CONTAINER SHIPPING STRATEGY: CHARTING A COURSE FOR FUTURE PROFITABILITY

by

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PROJECT SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

Master of Business Administration
EMBA Program

in the Faculty

of

Business Administration

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SIMON FRASER UNIVERSITY
August 2004

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ABSTRACT

Container shipping is a global industry engaged in the business of transporting goods by sea in standard shipping containers, predominantly of 20 feet and 40 feet in length. The industry is dependent on the volume of world trade and consequently is highly cyclical with its profitability being dependent, in large part, on the health of the global economy. It is a highly capital intensive industry requiring large amounts of investment in large scale fixed assets such as ocean vessels, global office networks, and communications infrastructure.

Container shipping, while dramatically increasing the efficiency of ocean transportation has a very chequered history of profitability and continues to remain a prisoner to the cycle of world trade. The industry has also tended to limit itself in its extension along the value chain and large portions of value have been captured by other providers of logistics such as freight forwarders and distribution companies. While the industry is slowly consolidating over the longer term, it continues to remain fragmented despite recent mergers and no single company or group of competitors has established a dominant position in the market.

This paper will look at various aspects of the performance of one of the largest container shipping companies, Royal P&O Nedlloyd N.V., an Anglo-Dutch container line. As will be shown later in this paper, carriers that pursue differentiation strategies tend to have superior financial performance than cost based operators. P&O Nedlloyd pursues a differentiated strategy but has, to date, had very weak financial performance in comparison to its main competitors and is clearly out of step with the other differentiators. While apparently following the more successful industry strategy the company nevertheless continues to substantially under perform.

The paper will seek to identify the key success factors within the industry and then contrast these with P&O Nedlloyd's own internal strategy. Suggested changes to strategy will then be made on the basis of the findings. The paper will conclude by making recommendations on longer-term strategy in order to generate sustainable profitability and financial success for Royal P&O Nedlloyd N.V. in the future.

DEDICATION

To my wife Karen, without whose knowledge, encouragement, support and patience it would have been difficult to start let alone complete all of the courses of study over the last four years.

To my parents, Philip and Winifred, who, though they may not have realised it at the time, did manage to instil enough sense into me to know that education mattered. Thanks for your patience while I "ploughed my own furrow".

To friends both old and new who have helped, supported and put up with me through both this and prior courses of study.

To all of you I dedicate my final project work in the Executive MBA Program.

ACKNOWLEDGEMENTS

This project was compiled with the support, advice and guidance of Dr Neil Abramson and Dr. Steven Globerman of the Faculty of Business Administration at Simon Fraser University.

I am also deeply grateful for the help, support and assistance of Tom-Peter Blankestijn and Piet-Jan Ten Thije of P&O Nedlloyd in Rotterdam for their patience in letting me bounce ideas of them as well as their assistance in obtaining information, assistance and opinion from the very heart of the company. Their help and constructive criticism were instrumental in producing this paper and I am very thankful for their support.

I would also like to express my appreciation to John Fossey of Drewry Shipping Consultants Ltd, London and Matthew Beddow, managing editor of Containerisation International, London U.K for their kind permission to include source data from the Drewry 2003-4 Annual Container Market Review and Forecast report and the Containerisation International online database respectively.

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The following abbreviations and acronyms are used in this paper

- TEU – Twenty Foot Equivalent Unit – 1x20' Container = 1 TEU and 1x40' container = 2 TEU
- NVOCC – Non Vessel Operating Common Carrier
- OE – Operating Efficiency
- MES – Minimum efficient scale
- FDI – Foreign Direct Investment

1 INTRODUCTION

Royal P&O Nedlloyd N.V. is an Anglo-Dutch container shipping Line, currently ranked fourth in the world in terms of market share. The company had its roots in the 1997 merger of P&O Containers Ltd based in London in the U.K., and Nedlloyd Lines based in Rotterdam in the Netherlands. Both carriers have long histories dating back to the beginning of the 19th century and were considered to be the "national" flag lines of their respective countries.

