ERASMUS UNIVERSITEIT ROTTERDAM

Erasmus School of Economics

The acquisition of Neptune Orient Lines by Compagnie Maritime d'Affrètement – Compagnie Générale Maritime

A case study

Thesis by Gerrit Kaasjager

432654

Supervised by dr. S. Obernberger

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1. Introduction

My thesis will be a case study of a particular acquisition in the shipping industry. Mergers and acquisitions are an interesting field to study, since mergers and acquisitions are happening on a daily basis, impacting the way business is done. In 2017, the Sociaal Economische Raad (SER, an advisory organ about social economic issues in the Netherlands) reported 588 transactions. This is an increase of 12.5% compared to 2016 (nu.nl, 2018). This shows that there is at least one transaction a day on average. The financial crisis starting in 2008 lowered the amount of transactions, but as of 2018, the amount of transactions in the Netherlands is the highest since 2008, showing that the topic becomes more and more relevant to study.

A merger or acquisition is a fast way to grow for companies. Another reason for an acquisition might be when the acquiror thinks that the target company is poorly managed. If management of the acquiring company sees or thinks it can manage the target company in a more profitable or more efficient way, so that it creates more value, it might be able to acquire the target and thus the extra growth for a relatively low price. It could be a good way to expand into a new geographical area or to obtain skills, both of which are important value drivers (Goedhart & Koller, 2010).

This is not different in the shipping industry. During the last few years, more and more companies struggle for existence. Especially for smaller companies it is hard to operate profitably. The bigger companies use this fact to obtain rapid growth by acquiring those small, struggling companies. The acquisition of Neptune Orient Lines (NOL) by Compagnie Maritime d'Affrètement – Compagnie Générale Maritime (CMA CGM) is not different. This is the deal I am interested in. In the next section, I will further elaborate about why I have chosen this particular deal.

1.1 The deal

NOL is sailing under the name of its operating brand, American President Lines (APL). CMA CGM has acquired NOL mainly because of APL. NOL has been using APL as its operating brand since 1997, when NOL merged with APL. Because of the existing reputation of APL, the new formed company decided to use that as its operating brand (Neptune Orient Lines, 2018).

At the time of the deal, CMA CGM was the world's third and NOL was the twelfth largest container shipping company, making it a deal between two giants. The deal was the biggest

transaction in the history of container shipping up to 2015. Combined, the companies have a capacity of almost 2.4 million twenty-foot equivalent unit (TEU). TEU is the standard measure used in container shipping. It corresponds with one twenty-foot container. This capacity translates to a market share of 11.7% (The Journal of Commerce, 2016). CMA CGM is nowadays still the number three container liner company measured in TEU, according to Alphaliner (2018). The acquiror paid approximately 2.5 billion dollars to close the deal (CMA CGM, 2016). The deal brings fast growth to CMA CGM. In the transpacific, the acquisition will make the carrier grow to number one, as opposed to being the fourth largest before the deal. The deal will make CMA CGM go from seventh largest to fourth largest in the intra-Asia trade. These are all regions where NOL was active (American Shipper, 2015). Looking at these numbers, one can understand why CMA CGM considered acquiring NOL, because it is strengthening their position in various trading routes worldwide.

But why is this particular deal relevant for me and a reader of this thesis? This deal was the first deal in an unprecedented wave of acquisitions (The Journal of Commerce, 2016). This wave started in a time where the vast majority of the shipping companies recorded losses. For smaller companies, times are hard now, and thus will the consolidation continue, according to the Rodolphe Saadé, Vice Chairman of CMA CGM (Xeneta, 2016). The trend of low profitability, even losses, and a new wave of acquisitions makes this deal very interesting. It is occurring in a time where companies try to maintain their position in the market but also try to prepare for the future by making shipping more efficient. The state of the industry will further be examined in the industry analysis, section 2.

1.2 Research question

The deal will be examined using two research questions:

1. *Is the price paid for NOL a fair price?*
2. *Did CMA CGM benefit from the deal?*

To be able to answer these questions, two analyses will be set up. The first one will be investigating the price paid for the target, which is around 2.5 billion US dollars. In order to determine whether this was a fair price or not, the standalone value of the target needs to be calculated. A fair price is a price that reflects the future benefits for the acquiror. All future free cash flows are for the new owner. So the price should include these discounted cashflows. If this value is somewhat near the price paid, one could argue that the price paid was fair. With such a price, a company will pay for the target what it believes it will be worth to itself. A deal

should also yield synergies. Combining two companies should result in cost savings, mainly in the constant costs. If an acquiror pays more than the fair price, the realised synergies will be offset by the cash outflow of the sale. It is therefore important that the price is fair.

The value of the target will be calculated using two methods. First, a DCF-WACC method is used. The second method is a multiples method. This results in a stand-alone value, which, as explained above, should reflect the true value and therefore be the fair price. The method will be explained in more detail in section 3, valuation.

To see whether and how much synergies occur from this deal, the standalone value of the new combined company needs to be determined. If we subtract the standalone values of both companies from that number, we arrive at the possible synergies. This method will be explained in more detail in the synergies section, section 4.

By applying these methods, I will be able to answer the research question. The answer to this question will be used to determine whether this deal makes sense in an economic way. If the price was fair and if there were synergies, the acquiror would benefit from the deal, creating value. There might also be extra value for the former shareholders of the target firm, which all depends on the price paid and prices of their shares at the moment.

1.3 Summary of the results

The Discounted Cash Flow valuation gave a result of just over 18 million US dollars. This result, however, is influenced by the poor financial results of NOL in the past years, leading to low forecasts. I performed a valuation based on multiples after that. That gave me two numbers, 1.8 billion and 2 billion dollars. These are much more close to the price as paid in the deal. With the value of the Discounted Cash Flow analysis, the possible synergies were 1.8 billion dollars. The multiples method gave a result of 28 million and negative 195 million respectively. This indicates that there are not very large synergies, if there are even synergies.

1.4 Structure of the paper

The paper is structured in the following way: first I will examine the state of the industry, and present the results in the Industry Analysis. After that, the actual valuation will be presented, along with the methodology and a short overview of the data. As soon as the valuation is done, the synergies will be determined and after that the results will be presented with a conclusion in the last section.

2. Industry Analysis

2.1 Crisis in the industry

As with every industry, the container liner industry suffered from the financial crisis, starting in the year 2008. In the past years, starting in 2011, the container liner companies started ordering more and more bigger ships, anticipating high growth rates in the transport of containers. However, this growth never showed up to that extent, while the fleet kept growing. This led to overcapacity which in turn crushed the freight rates (The Economist, 2016). This is not only the case in the container industry. In the whole maritime industry a trend could be seen that capacity outpaced export volumes growth, as can be seen in figure 1 provided by Deloitte (Barua & Mittal, 2017). In the period 2011-2014, the capacity growth has been above the global export volumes growth.

Annual growth (percentage)

Source: Haver Analytics, Deloitte Services LP economic analysis.

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Figure 1 Shipping capacity growth and export volumes over the period 1981-2015 (Barua & Mittal, 2017)

About two-third of worldwide seaborne trade is container trade. In 2015, world Gross Domestic Product (GDP) grew faster than container transport. Together with the overcapacity this means lower revenues for the container liners. In fact, of the twelve biggest companies, eleven made a loss in the second quarter of 2016 (The Economist, 2016). It is clear that the container shipping industry needs to change. But how? Lowering costs seems a reasonable option, but research performed by Davies (1983) showed that just under 32% of the total costs are variable,

leaving 68% constant (Davies, 1983). There are a lot of ways to bring costs down, but one of them is interesting for this thesis: economies of scale. When a ship is bigger, it can transport more containers and thus lower constant costs. This might also be a driver for a merger or acquisition. As said before, an acquisition is a way to obtain growth and this growth can be used to lower costs. There has been indeed an acquisition wave in the container liner industry, starting with the acquisition of NOL by CMA CGM, the subject of this thesis (The Journal of Commerce, 2016).

