Mermaid Operator Business Plan

Round 2

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Introduction

Company Idea

The company will primarily provide maritime trasportation in Europe. The business intends to bid on journey charters on short routes throughout Europe, where it will be able to provide shipping for any sort of goods. The firm will also take on profitable contracts to and from other continents, although there are no plans to operate on intercontinental routes where Europe is neither the starting or ending point.

Company Mission

In order to move all kinds of cargo in every port in Europe, the company will buy ships with a very high floor strength and possibly according with Ice Class that is a requirement in some ports in Europe. A ship of the size 'Handymax', more specifically Yo-1, will be required for this mission, stationed in Middle East or near Europe, with a floor strength of 20 ton/m2. In fact, this sort of ship will be capable of transporting a wide range of goods, including steel, iron ore, and minor ores. With a design draught of 12.92 metres, the ship will be able to visit practically any European port, as no available contract will provide for a maximum load, being able to decrease the immersion by a few metres. This presents the rare circumstance of an all-around accessible ship that can execute nearly any contract throughout Europe, with the sole limitation being the vessel's cargo volume limits.

Market Analysis

The market was examined to determine where the most contracts are available and which ships can sail these contracts. Contracts will be available at 54 different ports. The maximum depth and, thus, the maximum draught of a ship limit port accessibility. When the draughts of the various ships are compared, the following can be seen: an Handymax would not be able to use up to 20 ports in total, but based on our market analysis of the major ports of interest, in terms of amount of cargo loadable, strategic location and contract offerings, all of these ports inaccessible by our characteristics, are not critical to our business. Moreover, assuming the continuous and remote possibility of varying the dive in case a sensitive port is required by a major contract. An Handymax is distinguished by a DWT of 65000 tonnes and can sail more than 110 contracts out of a base of more than 240 contracts analysed from the previous round. Assumed and analysed that the trend in the new market does not deviate much from the past, therefore assumed that it doesn't change, this leads to the conclusion that approximately 45% of contracts available will be able to be sailed with the ship. If a Handymax is chosen, more contracts will be available due to higher DWT capacity, compared to the more trendy Handy, preferred because of the higher draft limits of the secondary and unimportant ports. The majority of contracts are accessible in Europe. Since the company intends to

operate in a location with a large availability of contracts, the European market appears to be the most appealing. Accepting contracts to ship products to America or Asia can still be considered, but with one major caveat: there is a strong likelihood that there will be no contracts at the conclusion of the voyage that permits the boat to return to Europe. This is also owing to the boat's medium size, which may preclude some contracts of large tonnage shipping, which is more common on intercontinental routes. 21% of available contracts need ice class. Ice class is required for 39% of the contracts available for high DWT Handymax. Cranes are required for 6%. The DWT available for high floor strength Handymax is higher, highering the overall share of contracts available from 28% to 34%. Of the 115 contracts available for the Handymax with floor strength 20, 35% of them demand a high floor strength. The rates fluctuate according to the kind of cargo. The average rates for contracts requiring high floor strength are slightly lower than those for the other contracts. Most contracts are accessible at European ports, based on their location. With 43% of all available contracts in Rotterdam and Antwerp, which are both easily accessible. Choosing a ship capable of sailing to Antwerp increases the likelihood of contracting. When it comes to available ships, 8 Handymaxs have a floor strength of 20. Two of these have an ice class, however they are not all equipped with cranes. A Handymax with a floor strength more than 20, costs more than the average of peers with less floor-strength value, making our choice more justifiable because the ability to carry heavier, restricted goods allows for more profitable contracts. The gap in availability and purchasing price for high strength ships is tolerable.