At the time of the merger P&O Containers Ltd was the liner shipping division of the much larger P&O Steam Navigation group, a U.K. based conglomerate with diverse interests in property, ports, ferries and the well known "Princess Cruises" cruise line. Nedlloyd Lines, on the other hand, was the liner shipping division of the Royal Nedlloyd Group which was a specialist in European transport, logistics and distribution. Nedlloyd Group was also involved in the airline industry owning a 50% stake in conjunction with KLM, in Martinair in addition to a European regional airline, Transavia. The group also had interests in heavy lift operator Mammoet, responsible for moving large oil rig fabrications, notably in the North Sea and for the Hibernia project off the Canadian east coast. The company also had some limited interests in North Sea oil drilling in the form of NedDrill N.V.

Both P&O Containers and Nedlloyd Lines had been under-performing divisions within their respective group companies prior to the merger in 1997 and the merger of these two divisions to form P&O Nedlloyd was an attempt to generate economies of scale for the merged company and was undertaken with a view to floating the merged company independently as soon as market conditions and the company's performance warranted. As a result of the merger of the two liner divisions P&O Nedlloyd was jointly owned by both group companies, with P&O Group holding 50% of the company's stock and Royal Nedlloyd Group holding the remaining 50%.

Since the merger both the P&O and Nedlloyd groups have substantially changed their core strategies. P&O Group has decided that its core business will in the future be Ports & Terminals and the company is engaged in transforming itself into a major player

in the global port and terminal business. P&O Group has as a result divested itself of most of its other non port assets, including P&O Nedlloyd and in early 2004 it announced that it would sell its 50% stake in the company to Royal Nedlloyd Group. The Royal Nedlloyd Group on the other hand has entirely divested itself of its non shipping line business and its investment in P&O Nedlloyd now represents almost the entire assets of the group. In April of 2004 the sale of P&O Group's 50% stake in P&O Nedlloyd to Royal Nedlloyd was executed and P&O Nedlloyd was then reverse listed on the Amsterdam stock exchange, Euronext, through Royal Nedlloyd which then changed its name to Royal P&O Nedlloyd N.V. The purchase of the P&O Group share in the company was in the form of both cash and shares in the new company and as a result P&O Group currently has a 25% stake in the new company.

P&O Nedlloyd Container Line is the fourth largest provider of container shipping services in the world by fleet capacity, operating a fleet of 154 modern container ships with a total nominal capacity of 416,732 TEU. P&O Nedlloyd's ships call at 229 ports in 94 countries and these are supported by a network of more than 400 offices in 156 countries employing over 11,600 people. In terms of financial size the company's turnover in 2003 was US$ 5.5 billion. The company offers a diverse palette of services from basic port to port service, often referred to as *Base Level Product* or BLP, and is also capable of offering inland transport either via railroad, trucking or barge in many parts of the world. Complimenting the company's main-haul deep sea services it also has a large array of feeder services to secondary ports around the world, such as the Baltic or Irish feeder services that transport cargo to and from the main ports of discharge in Rotterdam or Bremerhaven. The company has also recently formed a logistics division to provide distribution and storage services in a number of key markets around the globe.

In the container shipping industry firms compete using either cost based strategies, offering acceptable service at a low price, or differentiation strategies, offering differentiated services and products and charging a price premium. P&O Nedlloyd competes using a differentiated strategy and charges a price premium by offering

products based on superior service quality and operational performance in comparison with its rivals.

Customers within the industry also fall largely into one of these two categories. For some exporters price is the determining factor affecting whether their cargo can even be competitive overseas, an example being basic raw materials exports. Other firms require a high degree of service. This can be due to the fact that their component manufacturing is outsourced overseas and they require a reliable steady stream of supply to satisfy the needs of their assembly plants. Cost driven customers will tend to utilise carriers with low cost strategies while service driven customers will tend to use carriers that offer differentiated service.