2.2 Value drivers

What are the main value drivers in this industry? Shipping industries, and especially container liners, put a great effort in the whole transport system. The time that they only transported the container from the origin port to the destination port lies far behind us. More and more liner companies integrate the transport chain. They do not only care about bringing the container to the seaport of destination, but also about the transport to the hinterland. Why would they do that? Well, when a shipping company controls a large part of the transport chain, it can of course deploy these services to an optimal extent. This leads to faster transport, but also less costs, for example storage costs. It is a way of improving the revenue by offering a rate that is somewhere between hinterland transport and sea transport (Midoro, Musso, & Parola, 2005).

Another way of creating value is by forming alliances. Sailing with a fully loaded ship is optimal because that yields the most revenue. However, a shipping company does not always have fully loaded ships. If the ship is not fully loaded, it could make a loss on its voyage. Unit costs go down when the utilisation of the ship increases, but the reverse is obviously true too. Tran and Haasis (2015) show that cost advantages become cost disadvantages when utilisation decreases. This, combined with the lower freight rates, drives container liner companies towards the forming of alliances. These alliances can be used in the way that the freight of the companies in the alliance can be combined so there will be more chance a ship is loaded fully when it sails. It is interesting, however, to see that smaller companies engage more in horizontal alliances than bigger companies. Medium-sized operators are more inclined to operate in alliances. A possible explanation could be that large companies are capable of covering bigger geographical areas with their own fleet. Another reason could be that big and small operators are better equipped to deal with demand uncertainty (Panayides & Wiedmer, 2011). The forming of alliances gives container liner companies more economies of scale and this will create more value.

2.3 Growth rates

According to the financial report of Hapag-Lloyd over the first 9 months of 2017, the annual global container shipping volume will grow with a rate between 4.8% and 5.1% in the period 2018-2021 (Hapag-Lloyd AG, 2017). Hapag-Lloyd has obtained this data from several research companies, but I have not been able to access that source. The total global growth will be 3.9% in 2018 and 2019. The world trade volume will grow in 2018 and 2019 with 4.6% and 4.4%, respectively (IMF, 2018). According to the Market Analysis of Bimco (2018), demand will grow with 4.0% to 4.5% in 2018. Meanwhile, the fleet will grow with 3.9%. This means that there will be no overcapacity, which is backed by the fact that there were just 65 idle ships in 2017 (Sand, 2018). The industry itself is very optimistic about demand in the coming years. They have a reason for that because a growth in the world trade volume will cause positive effects in the container industry. These growth rates will be used to obtain a forecast of the financial statements of both the target and the acquiror.

3. Valuation

3.1 Theoretical framework

There are several ways to value a company and they all have their own arguments on why that method is the best. For example, the most basic way to estimate the value of a company is by applying formula 1:

$$Enterprise\ Value = Market\ Value\ of\ Equity + Debt - Cash \text{ (1)}$$

However, for a merger or acquisition, it is more complicated. The acquiror is not interested in the value of the company today, but the value in the future. It regards the acquisition more as an investment. The value of an investment is determined by its Net Present Value (NPV). The NPV is calculated by discounting all future cashflows and subtracting the initial investment. If the NPV is above zero, the investment will create value and should therefore be executed. It works the same with acquisitions. One could use a Dividend Discount Model (DDM). Perhaps the most known application of DDM is the Gordon Growth model:

$$Price = \frac{Div_1}{r-g} \text{ (2)}$$

In this model, Div_1 is the dividend in one period from today, r is the return on equity and g equals the constant growth rate (Gordon & Shapiro, 1956). This model however has several limitations. For instance, a company might not pay dividends. It is not possible to use this formula in that case. Also, a steady growth rate is not always the case. In research, conducted by Graham and Harvey in 2001, it was proven that 15.74% of the respondents used the dividend discount model to back their cost of capital (Graham & Harvey, 2001). The model that was used the most according to this research, was the Capital Asset Pricing Model (CAPM). Over 73 percent of the respondents use this method always or almost always (Graham & Harvey, 2001). This model will be discussed in detail later on in this thesis. The CAPM is a method that will be used to determine the cost of capital. This cost of capital will be used to determine the value of a company. This valuation can be done in several ways but the starting point is Free Cash Flow (FCF). This is the value that the acquiring company will obtain in the future. FCF can be calculated using formula 3:

$$FCF = EBIT(1 - T_c) - NINV \text{ (3)}$$

EBIT stands for Earnings Before Interest and Taxes and NINV represents net investment (capital expenditures minus depreciation plus change in net working capital). T_c is the corporate tax rate (Jagannathan, Liberti, Liu, & Meier, 2017).

Once arrived at the free cashflows, there are several options. One could discount these cashflows by using the Weighted Average Cost of Capital (WACC) or use the Adjusted Present Value (APV) approach (Jagannathan, Liberti, Liu, & Meier, 2017). One could also use the Free Cash Flow to Equity method. The FCF needs some adjustment in that method. Interest payments need to be subtracted and add net borrowing. This method however needs the value of the company in order to be useful. It is therefore not useful for valuing an unknown project (Inselbag & Kaufold, 1997). What kind of method should one use for a valuation? The answer lies in the firm's debt-to-equity ratio. If a firm adopts a strict debt-to-equity ratio (one that is constant over time), it should use the WACC method. The APV method is applicable too, but the WACC is more straightforward to use in this case. If, however, a firm has no constant debt-to-equity ratio, the APV method is easier to use. Both methods work differently. I will explain how they work in the following sections.

3.1.1 WACC

The WACC estimates the value by discounting the future free cashflows using the weighted average cost of capital. The formula used in the WACC method is shown below:

$$V_L = \sum_{i=0}^{n} \frac{CF_i}{(1 + r_{wacc})^n} \quad (4)$$

V_L stands here for the levered value of the firm. CF_i equals the cashflows in year i, and r_{wacc} is the weighted average cost of capital. The formula for the WACC is given in formula 5.

$$r_{wacc} = r_D * (1 - T_c) * \frac{D}{V} + r_E * \frac{E}{V} \quad (5)$$

The inputs in this formula are r_D which is the cost of debt, r_E which is the cost of equity, D/V and E/V are the debt ratio and equity ratio, respectively. Lastly, T_c is the corporate tax rate. The reason this method is the best to use with a constant debt-to-equity ratio is because the WACC will stay constant during the lifetime of the investment (Inselbag & Kaufold, 1997).

3.1.2 APV

The APV method is a bit more extensive, since it consists of two parts. The levered value of a firm, V_L, is determined by the sum of the unlevered value, V_U, and the discounted value of the tax shields (TS):

$$V_L = V_U + TS \text{ (7)}$$

The tax shields are discounted by the cost of debt, r_D. The unlevered value of the firm will be determined by discounting the free cashflows using the unlevered WACC, r_U:

$$r_U = r_D * \frac{D}{V} + r_E * \frac{E}{V} \text{ (8)}$$

Adding these two elements leads to the levered value of the firm. The reason that APV is more straightforward to use here is because the WACC needs to be re-estimated every year with a non-constant debt-to-equity ratio (Inselbag & Kaufold, 1997). The reason that we do not discount the tax shields when using the WACC method, is that we already have taken tax into consideration when determining the discount rate.

3.1.3 Determining discount rates

But how does one determine the discount rates used in the previous sections? There are three discount rates to be calculated: the r_E, the r_D and the r_{wacc}. In section 3.1.1 it is already discussed how to calculate the r_{wacc}. To calculate the r_E, we make use of the Capital Asset Pricing Model (CAPM) as seen in formula 9:

$$r_E = r_f + \beta(r_M - r_f) \text{ (9)}$$

In this model, r_f stands for the risk free rate, β for the stock's sensitivity to the market and r_M for the market return. The risk free rate and the market premium (that is, the market return minus the risk free rate), is the same for every company in that industry or market. It is the beta that makes the difference in the cost of equity for a specified company. How each part of this formula is derived will be explained in the following section where the calculations are done.

