								The equity value is slightly increasing throughout the years, having in mind the payout ratio of 50%.
Non-controlling Interests	% Shareholder´s Equity	2,63%	2,63%	2,63%	2,63%	2,63%	2,63%	Considered the same % revenues as of the year 2020
Terminal growth rate				2,3%				This is the growth rate obtained after stabilizing Maersk Cash Flows. Note that, it corresponds to the product between reinvestment rate and return on new invested capital. *See in more detail sheet " Growth"*

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