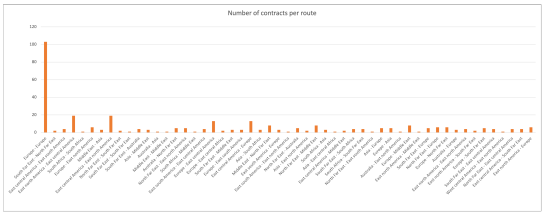

Figure 1: Number of contracts per route

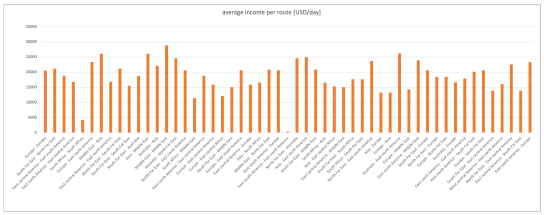

Figure 2: Average income per day

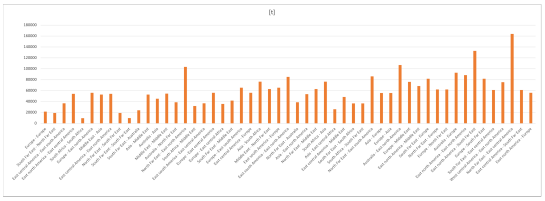

Figure 3: Tons of cargo per region

Strategy

The Handymaxs, which have a floor strength of 20 ton/m2, an average age of 27 and are available very close to Europe, are seen to be the best solution for the vessels, as past the Suez Canal or the Atlantic ocean, it will become 100% operable in the European landscape. These two characteristics already significantly lower the Handymax available at the start of this round. The best Handymax will be selected based on the results of the additional analysis, which

will be discussed in the next paragraphs. Some effort will be made to optimise the company's performance while running the operation. Contracts in Europe will be prioritised, and a efficient analysis will be built to optimise the best potential offer for the available contracts and determine which is the best option in crucial scenarios. For example, an evaluation is required when there is no contract available for the ship in the port where it is docked. The idea is to buy one of the three handymax ships in the first week analysed properly and prioritised according to location and market trend. Once we have purchased the closely sought after Handymax Yo-1, in which no bank loan terms will be required due to careful analysis and selection in the current sales market, it will be deployed in the European scenario of major ports, as its excellent purchase price/ scrapping price ratio will allow us not to suffer from depreciation over our three years of operation. Furthermore, given its important physical characteristics, such as the ability to transport heavy goods with its 20t/m2 floor strength, its non-limiting dimensions in accessing major ports, its excellent operating and specific consumption costs, and its 497 days missing dock time, make it the main candidate for our future profit in the lucrative European market, especially in its first year of operation. Furthermore, if the proposed approach is successful, it will be conceivable to explore expanding the target market to an intercontinental market by purchasing a second vessel. More specifically, the intention is to acquire at the end of the first year of operation a ship that can complete the other highly profitable geographic market segment, Europe-North America. To do so, we believe that the use of a vessel of the same class, with very similar characteristics and evaluated financial planning aspects, will lead us to choose the Handymax Bao Zhong 218,based in New York. This stems from the fact that the established and detailed predominant choices regarding port accessibility, the overall budget on the basis of depreciation, operational costs and the possibility of having an operational ship if the first one goes under repair and maintenance (given its 547 days to dock), have been analysed in detail leading us to the conclusion that a very good profit margin can be earned according to the contract market trend in that area.

SWOT and Confrontation Matrix

Strength (internal)	Weakness (internal)
1.Floor strength of 20t/m2 2.No loan 3.Availiablity for all kinds of cargo	1.Limited cargo volume 2.Only one ship working in the first year
Opportunity (external)	**Threat (external)**
1.Non-limiting draft in accessing major ports 2.A plan for transcontinental contract	1.Competition in chosen market 2.Market analyses done with old information

Figure 4: SWOT

		Opportunity		Threat	
		1	2	1	2
Strength	1	+		+	
	2		++	-	+
	3	+	++	+	
Weakness	1	-		--	
	2		-		-

Figure 5: Confrontation Matrix

In the above SWOT, the different advantages and downsides of the ship type and strategy choice are summarized.

Investment Proposal

It has been possible to estimate the investment case based on our ships after an accurate market analysis. The following values of IRR, WACC and NPV proof the potential reliability and liquidity of Mermaid Operator.

Free Cash Flow Proposal

The FCF prognoses has been obtained for a short duration due to the old age of chosen vessels, after that (year 6) the vessels will be sold or scrapped so that we will able to limit the vessels' costs and risks which will slightly increase over the years. As it can be seen in the following table the total amount of the costs during the period of our management is composed by the Voyex (voyage expenses),the Opex (operational expenses) and docking costs. Since the company operates with old ships, especially at the beginning, the OPEX costs are relatively high. In contrast, the acquisition costs are relatively low since the vessels prices have already reached the scrap values, which translates into lower financing costs.