The cost of debt, r_D, should be derived by taking the yield-to-maturity (YTM) of all outstanding debt of a company. If this data is not available, a good alternative is using the YTM of a representative sample of publicly traded corporate bonds that have the same credit risk as the company (Pagano & Stout, 2004). A third method is using the credit spread. The cost of debt is then obtained by adding this spread to the risk free rate (Goedhart & Koller, 2010). The method used here, however, is interest expense divided by EBIT.

3.2 Calculations

3.2.1 Cost of Equity

The risk free rate used to derive the cost of equity should be in the same currency as the cashflows that are discounted (Goedhart & Koller, 2010). Since the yearly reports of NOL and CMA CGM are both in US dollars, the risk free rate will be based upon a 10-year US bond. A 10-year period is chosen because the duration of the bond should equal the period of the expected cashflows. Of course, assumed is that the cashflows will be until eternity, but the price of a bond with a duration of 30 years might not reflect their current value, because of the illiquidity of the bond (Goedhart & Koller, 2010). At the date of the announcement, 19 July 2015, the yield of the bond was 2.347%. This rate will be used as the risk free rate

The raw β of the bond can be calculated by using formula 10:

$$\beta = \frac{Covariance(r_m, r_i)}{Variance(r_m)} \quad (10)$$

Here, the r_m stands for the return of the market and r_i for the return of the stock. According to Goedhart and Koller (2010), it is best to use at least five years of monthly returns for the calculation of the beta. The used data is therefore the monthly returns from June 2010 to July 2015, from both NOL as the MSCI World Index, collected from Investing.com. The MSCI World Index is chosen as the market proxy because the use of a local index may not be representative enough (Goedhart & Koller, 2010). The raw beta obtained, with formula 10, using this data and formula 10 is 0.954. This beta, however, may not be representative as well. Marshall Blume (1975) found that the beta reverts over time towards the mean of 1. The beta as calculated might be biased because of the circumstances of the market at that time, for example. Therefore, an adjustment is made using formula 11, which is the formula Bloomberg uses to adjust its beta .

$$Beta = 0.33 + 0.67 * raw\ beta \quad (11)$$

Using this formula yields a beta of 0.969, which should reflect the beta of NOL over time.

The market risk premium is calculated as the difference between the market return and the risk free rate. It is best to use a longer period for the calculation of the market risk premium according to Goedhart and Koller (2010). The annualized gross return of the MSCI World index since 31 December 1987 is 8.03%. This is the market return. Subtracting the risk free rate gives the market premium.

Taking all these numbers together and applying formula 9 will give a cost of equity of 7.857%. See table 1 for all data.

Table 1 Cost of equity NOL

Risk free rate	Beta	Market return	Cost of equity
2.347%	0.969	8.030%	**7.857%**

3.2.2 Cost of debt

There are two main methods to calculate the cost of debt. The first is the current yield-to-maturity (YTM) of the outstanding bonds of the company (Goedhart & Koller, 2010). If this method does not work, for example because there is no data available on the corporate bonds, there is another method. That is creating a synthetic credit-rating and looking up the credit-spread. This credit-spread is added to the risk free rate to obtain the cost of debt. The synthetic rating is done by dividing EBIT by interest expenses. The result is called the Interest Coverage Ratio. This ratio corresponds with a synthetic rating and that rating has a corresponding credit spread. Adding this to the risk free rate gives the cost of debt (Damodaran, 2012).

There were three outstanding bonds of NOL at the date of acquisition. They were not all in the same currency. So the first method was not useful. I looked into the second method, but I could not find a recent credit spread table. Therefore, I decided to use a third method, which is average interest expense divided by average borrowings. This is a relevant approximation because NOL uses this method as well (Neptune Orient Lines, 2015). This method results in a cost of debt of 3.4%.

3.2.3 Final WACC

Taking into account all calculations mentioned before, the final WACC can be calculated. For that, we need a few more numbers: the tax rate, the Equity-to-Value (*E/V*) and the Debt-to-Value ratio (*D/V*). The corporate tax rate in Singapore, where NOL is registered, is 17.00%, for companies with the size of NOL (Inland Revenue Authority of Singapore, sd). Assuming a constant gearing ratio (net debt divided by total borrowings) of 1.06, the *E/V* ratio is 0.485. The D/V ratio is then 0.515. These numbers, together with the cost of equity and cost of debt, give us a WACC of 5.266%. This is lower than the WACC as used by NOL which is based on the industry average, which in turn is 7% (Neptune Orient Lines, 2015).

Cost of Equity	E/V	Cost of Debt	D/V	Tax rate	WACC
7.857%	0.485	3.4%	0.515	0.17	**5.266%**

3.3 Forecasting the Balance Sheet

To derive some of the figures needed in the valuation, a forecast of the Balance Sheet will be made. Forecasting relies heavily on assumptions. To forecast the Balance Sheet, margins will be used. Provisions will be estimated as a percentage of sales, for example. These margins are determined using historical averages. Here lies a problem, however. In the beginning of 2015, NOL sold its Logistics segment to Kintetsu World Express (KWE) (Singh, 2015). This means that the Logistics segment should be taken out of consideration when using historical data to forecast the Balance Sheet, since it is only the Liner segment what is sold to CMA CGM. Although NOL provides a detailed overview of the financials per segment, the annual reports do not report a separate Balance Sheet. The only year of which a Balance Sheet consisting of only the Liner segment is available, is 2015. A few lines are easy to obtain, for example Goodwill is reported per segment every year. But for a line like Property, Plant and Equipment (PPE), there is no information about what part of that is allocated to Liner and what part to Logistics. In the annual report of 2015, NOL reported the sale of the Logistics department, together with an overview of the Balance Sheet of Logistics at the date of sale, 29 May 2015. This overview is therefore used as a proxy to create a pro forma Balance Sheet for the years 2010-2014. This, together with the Balance Sheet of 2015, is used as a basis for forecasting the years 2016-2021. Because a lot of the lines are hard to forecast, the Balance is simplified. This pro forma Balance Sheet can be seen in the appendix, in table 4 and 5.

The cash and cash equivalent part of the Balance Sheet is calculated as a percentage of total assets. The same applies for other current assets and other non-current assets. It is very hard to forecast cash, it is therefore that I have chosen to take an average of the ratio of cash to total assets and forecast it this way.

Trade and other receivables are assumed to rely on the revenue, as well as trade and other payables. The same goes for inventory. When revenue is higher, it is more likely that receivables and payables are higher as well. Inventory is also relying on revenue because when sales rise, more inventory is needed. Therefore these lines are forecasted using an average ratio to revenue.

According to the 2015 annual report of NOL, associated companies are entities over which NOL has significant influence but no control, which means NOL has between 20% and 50% of the voting rights (Neptune Orient Lines, 2015). Joint ventures are entities over which NOL has joint control as a result of contractual arrangements, and rights to the net assets of the entities. Because there is no information about these entities, and therefore no good forecast, it is assumed that the assets will stay constant.

Property, Plant and Equipment (PPE) will grow with the rate as presented in the Industry Analysis for the growth of the worldwide fleet, and intangible assets will do so too. For the years 2016-2020 this is 3.9%. From the year 2021 on, the terminal growth rate will be used, which is 2%. Forecasting PPE and intangible assets based on revenue is a good method according to Goedhart and Koller (2010). But looking at the bad state of the industry and the company in particular and taking into consideration the overcapacity in the past years, this conservative growth rate is justified. Goodwill is assumed to stay constant over the years.

Provisions are forecasted as a percentage of revenue. To arrive at a distinction between current and non-current provisions, historical average ratios are used. The same goes for the distinction between current and non-current borrowings. To estimate the total amount of borrowings, a target debt-ratio is assumed of 1.06. That was the debt-ratio in 2015, and it is assumed it will stay constant. One reason for this is that NOL has laid off much debt with the sale of the Logistics department. At that time, as becomes clear from a report about the sale, the debt-ratio decreased in 2014 from 2.25 to 1.08, assuming the sale would have been closed at the end of 2014 (Neptune Orient Lines, 2015).