Table 1 : Carrier Returns on investment 1999-2003[1]

Rank	Carrier	Dominant Strategy	1999	2000	2001	2002	2003	Average %
1	Maersk	Differentiation	10.4	11.2	15.8	14.3	16.5	13.6
2	OOCL	Differentiation	6.3	7.7	5	10.5	32.1	12.3
3	Hapag Lloyd	Differentiation	8.5	2.7	9.6	6.6	10.5	7.6
4	APL	Differentiation	6.1	12.6	6.4	4.6		7.4
5	K-Line	Cost	5.2	7	3.6	5.7	12.6	6.8
6	CP Ships	Cost	7.3	9.7	7.2	3.3	5.2	6.5
7	CMA-CGM	Cost	3.9	11.4	2.3	5.2	9.6	6.5
8	NYK	Differentiation	5	6.3	4.9	5.4	6.7	5.7
9	Mitsui Osk	Cost	5.1	6.9	5.5	4.3		5.5
10	Hanjin	Cost	4.9	7.5	4.4	0.2	8.1	5.0
11	Hyundai	Cost	4.7	6.2	4.5	-0.6	6.7	4.3
12	Evergreen	Cost	3.9	4.3	3.1	2		3.3
13	P&O Nedlloyd	Differentiation	0.2	9.3	3.9	-12.1	4.3	1.1
Average %			5.5	7.91	5.86	3.8	11.2	6.9

Table 1 above illustrates the performance of P&O Nedlloyd's competitors in terms of their return on investment and also illustrates the predominant strategy used by each of these individual carriers. Carriers are ranked by their 5 year average return on investment. We can see from the above table that there is a clear clustering pattern with

[1] See Appendix 2, p.76

carriers that pursue differentiated strategies appearing in the top quartile and cost based carriers all appearing in the bottom quartile. We can see that P&O Nedlloyd has a financial performance problem and is clearly an outlier here. Even using other financial measurements of success, a similar picture emerges as will be shown later in this paper. The company appears to be following the correct strategy to achieve better performance, but is not deriving any benefit from it. We can also clearly see that the strategy choice itself appears to be a key success factor for carriers in terms of investment returns..

The adoption of supply chain management techniques by shippers has resulted in a continuing evolution of their expectations of the characteristics of container carrier services. Companies today hold considerably less inventory than in the recent past in order to minimise the amount of capital tied up in them and thereby reduce cost. As a result they increasingly rely on timely transportation of merchandise from producer to final customer in order to meet customer demands. These developments, spin-offs of globalisation, are affecting the nature and range of services offered by carriers and the relationships between direct competitors and related service providers.

Increasing use of differentiation by carriers that have chosen this strategy is resulting in a blurring of the roles of container carriers, freight forwarders and other logistics providers. Ocean carriers have traditionally confined themselves to port to port shipments and some level of intermodal capability such as rail to inland hubs and some local pick-ups and deliveries. However, simple A to B ocean freight has become a very homogeneous product offered by a plethora of lines, and as the number of intermediaries such as freight forwarders has multiplied and adoption of the internet has flourished, this has led to increasing transparency of pricing within the industry. While some carriers have chosen to meet this challenge by competing on low cost other carriers have started to look at expanding along the value chain in order to capture potential profit pools in other areas of the logistics chain. This is borne out by the number of ocean carriers that now have "Logistics Divisions" that are beginning to offer services. There are, however, uncertainties about the long-term success of shipping lines in logistics service. While a few lines have well established logistics services many are, in fact, new to the business

and as a result shippers continue to be somewhat sceptical about their ability to manage sophisticated requirements. In the past this lack of confidence by shippers gave Freight Forwarders, NVOCCs and third party logistics providers the opportunity to enter the logistics services business before many of the carriers themselves. Shippers tend to perceive that ocean carriers have strong competencies in the marine transport business, consolidation and intermodal services, while inventory management, LTL transport, warehousing and distribution are not the lines' core business. Container carriers that have established logistics divisions are attempting to use them as a method to differentiate themselves from their competitors by having less homogeneous products and by offering differentiated products that increasingly provide one stop shopping for customers. In effect these types of carriers are making port to port container shipping simply one part of their own value chains.