Handymax Yo-1

Handymax Yo-1 has been chosen to obtain the maximum return on investment because it best suits our strategy and all the constraints of the market where we want to introduce. Firstly, the total revenue has been determined through an analysis of all the contracts rates that our vessel can fulfill in Europe. Secondly, the average sailing time has been calculated considering: loading/unloading time, waiting time and the time to complete the route with an average speed of 13 knots; it is 1.09 weeks per contract. Nevertheless to determinate the amount of the total revenue and the total voyage expenses during all the period it has been estimated that our vessel will fulfill 28 contracts per year.The vessel also need to dock for inspection but it has to be performed within 497 days so it will take place in the second and forth year. The Handymax Yo-1 will dock around 30 days. Due to its size it will dock at Alexandria where the docking tariff is $ 110 per day per DWT0.5. The Handymax, primarily focuses in Europe, where a port tariff of 20.86 $ / GT can be assumed. This number is quite important in order to reduce the cost. So, unnecessary or unexpected visits to ports must be limited. For bunkering, the average bunker costs for North Europe are assumed, which amount to 297 dollars per ton. To reach the Europe we have to go through the Suez Canal whose fees are $ 2/GT. This results in canal fees of 71120 $. Following the strategy our company will establish competitive contract bids with an operative margins but with the main goal of building trust with the same brokers to get more contracts.

Handymax Bao Zhong 218

Handymax Bao Zhong 218 assumes that the cycle New York-Corpus Christi-Rotterdam and back is executed. The average speed is assumed to be 10 knots. This results in around 1968 tons of fuel for one cycle. For the bunker costs, the average bunker costs for North America are assumed, which amount to 314 dollars per ton. This results in bunker costs of 6177952 dollars. Based on the assumptions described above, it is assumed that this round trip can be executed 5 times, resulting in a bunker cost of $ 3089760. Port costs are assumed to be the global average of $ 2.1/GT. Furthermore, repair costs become necessary in the third and fifth year. This is estimated to take around one month. It will dock at Ensenada where the docking tariff is $ 150 per day per DWT 0.5 . This means docking costs of $ 1243832. For revenue, the following assumptions were made through market research. In the described circle run, there is always one short and two long routes. Market research has shown that an average of $ 20 per ton can be charged for the long route and $ 14 per ton for the short route. These assumptions are difficult to guarantee, as the very volatile market environment is the main factor here.

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Purchase Price	-1980562	-2049171				
Scrap Value						
Revenue		5262000	12832360	12832360	12832360	12832360
Fuel consumption		-500000	-3589760	-3589760	-3589760	-3589760
Port fees + Canal fees		-1421622	-2240786	-2240786	-2240786	-2240786
Total Voyage Expenses		-1921622	-5830546	-5830546	-5830546	-5830546
Net Revenue		3340378	7001814	7001814	7001814	7001814
Administration		-237620	-478494	-478494	-478494	-478494
Crewing		-771960	-1543920	-1543920	-1543920	-1543920
Maintenance		-441165	-885779	-885779	-885779	-885779
Insurance		-725946	-1495934	-1495934	-1495934	-1495934
Total Operational Expenses		-2176691	-4404127	-4404127	-4404127	-4404127
Docking costs			-905962	-1243832	-905962	-1243832
Free Cash Flow	-1980562	-885484	1691725	1353855	1691725	1353855

Table 1: Free Cash Flow

NPV,WACC and IRR calculations

The Net Present Value (NPV) has been calculated with the following formula:

$$NPV = \sum_{i=0}^{n} \frac{FCF}{(1+WACC)^i} \tag{1}$$

Firstly, we needed to determine which is the value for the WACC, it is defined as:

$$WACC = \frac{Equity * r_{equity} + Debt * r_{Debt}}{Equity + Debt} \tag{2}$$

Since our company does not intend to take any loan there is no debt so the WACC is equal to the cost of equity that is 10%. It follows that the $NPV = 1625851,089\$$.

According to the table 1 has been possible to calculate rate at which the project DCF will amount to exactly zero.

$$0 = \sum_{i=0}^{n} \frac{FCF}{(1+IRR)^i} \tag{3}$$

It follows that IRR=28%.

In order to make a good investment, the Internal Rate of Return (IRR) should be higher than the WACC.

$$IRR = 0.28 > 0.10 = WACC \tag{4}$$

As can be seen the IRR is higher than the WACC. Additionally, the NPV is positive and shows therefore that the projected earnings generated by the investment exceeds the anticipated costs. Therefore, Mermaid Operator is looking financial stable with high predicted cash flow. This result provides that the strategy of the company is reliable and competitive within the markets where we want to introduce. Applying this strategy to several old vessels close to the end of their useful life will turn out to generate high profits and it will maintain financially healthy the company during the years.