Total equity is assumed to stay constant. No new shares will be sold and no treasury shares will be bought.

3.4 Forecasting the Income Statement

Neptune Orient Lines gives detailed information about the several segments in the annual report. The Income Statement is presented per segment. There is no distinction made however in expenses. The Income Statement just shows revenues, expenses and segment result. After that, the interest income, as well as the results from associated companies and joint ventures and minority interest is added to arrive at EBIT. Then, after subtracting taxes and interest, net profit or loss is presented.

I have chosen the same format for my forecast. Let's start with revenue. As presented in section 2.3, the industry will grow with 4.8% in the period 2018-2021. For the years 2016 and 2017, I

assumed a growth rate of 4.7%. From the year 2021 onwards, I assume the growth rate will be 2%, equal to the terminal growth rate as presented in the annual report of NOL in 2015 (Neptune Orient Lines, 2015).

The expenses have been calculated as a percentage of revenue. This is done by calculating a historical average, over the years 2003-2015.

Interest income is forecasted using a historical percentage of revenues. The results from associated companies and joint ventures as well as minority interest are forecasted using the same growth rate as revenues. After adding all these to the segment result, EBIT is reached.

To arrive at net profit or loss, interest expense and taxes need to be deducted. Interest expense is forecasted using a historical average. Taxes are assumed to be 17%, as it is the corporate tax rate in Singapore, according to the website of the Inland Revenue Authority of Singapore (Inland Revenue Authority of Singapore, sd).

3.5 Free Cash Flow

To arrive at Free Cash Flow, formula 3 will be applied, meaning that EBIT is multiplied by the corporate tax rate and then the Capital Expenditures and Net Working Capital will be deducted. Depreciation and Amortisation should be included again, because they are not a real outflow of cash. This FCF is discounted using the WACC, to arrive at the value of NOL. See table 3 for the forecasted Free Cash Flow and the appendix (table 1-5) for all forecasts.

Table 3 Forecasted Free Cash Flow's for Neptune Orient Lines (amounts in $000)

	2016	2017	2018	2019	2020	2021
EBIT(1-T_c)	129,520	135,633	142,170	149,020	156,200	159,335
Depreciation/Amortisation	367,977	382,328	397,238	412,731	428,827	445,551
Capital Expenditures	586,471	609,343	633,108	657,799	683,453	581,221
Change in Working Capital	787,007	(8,802)	20,234	(7,662)	20,831	(26,515)
Free Cash Flow	(875,982)	(82,580)	(113,934)	(88,386)	(119,257)	50,180

As one can see, the forecast for the five coming years is a negative FCF. This has all to do with the fact that the cost are high, resulting in a low EBIT. The FCF of 2021 is multiplied with 1.02 to calculate the terminal value.

The problem lies here in the fact that the past five years all have had costs that were higher than the revenue. This obviously gives losses, but also a bad estimate for the coming year. The

expectation is that the FCF's will be positive, but this may take some time, which cannot be seen already in the DCF analysis yet.

The value according to these FCF's and the company's WACC is as follows, as calculated using formula 4:

$$Value\ NOL = \frac{(875,981,942)}{1.0527} + \frac{(82,580,127)}{1.0527^2} + \frac{(113,933,804)}{1.0527^3} + \frac{(88,386,005)}{1.0527^4}$$

$$+ \frac{(119,256,920)}{1.0527^5} + \frac{50,179,954}{1.0527^6} + \frac{\frac{51,183,553}{0.0527 - 0.02}}{1.0527^6} = 18,490,141$$

The value as calculated using the DCF analysis is around 18 million US dollars. This is not close to the amount that was paid to close the deal, around 2.5 billion dollars. The reason for the low value estimate is of course the negative cashflows.

These negative cashflows can be avoided if the costs would be brought down a bit more. Currently, the costs are estimated as 97.4% of the revenue. If these costs would be down to 96%, the value of the company would be almost 2.3 billion dollars. All relevant parameters matter for the valuation, such as working capital, capital expenditures and so on, but the costs matter the most. Just 1.4 percentage point off would mean a much higher value. However, there is no plausible way to estimate the costs at that level. There is no information on a target cost level, and leaving out years in the historical average would be unjustified. To see whether the WACC and the terminal growth rate matter for the valuation, see the sensitivity analysis in section 3.7.

Now it is clear that the DCF method does not give a good representation of the value of NOL, a different approach is needed. The DCF method gives no good representation of the value because the assets of the company are worth 7 billion dollars and CMA CGM has paid 2.5 billion dollars for NOL. This indicates that the 18 million is too low. There is another method, the multiples method. The use of multiples can be useful to obtain more accurate forecasts and valuations (Goedhart & Koller, 2010). It is also one of the most common ways to value a company (Frodsham & Liechtenstein, 2011). That method works in the following way: from comparable deals or companies, some multiples are obtained, for example Enterprise Value/EBITDA. From all these multiples, the median or average is taken. That multiple is used to determine the Enterprise Value (EV) of the target company. With the knowledge of all this, it seems reasonable to perform the valuation once more, but now using multiples.

3.6 Multiples

Therefore, I will perform the valuation again, but now using multiples. In this way we can look if we can arrive at the price using a different valuation technique. First of all, a peer group needs to be established. The fastest way to obtain a peer group is by using a database, such as M&A Research Catalyst. However, this gives a very broad range of companies and deals, that are not very similar to the companies I am looking into. Therefore, this list needs to be adapted a bit. The final peer group consists of companies which are all active in sea-transport. See the appendix, tables 10 and 11, for the full list of companies, as well as their respective multiples. The median of these multiples is used for the valuation.

I am using one multiple, for two different peer groups. Although using EV/EBITA is the best measure according to Goedhart and Koller (2010), this would result in a negative valuation once again because the EBIT and EBITA of NOL are negative in 2015. Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA) are positive, however, giving the possibility to estimate a value. The EBITDA of NOL in 2015 is 194,939 thousand US dollars. See table 4 for the multiples and the values coming from these multiples.

Table 4 Valuation of NOL based on EV/EBITDA

EBITDA NOL	Multiple Comparable Deals	Multiple Comparable Companies	Value based on Deals	Value based on comparable companies
194,939,000	9.31	10.46	1,814,882,090	2,039,061,940

As one can see the value of NOL is based on multiples much closer to the price paid when compared to the DCF-analysis. One way to come even closer to the price is by taking the original report from M&A Research Catalyst which would yield for comparable deal and companies valuation numbers of $2,651,170,400 and $2,345,116,170. However, as said, these reports do also have companies and deals in it that are not very much related to the NOL deal.

The value of NOL is therefore somewhere between 1.8 and 2.0 billion dollar based on these multiples.

3.7 Sensitivity Analysis

The DCF valuation did not bring the value that comes near the price paid. However, I am interested in how the value of the company would have changed if two parameters in particular

would have been different: if the WACC was different or if the terminal growth rate was different. For the outcomes, see table 5:

Table 5 Sensitivity Analysis NOL (amounts in thousands of US dollars)

Terminal growth rate/WACC	0.00%	1.00%	2.00%	3.00%	4.00%
3.27%	3,527,279	3,143,578	2,155,624	-6,150,508	8,299,886
4.27%	2,267,902	1,690,866	605,428	-2,189,361	-25,686,294
5.27%	1,501,180	933,452	18,490	-1,702,606	-6,134,090
6.27%	990,668	474,843	-282,586	-1,503,275	-3,799,460
7.27%	630,059	171,532	-461,009	-1,389,823	-2,886,717

What can be seen is that the value of NOL would almost never exceed the price paid in the deal, except for the low WACC and low terminal growth rate situation. The high value with a WACC of 3.27% and a terminal growth rate of 4.00%, is because the growth rate exceeds the WACC, yielding in discounting a negative cashflow with a negative discount rate.