As a differentiator, P&O Nedlloyd has an excellent reputation for service in the marketplace globally and is able to command a price premium over carriers competing on cost and indeed on some lower end differentiators. From the perspective of market share P&O Nedlloyd is a substantial player in the major world tradelanes with an overall market share of 4.6%[2] of loaded, freight paying containers, ranking it fourth in the industry.

P&O Nedlloyd is involved in a large global scale market that is rapidly evolving due to globalisation and continued growth in GDP and outsourcing of manufacturing with overall growth in container traffic in the order of just over 40%[3] in the 2000-3 period.

This paper will analyse the overall market using the Porter's Five Force model, identify key sources of competitive advantage in the industry value chain and examine to performance of P&O Nedlloyd against these. Following from this the key success factors

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[2] See Table 4, p.11

[3] See Table 3, p.9

will be explored which will lead to recommendations to assist P&O Nedlloyd to achieve sustainable profitability in the future.

2 EXTERNAL ANALYSIS

In the following external analysis of the container shipping industry we shall, as mentioned, use Michael Porter's five forces analysis technique[4] to look at the rivalry and competitive forces within the industry. This analysis defines container transportation as being effected by container carriers on a point to point basis. The industry analysis will focus on the following forces:

- Threat of Entry
- Threat of substitutes
- Buyer Power
- Supplier Power

In the competitive analysis in section 2.2 we shall focus on the fifth of Porter's forces, the current rivalry within the industry between existing carriers.

2.1 Industry Analysis

While the ethical and moral issues of globalisation are best left to another forum, there can be no debate about container shipping's contribution to it. The plentiful supply of cheap, standardised and timely shipping has been an extremely effective enabler. It would be hard today to envision a globalised economy without such transport capabilities.

Over the last 10 years the container shipping industry has under performed the S&P 500 index, largely failing to recover its cost of capital and creating limited shareholder value, if any. From 1981 to 2001 world trade grew continuously, averaging 3% per year, even allowing for the Asian crisis of 1997-8. Despite the economic slowdown of 2001-2 world GDP growth has rebounded to 3% on average by mid 2003 and looks set to continue at a similar level in the near to mid-term. This, however, is not the only factor driving the amount of containerised freight in the world economy. Increasing globalisation of the world economy and in particular outsourcing of

[4] (Porter, 1980)

manufacturing to China and other areas of Asia have led to growth in container traffic that substantially exceeds GDP growth. Table 2 below illustrates the growth of global loaded, fee paying container traffic as well as the fluctuation of container revenues for the entire industry.

Table 2 : Total Container Trade and Revenue 1996-2003[5]

Year	Loaded container Moves (Million TEU)	% Change year on year	Gross Carrier income ($ billion)	% change year on year
1996	49.0		77.9	
1997	53.9	10.0%	78.2	0.4%
1998	56.2	4.3%	77.2	-1.3%
1999	61.7	9.8%	80.3	4.0%
2000	68.6	11.2%	92.9	15.7%
2001	70.6	2.9%	91.9	-1.1%
2002	77.8	10.2%	89.1	-3.0%
2003	86.7	11.4%	106.1	19.1%
Period Growth		76.9%		36.2%

As we can see the pace of growth in container traffic over the last seven years has been brisk. We can also see that while overall average container revenues have continued their historic decline, the dramatic increase in volume has in fact led to a 36% increase in revenues over the period. From the data we can clearly see the impact of the Asian crisis in 1998 and the economic slowdown in 2001-2.

In order to see where P&O Nedlloyd stands in relation to the above total market growth, the growth of P&O Nedlloyd's own container throughputs in comparison is shown in Table 3 below for the four year period from 2000-3. This table illustrates that P&O Nedlloyd has not quite kept pace with global growth in world container volumes.