To come close to the real value of NOL, one would have to adjust the WACC and the terminal growth rate to almost unrealistic values. This indicates that the problem of the low value is in the forecasts.

4. Synergies

In order to know whether the deal has brought CMA CGM any benefits, possible synergies need to be estimated. In order to do that, the stand-alone value of NOL and CMA CGM need to be determined. The value of NOL is already determined in the previous section, and the value of CMA CGM needs to be estimated in the same way as NOL is valued. After calculating the standalone values, a pro forma Income Statement and Balance Sheet of both companies is combined. That will be used to create a value of the two companies combined. If that value is greater than the sum of the stand-alone values, we can state that there have been synergies.

4.1 CMA CGM

4.1.1 Income Statement and Balance Sheet

The forecast of the Balance Sheet and Income Statement of CMA CGM has been done in the same way as the forecast for NOL has been done. The same growth rate of revenue is used, with the only difference in the perpetual growth rate. CMA CGM reports in their annual report of 2016 that the perpetual growth rate equals 1 percent (CMA CGM, 2017). This is the rate I used to forecast the terminal growth and the revenue growth in 2021. The operating expenses are calculated as a percentage of revenue. I assume that gain on disposal will be zero, because it is not possible to make a reliable forecast of this line. After subtracting operating expenses, Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA) is reached.

The next step is subtracting depreciation and amortisation, which is estimated using a historical average. This average is multiplied by last year's Property, Plant and Equipment plus Intangible Assets, to obtain the depreciation and amortisation. Other income and expenses, measured as a percentage of revenue, and NPV benefit related to assets, measured as a percentage of total assets, are added. The last step to arrive at Earnings Before Interest and Taxes (EBIT), is adding the share of profit or loss from associated companies and joint ventures which is assumed to grow at the same pace as revenue. Interest expense and taxes are subtracted to reach profit or loss.

The EBIT is then used to arrive at Free Cash Flow (FCF). First, EBIT is multiplied with one minus the tax rate. Then, depreciation and amortisation is added up. After that, the capital expenditures, which is the difference between this year's and last year's PPE and intangible assets, plus depreciation are added. Finally, working capital, measured as the difference between current assets and current liabilities, is subtracted to arrive at the FCF. The FCFs are presented in the appendix.

4.1.2 WACC

These FCF's are then discounted using CMA CGM's WACC. The inputs for the cost of equity are the same, except for the beta. Since CMA CGM is not a listed company, the beta needs to be determined using an industry beta. After un-levering and re-levering, CMA CGM's beta comes down to 0.737. See the table for all the details. The data is obtained from Thomson Reuters, via the Maersk Financials page (Thomson Reuters, 2018).

Table 6 Beta calculation CMA CGM

Industry beta	Industry E/V	CMA CGM E/V	CMA CGM beta
1.010	0.511	0.700	0.737

This gives CMA CGM a cost of equity of 6.535%. The cost of debt is obtained using the Yield-To-Maturity (YTM) of all outstanding bonds of CMA CGM at 19 July 2015. This data is retrieved from the Bloomberg Terminal (Bloomberg, 2018). The weighted YTM of CMA CGM is 6.366%. That is the cost of debt. Using a *D/V* ratio of 0.3 and an *E/V* ratio of 0.7, the WACC as calculated is 5.848%. See the table for all numbers (note: all the numbers presented in the table may be subject to rounding errors).

Table 7 WACC CMA CGM

Cost of Equity	E/V	Cost of Debt	D/V	Tax rate	WACC
6.535%	0.700	5.848%	0.300	0.3333	5.848%

4.1.3 CMA CGM stand-alone value

The stand-alone value of CMA CGM is calculated as follows:

$$CMA\ CGM = \frac{329,489,200}{1.05848^1} + \frac{76,005,092}{1.05848^2} + \frac{71,160,969}{1.05848^3} + \frac{75,486,282}{1.05848^4} + \frac{80,020,574}{1.05848^5}$$

$$+ \frac{490,608,419}{1.05848^6} + \frac{\frac{495,514,503}{0.05848 - 0.01}}{1.05848^6} = 8,176,056,942$$

The stand-alone value of CMA CGM is more than 8 billion dollars.

4.2 Two companies combined

The next step is to combine the two companies with making a pro forma Income Statement and Balance Sheet. All calculations for the statements are the same as for NOL and CMA CGM. There are a few assumptions worth the mention. First, the tax rate of CMA CGM is used,

because that is the tax rate the new company will be subject to. Second, PPE and intangible assets will grow at the same rate as revenue. The D/E ratio is calculated on basis of the combined debt in 2015, and is 0.83. For the Income Statement and the Balance Sheet, see appendix.

The FCF is derived using the same way as for the stand-alone values. In the table you can see what this Free Cash Flow is per year:

Table 8 Free Cash Flows for the combined company (amounts in $000)

	2016	2017	2018	2019	2020	2021
EBIT(1-Tc)	567,444	604,895	632,193	660,177	689,411	682,442
Depreciation	784,850	802,655	840,380	880,718	922,992	967,296
Capex	1,432,971	1,481,238	1,565,973	1,641,140	1,719,914	1,141,291
Change in Working Capital	(507,765)	2,796	1,391	1,364	1,495	(74,736)
FCF	427,088	(76,485)	(94,792)	(101,609)	(109,006)	583,183

This gives the new company a value of:

$$Value\ combined\ firm$$

$$= \frac{427,088,277}{1.05495^1} + \frac{(76,484,672)}{1.05495^2} + \frac{94,791,880}{1.05495^3} + \frac{101,609,117}{1.05495^4}$$

$$+ \frac{109,006,060}{1.05495^5} + \frac{583,183,094}{1.05495^6} + \frac{\frac{589,014,925}{0.05495 - 0.01}}{1.05495^6} = 10,019,156,446$$

The value of the two companies combined is just over 10 billion dollars. In order to see whether the deal has brought synergies or not, the stand-alone value of the two companies is subtracted. Since we have got two valuations for NOL, one with DCF and one with multiples, we will do it twice.

1. $Synergies\ (DCF\ method) = 10,019,156,446 - 8,176,056,942 - 18,490,141 = 1,824,609,363$
2. $Synergies\ (multiples\ method\ based\ on\ comparable\ deals) = 10,019,156,446 - 8,176,056,942 - 2,039,061,940 = -195,962,436$
3. $Synergies\ (multiples\ method\ based\ on\ comparable\ companies) = 10,019,156,446 - 8,176,056,942 - 1,814,882,090 = 28,217,414$

Looking at the valuation done with the DCF approach, one can see that this deal has brought a value increase of almost 2 billion dollars. But, the value of NOL is estimated very low, as explained in section 3. Therefore I am more interested in the synergies calculated with the valuation done by multiples. When the value based on comparable deals is used, there are no synergies. When the value based on comparable companies is used, there are synergies worth around 28 million dollars. A good note is here, that there are no synergies if the value is equal to the price paid, which is around 2.5 billion dollars.

A little sensitivity analysis is needed here. Why is the value of the combined firm so high, when valued with a DCF-WACC method? It is remarkable that a firm with such a low value, 18 million, would yield almost 2 billion dollars in synergies. The biggest differences should be in the capital expenditures and the change in working capital, because the combined EBIT is very close to the sum of the EBIT of CMA CGM and NOL. The starting point for the FCF is even lower, because the corporate tax rate of CMA CGM is higher. The sum of the capital expenditures is close to the capital expenditures of the combined firms each year. This difference is not the biggest cause. The real difference appears to be in the working capital change.

If we start at 2016 for NOL, we see that the change in working capital is 787 million dollars. This is a big change. Would this have been of the size of the changes in the other years, somewhere between -26 million and 20 million, the value of NOL would have increased to somewhere around 750 million dollars. Next big difference is at CMA CGM. Change in working capital in 2016 is -250 million dollars. If this would be of the magnitude of the other changes, between -40 and 7 million, than the value of CMA CGM would decrease to 7.9 billion dollars. That is not a very big change. The last difference is in change in working capital in the Balance Sheet of the combined firm in 2016. The change is there almost -508 million dollars. If this would have been somewhere around zero, the value would have been 9.5 billion. In the last year, the change is -75 million. If this as well would have been zero, the value would have been 8.3 billion dollars. This value decrease is large because the change in working capital affects the calculation of the terminal growth directly. If only the last year change in working capital would have been zero, the value would also drop much, namely to 8.7 billion dollars. As one can notice, the change in working capital has a big impact on the value. It seems reasonable that the difference in value can be attributed to change in working capital which has taken some deviant values in the forecasts.

5. Conclusion

The two questions I tried to answer were:

> 1. *Is the price paid for NOL a fair price?*
> 2. *Did CMA CGM benefit from the deal?*

During the making of this thesis, I found answers on both questions. I performed a DCF-valuation. However, because of the financial problems of NOL in the years 2010-2015 were the estimates low. The costs were higher than the revenue in the past 5 years. This made it difficult to forecast lower costs. The value of NOL would come very close to the price paid, if the costs would be 96% of the revenue. But there is no plausible way to assume the costs would be at that level. This yielded in low FCF's and by consequence, a low valuation. In fact, based on the DCF-method, the value of NOL was just over 18 million dollars. This is a very low value for a company with assets of almost 7 billion dollars. It is also low compared to the fact that CMA CGM paid around 2.5 billion dollars for the firm. After performing the DCF-method, I therefore estimated the value of the company using multiples. This method gave a valuation that was closer to the price paid, namely 1.8 and 2 billion dollars. The answer on the first question, about the fairness of the price, would be no. According to my valuation and my estimates, the company is worth less than 2.5 billion. It would have been fair to pay around 2.0 billion dollars.

After the valuation, I looked into the possible synergies CMA CGM could obtain by this deal. The value of the two companies combined was just over 10 billion dollar. With a value of CMA CGM of 8 billion dollars and the low estimate derived from the DCF-valuation, it is no surprise there were substantial synergies. However, when looking at the more accurate values, derived using multiples, there were no synergies or synergies corresponding to just 25 million dollars. In line with the first part of the research question the answer appears to be no.

A few remarks

However, there are some remarks that can be made about this case study. I made it a bit more complicated to use only the data corresponding to the Liner segment, because of the sale of the Logistics segment in the first half of 2015. I say more complicated because the presentation of financial details is not as elaborated for the segments as for the whole company. There was enough information about the Income Statement, but almost nothing about the Balance Sheet. This statement needed to be estimated for the future as well for the past. This was done by using the Balance Sheet items as presented at the time of the sale of the Logistics segment.

Obviously, this task would also have been easier and more accurate if there was enough information about the different segments.

Also, it is very clear that this entire valuation is based on a lot of assumptions. When I make a different assumption somewhere in the beginning of the process, the whole valuation might give a different result. It is therefore very important to make the right assumptions at the beginning. One may however, obtain a different result by making other, also reliable, assumptions. Seen in this light, it is possible that CMA CGM paid 2.5 billion, because they may have used a different method or may have made different assumptions.

The assumption of lower costs would have given a value to NOL close to the price paid. Other factors obviously matter as well, but they do not influence the value so much as the costs do. The level of WACC and the terminal growth rate matter as well, as can be seen in the sensitivity analysis. However, a WACC of 2% might not be realistic at all, for example. Therefore, I think my calculations and assumptions were realistic. It is clear however, that it matters which assumptions are made.

Future research

This research has given me some insight in the world of Corporate Finance and the shipping industry in particular. Because of the bad financial state of NOL is no exception in the (container) shipping industry, it is a very interesting topic to research. It is quite interesting to see how deals like this develop and how the companies behave and develop financially after an acquisition or a merger.

It is common in the container shipping industry to form alliances. Alliances are a way to obtain a growth in revenue, by improving efficiency. This is also a very interesting topic to do research on. How are these alliances created? How do they behave financially? Does it really bring advantages to the companies involved? I think these are all questions that provide for interesting research.

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Appendix

Table 1 Income Statement NOL 2003-2009 (amounts in $000)

Year	2003	2004	2005	2006	2007	2008	2009
Revenues	4,229,719	5,377,509	5,981,176	5,953,661	6,837,034	7,961,030	5,539,439
Costs	3,887,594	4,414,753	5,164,561	5,623,217	6,306,970	7,863,310	6,157,467
Segment result	342,125	962,756	816,615	330,444	530,064	97,720	(618,028)
Interest income	8,469	12,799	25,295	23,794	25,776	9,019	6,036
Share of result of associated companies	159	609	10,778	(1,206)	513	80	(73)
Share of result of joint ventures	103	3,110	2,851	3,554	6,364	5,800	(175)
Minority interest	(2,823)	(1,922)	-	-	-	(2,686)	(307)
EBIT	235,112	892,178	815,537	319,084	526,252	84,633	(654,819)
Interest Expense	(115,744)	(87,096)	(40,002)	(37,502)	(36,465)	(27,986)	(42,579)
Taxes	(22,484)	72,545	(62,595)	100,390	(53,900)	(48,926)	(38,977)
Profit (loss)	96,884	877,627	712,940	381,972	435,887	7,721	(736,375)

Table 2 Income Statement NOL 2010-2015 (amounts in $000)

Year	2010	2011	2012	2013	2014	2015
Revenues	8,161,982	7,806,067	7,956,380	7,245,666	6,957,845	5,378,241
Costs	7,670,795	8,278,172	8,345,507	7,318,118	7,118,456	5,457,927
Segment result	491,187	(472,105)	(389,127)	(72,452)	(160,611)	(79,686)
Interest income	3,590	5,855	4,091	-	-	1,559
Share of result of associated companies	(175)	(892)	2,504	853	1,559	1,559
Share of result of joint ventures	1,056	485	7	624	1,798	1,798
Minority interest	(341)	(393)	(1,284)	(850)	(1,978)	(1,569)
EBIT	461,020	(497,376)	(419,654)	(102,610)	(268,286)	(187,487)
Interest Expense	(34,638)	(30,719)	(37,129)	(31,635)	(111,032)	(112,717)
Taxes	(65,799)	(24,927)	(31,365)	(35,434)	(20,468)	(20,502)
Profit (loss)	360,583	(553,022)	(488,148)	(169,679)	(399,786)	(320,706)

Table 3 Forecasted Income Statement NOL (amounts in $000)

Year	2016	2017	2018	2019	2020	2021
Revenues	**5,631,018**	**5,895,676**	**6,178,669**	**6,475,245**	**6,786,056**	**6,921,778**
Costs	5,486,742	5,744,619	6,020,361	6,309,338	6,612,186	6,744,430
Segment result	**144,276**	**151,057**	**158,308**	**165,907**	**173,870**	**177,347**
Interest income	8,921	9,340	9,788	10,258	10,750	10,965
Share of result of associated companies	1,632	1,709	1,791	1,877	1,967	2,006
Share of result of joint ventures	1,883	1,971	2,066	2,165	2,269	2,314
Minority interest	(664)	(664)	(664)	(664)	(664)	(664)
EBIT	**156,048**	**163,413**	**171,289**	**179,543**	**188,193**	**191,970**
Interest Expense	(50,799)	(53,186)	(55,739)	(58,415)	(61,219)	(62,443)
Taxes	(26,528)	(27,780)	(29,119)	(30,522)	(31,993)	(32,635)
Profit (loss)	**78,721**	**82,447**	**86,431**	**90,606**	**94,981**	**96,892**

Table 4 Balance Sheet NOL 2010-2015 (amounts in $000)