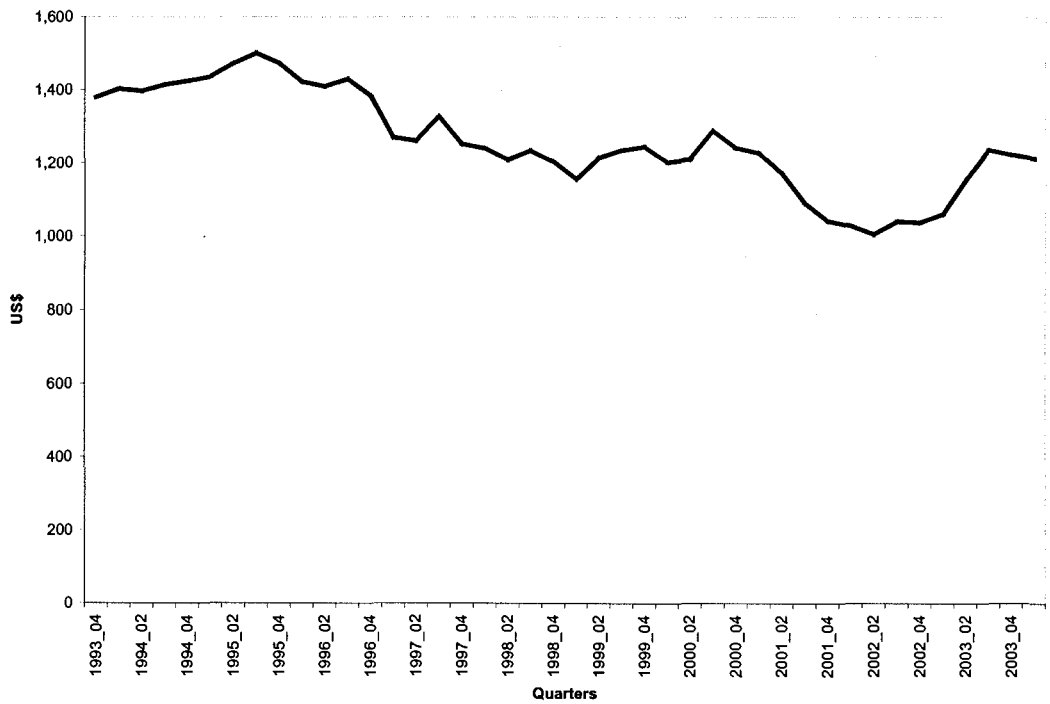
[5] (Drewry Shipping Consultants, 2003, p.15)

Table 3 : Total Market & PONL Volume Growth[6]

	2000	2001	2002	2003	Period Total
Total Market	11.2%	2.9%	10.2%	11.4%	40.5%
P&O Nedlloyd	8.1%	4.7%	11.8%	5.2%	33.1%

Container Shipping unit revenues have also declined dramatically over the past 10 years. In effect, carriers have to move increasing volumes in order to maintain adequate returns. During this period aggregated freight prices in the Transatlantic, Transpacific and Europe-Asia tradelanes declined overall by 12% as illustrated in the Figure 1 below.

Figure 1 : Average Aggregate Revenue/TEU - Transatlantic, Transpacific, Europe/Asia Trades[7]



Declining revenues in the industry are an effect of the intense rivalry in the industry rather than a cause. However they also cause a spiral of increased competition as carriers compete to maintain or increase their market share to continue to offset declining