		2010	2011	2012	2013	2014	2015
Assets							
	Cash	915,690	213,235	840,507	919,233	1,148,600	229,907
	Trade and other receivables	765,502	739,796	772,271	759,191	764,337	520,458
	Inventory	243,330	326,596	266,984	253,923	175,031	91,720
	Other	79,268	142,639	243,249	110,509	83,648	123,114
	Total current assets	**2,003,790**	**1,422,266**	**2,123,011**	**2,042,856**	**2,171,616**	**965,199**
	Associated	25,991	65,537	73,279	104,262	110,560	107,462
	Joint ventures	22,960	22,815	20,022	20,388	21,220	21,970
	PPE	3,643,047	4,726,793	5,160,506	6,017,566	5,933,606	5,590,142
	Intangible assets	16,540	16,561	22,317	19,398	19,308	12,277
	Goodwill	121,036	121,036	121,036	121,036	121,036	121,036
	Other	114,616	113,090	120,731	95,252	96,977	90,650
	Total non-current assets	**3,944,190**	**5,065,832**	**5,517,891**	**6,377,902**	**6,302,707**	**5,943,537**
Total Assets		**5,947,980**	**6,488,098**	**7,640,902**	**8,420,758**	**8,474,323**	**6,908,736**
Liabilities							
	Trade and other payables	945,095	1,025,806	1,004,231	1,008,090	948,375	854,661
	Provisions	30,132	26,615	27,398	26,657	24,728	29,983
	Borrowing	19,934	400,237	407,018	568,094	583,243	572,551
	Other current	349,362	358,663	398,271	380,113	364,342	246,268
	Total current liabilities	**1,344,523**	**1,811,321**	**1,836,918**	**1,982,954**	**1,920,688**	**1,703,463**
	Borrowings	1,268,881	1,831,713	3,362,963	4,045,874	4,434,151	2,309,811
	Provisions	79,607	80,704	88,840	105,321	117,371	147,838
	Other non-current	84,037	108,021	89,652	135,545	187,175	255,068
	Total non-current liabilities	**1,432,525**	**2,020,438**	**3,541,455**	**4,286,740**	**4,738,697**	**2,712,717**
Total Liabilities		**2,777,048**	**3,831,759**	**5,378,373**	**6,269,694**	**6,659,385**	**4,416,180**
Equity							
	Share Capital + reserves	1,883,661	1,835,978	1,865,714	1,788,370	1,721,357	1,732,994
	Retained Earnings	1,338,743	765,302	345,857	288,733	28,756	741,348
	Minority Interest	29,332	34,601	36,280	36,293	39,034	18,214
Total Equity		**3,251,736**	**2,635,881**	**2,247,851**	**2,113,396**	**1,789,147**	**2,492,556**

Table 5 Forecasted Balance Sheet NOL (amounts in $000)

		2016	2017	2018	2019	2020	2021
Assets							
	Cash	774,148	795,011	847,147	872,260	928,105	931,910
	Trade and other receivables	539,038	564,372	591,462	619,853	649,605	662,598
	Inventory	167,492	175,364	183,782	192,603	201,848	205,885
	Other	145,404	149,323	159,115	163,832	174,321	175,036
	Total current assets	**1,626,082**	**1,684,071**	**1,781,507**	**1,848,548**	**1,953,879**	**1,975,429**
	Associated	107,462	107,462	107,462	107,462	107,462	107,462
	Joint ventures	21,970	21,970	21,970	21,970	21,970	21,970
	PPE	5,808,158	6,034,676	6,270,028	6,514,559	6,768,627	6,903,999
	Intangible assets	12,756	13,253	13,770	14,307	14,865	15,162
	Goodwill	121,036	121,036	121,036	121,036	121,036	121,036
	Other	119,028	122,236	130,252	134,113	142,700	143,285
	Total non-current assets	**6,190,410**	**6,420,633**	**6,664,518**	**6,913,448**	**7,176,660**	**7,312,915**
Total Assets		**7,816,492**	**8,104,703**	**8,446,025**	**8,761,996**	**9,130,539**	**9,288,344**
Liabilities							
	Trade and other payables	723,156	757,145	793,488	831,575	871,491	888,921
	Provisions	20,691	21,664	22,703	23,793	24,935	25,434
	Borrowing	438,447	458,482	483,216	505,492	532,482	553,450
	Other current	401,418	419,883	441,954	462,522	486,640	503,626
	Total current liabilities	**1,583,712**	**1,657,173**	**1,741,361**	**1,823,382**	**1,915,548**	**1,971,431**
	Borrowings	3,112,879	3,255,123	3,430,729	3,588,884	3,780,511	3,929,377
	Provisions	78,564	82,256	86,205	90,343	94,679	96,573
	Other non-current	157,786	165,044	173,719	181,804	191,284	197,961
	Total non-current liabilities	**3,349,229**	**3,502,423**	**3,690,653**	**3,861,031**	**4,066,474**	**4,223,911**
Total Liabilities		**4,932,941**	**5,159,596**	**5,432,014**	**5,684,413**	**5,982,022**	**6,195,341**
Equity							
	Share Capital + reserves	1,732,994	1,732,994	1,732,994	1,732,994	1,732,994	1,732,994
	Retained Earnings	868,771	1,002,182	1,141,997	1,288,523	1,442,083	1,598,714
	Minority Interest	18,214	18,214	18,214	18,214	18,214	18,214
Total Equity		**2,619,979**	**2,753,390**	**2,893,205**	**3,039,731**	**3,193,291**	**3,349,922**

Table 6 Forecasted Income Statement CMA CGM (amounts in $000)

Year	2016	2017	2018	2019	2020	2021
Revenue	**16,410,783**	**17,182,089**	**18,006,830**	**18,871,158**	**19,776,973**	**19,974,743**
Operating Expenses	(15,347,265)	(16,068,587)	(16,839,879)	(17,648,193)	(18,495,306)	(18,680,259)
EBITDA	**1,063,518**	**1,113,503**	**1,166,951**	**1,222,965**	**1,281,667**	**1,294,484**
Depreciation & Amortisation	(416,873)	(436,466)	(456,980)	(478,884)	(501,838)	(525,892)
Other income and expenses	(40,836)	(42,756)	(44,808)	(46,959)	(49,213)	(49,705)
NPV benefits related to assets	95,340	99,821	104,608	109,623	114,880	116,248
Share of profit (loss) of associated companies and joint ventures	(6,073)	(6,358)	(6,657)	(6,970)	(7,297)	(7,640)
EBIT	**695,076**	**727,745**	**763,114**	**799,776**	**838,199**	**827,495**
Cost of net debt	(195,100)	(195,100)	(195,100)	(195,100)	(195,100)	(195,100)
Other Financial items	12,363	12,945	13,566	14,217	14,899	15,048
Financial result	**(182,737)**	**(182,156)**	**(181,535)**	**(180,883)**	**(180,201)**	**(180,052)**
Profit before Taxes	**512,339**	**545,589**	**581,579**	**618,893**	**657,998**	**647,443**
Taxes	(170,763)	(181,845)	(193,840)	(206,277)	(219,311)	(215,793)
Profit (Loss)	**341,576**	**363,744**	**387,739**	**412,616**	**438,687**	**431,650**

Table 7 Income Statement CMA CGM for the years 2011-2015 (amounts in $000)

Year	2011	2012	2013	2014	2015
Revenue	14,869,593	15,923,229	15,901,548	16,739,100	15,674,100
Operating Expenses	(14,562,596)	(14,617,766)	(14,877,909)	(15,449,300)	(14,420,600)
Gains on disposal	421714	18,873	343,846	27,900	9,800
EBITDA	728,711	1,324,336	1,367,485	1,317,700	1,263,300
Depreciation & Amortisation	(409,907)	(405,585)	(423,385)	(401,100)	(407,500)
Other income and expenses	51,410	(45,359)	(123,030)	(83,500)	(5,100)
NPV benefits related to assets	90,058	95,357	136,836	78,900	50,400
Share of profit (loss) of associated companies and joint ventures	24,378	39,106	18,769	5,700	(5,800)
EBIT	484,650	1,007,855	976,675	917,700	895,300
Cost of net debt	(430,822)	(409,911)	(432,198)	(310,200)	(277,700)
Other Financial items	(2,197)	(63,893)	(13,118)	88,300	54,500
Financial result	(433,019)	(473,804)	(445,316)	(221,900)	(223,200)
Profit before Taxes	51,631	534,051	531,359	695,800	672,100
Taxes	(33,472)	(64,655)	(100,896)	(84,100)	(85,400)
Profit (Loss)	18,159	469,396	430,463	611,700	586,700
Profit (loss) from discontinued operations	(22,724)	(108,783)	-	-	-
Profit (loss) for the year	(4,565)	360,613	430,463	611,700	586,700

Table 8 Balance Sheet CMA CGM 2011-2015 (amounts in $000)

Year		2011	2012	2013	2014	2015
Assets						
	Intangible assets	658,665	487,984	503,791	512,100	559,900
	PPE	7,881,422	7,530,737	7,465,467	7,170,300	7,627,500
	Other non-current assets	1,571,997	1,468,081	1,659,125	1,380,600	1,215,000
	Non-current assets	**10,112,084**	**9,486,802**	**9,628,383**	**9,063,000**	**9,402,400**
	Inventories	519,657	484,521	473,686	384,400	250,900
	Trade and other receivables	2,103,808	2,230,526	2,305,246	2,382,700	2,059,200
	Cash	857,117	601,309	1,410,447	2,186,500	1,224,000
	Other current assets	367,174	837,812	458,651	346,500	1,338,700
	Current assets	**3,847,756**	**4,154,168**	**4,648,030**	**5,300,100**	**4,872,800**
Total Assets		**13,959,840**	**13,640,970**	**14,276,413**	**14,363,100**	**14,275,200**
Equity	Share Capital	169,200	169,200	169,200	169,200	234,700
	Reserves and Retained Earnings	3,542,298	3,488,466	3,914,878	4,202,400	4,555,400
	Profit (loss) for the year attributable to the equity owners of the parent company	(35,388)	332,037	407,813	583,600	566,700
	Equity attributable to the owners of the parent company	**3,676,110**	**3,989,703**	**4,491,891**	**4,955,200**	**5,356,800**
	Non - controlling interests	43,943	49,653	49,232	40,100	48,700
Total Equity		**3,720,053**	**4,039,356**	**4,541,123**	**4,995,300**	**5,405,500**
Liabilities	Non-current financial debt	4,956,513	1,616,881	4,823,242	4,409,400	4,414,000
	Provisions and					

	retirement benefit obligations	227,983	201,720	315,762	331,100	296,600
	Other non-current liabilities	164,757	133,964	134,919	111,800	137,500
	Non-current liabilities	**5,349,253**	**1,952,565**	**5,273,923**	**4,852,300**	**4,848,100**
	Current financial debt	1,151,381	3,946,270	932,310	1,070,700	733,600
	Current provisions	21,336	14,799	25,523	19,700	23,100
	Trade and other payables	2,945,097	2,774,879	2,833,369	2,720,200	2,756,600
	Other current liabilities	772,720	913,102	670,164	704,900	508,300
	Current liabilities	**4,890,534**	**7,649,050**	**4,461,366**	**4,515,500**	**4,021,600**
Total Liabilities and Equity		**13,959,840**	**13,640,971**	**14,276,412**	**14,363,100**	**14,275,200**

Table 9 Forecasted Balance Sheet CMA CGM (amounts in $000)

Year	2016	2017	2018	2019	2020	2021
Assets						
Intangible assets	586,215	613,767	642,614	672,817	704,440	737,548
PPE	7,985,993	8,361,334	8,762,678	9,183,287	9,624,085	9,720,325
Other non-current assets	1,539,947	1,612,325	1,689,633	1,770,648	1,855,547	1,877,652
Non-current assets	**10,112,155**	**10,587,427**	**11,094,926**	**11,626,752**	**12,184,072**	**12,335,525**
Inventories	440,257	460,949	483,074	506,262	530,562	535,868
Trade and other receivables	2,298,340	2,406,362	2,521,868	2,642,918	2,769,778	2,797,475
Cash	1,315,563	1,377,394	1,443,438	1,512,648	1,585,177	1,604,060
Other current assets	707,237	740,477	775,981	813,188	852,179	862,331
Current assets	**4,761,396**	**4,985,182**	**5,224,361**	**5,475,015**	**5,737,696**	**5,799,734**
Total Assets	**14,873,552**	**15,572,609**	**16,319,287**	**17,101,767**	**17,921,767**	**18,135,259**
Equity						
Share Capital	234,700	234,700	234,700	234,700	234,700	234,700
Reserves and Retained Earnings	5,122,100	5,463,676	5,827,420	6,215,159	6,627,775	7,066,462
Profit (loss) for the year attributable to the equity owners of the parent company	341,576	363,744	387,739	412,616	438,687	431,650
Equity attributable to the owners of the parent company	**5,698,376**	**6,062,120**	**6,449,859**	**6,862,475**	**7,301,162**	**7,732,813**
Non-controlling interests	48,700	48,700	48,700	48,700	48,700	48,700
Total Equity	**5,747,076**	**6,110,820**	**6,498,559**	**6,911,175**	**7,349,862**	**7,781,513**
Liabilities						

	Non-current financial debt	3,090,274	3,268,119	3,457,806	3,658,777	3,871,574	4,037,506
	Provisions and retirement benefit obligations	284,106	297,459	311,737	326,700	342,382	345,806
	Other non-current liabilities	111,148	119,277	127,953	137,127	146,824	153,412
	Non-current liabilities	**3,485,527**	**3,684,855**	**3,897,495**	**4,122,604**	**4,360,780**	**4,536,724**
	Current financial debt	642,374	679,342	718,773	760,548	804,782	839,275
	Current provisions	21,728	22,749	23,841	24,985	26,185	26,447
	Trade and other payables	2,917,461	3,054,581	3,201,201	3,354,859	3,515,892	3,551,051
	Other current liabilities	579,524	621,911	667,145	714,981	765,543	799,891
	Current liabilities	**4,161,086**	**4,378,583**	**4,610,960**	**4,855,374**	**5,112,402**	**5,216,663**
Total Liabilities and Equity		**13,393,690**	**14,174,258**	**15,007,015**	**15,889,153**	**16,823,044**	**17,534,900**

Table 10 Comparable Deals used for multiples valuation

Deal closed	Target	Acquiror	EV/EBITDA
29/05/2015	Horizon Lines Inc.	Matson Navigation company Inc.	5.06
22/12/2014	Hurtigruten ASA	Silk BIDCO AS	9.66
27/12/2016	Aurora LPG Holding ASA	BW LPG ltd.	2.26
07/07/2015	Compagnia Italiana Di Navigazione spa	Onorato Family	11.71
10/10/2017	Maersk Tankers A/S	APMH Invest A/S	19.53
06/08/2013	Unifeeder A/S	Nordic Capital Fund VIII	8.61
31/03/2015	Golden Ocean Group ltd (OLD)	Knightsbride Tankers ltd	21.67
07/04/2014	Norwegian Car Carriers ASA	Car Carrier Investments AS	1.67
19/03/2015	Eitzen Chemical ASA	Team Tankers International ltd	28.21
19/06/2013	Vietnam Tanker Joint Stock Company	PG Tanker Corporation	3.44
13/12/2013	PKL As	Alfons Hakans OY	18.92
29/09/2015	Pallas Group AB	Smart Energy Sweden Group AB	8.95

Table 11 Comparable Companies used for multiples valuation

Company	EV/EBITDA
Royal Caribbean Cruises ltd	10.88
DP World ltd	10.46
Norwegian Cruise Line Holdings ltd	11.17
Teekay Corporation	5.96
Kawasaki Kisen Kaisha ltd	409.99
Wallenius Wilhelmsen Logistics ASA	8.51
Evergreen Marine Corporation (Taiwan) limited	9.75
DFDS A/S	8.82
Yang Ming Marine Transport Corporation	12.78