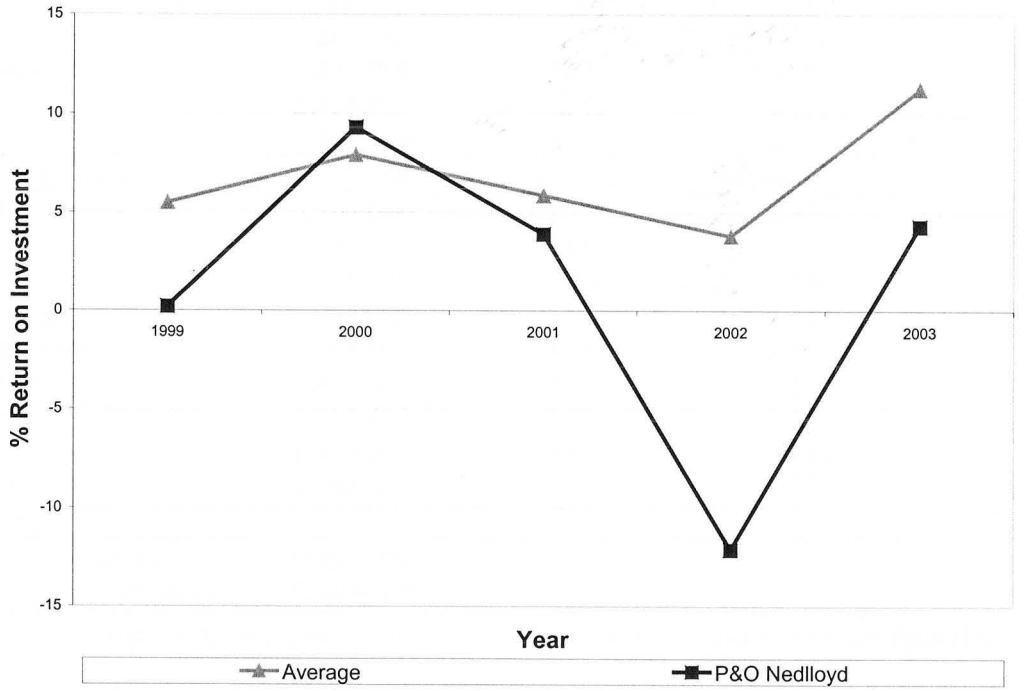
[6] (Drewry Shipping Consultants, 2003, p.15 and P&O Nedlloyd Annual Reports 2000-3)

[7] See Appendix 1, p.74

revenues. This does have the advantage of leading to increased scale firms and raises barriers to entry in the industry by increasing the industry minimum efficient scale. This will be dealt with in the "Threat of Entry" in section 2.1.1 of the industry analysis.

Returns on investment in the industry fluctuate with the world business cycle and, as mentioned previously, are often inadequate to cover the cost of capital. Figure 2 below illustrates the average return on investment for the top 13 ocean carriers with that of P&O Nedlloyd shown separately for comparison. As can be seen, the P&O Nedlloyd return on investment is, with the exception of 2000, below that of the industry average.

Figure 2 : Average Return on Investment[8]



With regard to industry fragmentation there are a large number of diverse competitors none of which have substantial market power. Competitors range from large publicly listed corporations to carriers from the developing world that are the transport arms of their domestic governments, such as China Ocean Shipping Co. (Cosco) which is

[8] See Appendix 2, p.76

controlled by the Chinese government. The relative sizes and market shares of the top twenty carriers in relation to the overall market in 2002 is shown in Table 4 below.

Table 4 : Loaded Container Volumes and Market Share - 2002[9]

Carrier	2002 Loaded Container Moves	% Share Top 20	% Global Share
Maersk Sealand	10,000,000	18.0%	12.9%
Cosco	4,600,000	8.3%	5.9%
Evergreen	4,200,000	7.6%	5.4%
P&O Nedlloyd	3,559,600	6.4%	4.6%
APL	3,000,000	5.4%	3.9%
MSC	2,800,000	5.0%	3.6%
CSCL	2,800,000	5.0%	3.6%
CMA-CGM	2,533,000	4.6%	3.3%
NYK	2,450,000	4.4%	3.1%
Hanjin	2,300,000	4.1%	3.0%
Total Top 10 Carriers	38,242,600	68.8%	49.2%
OOCL	2,265,650	4.1%	2.9%
K-Line	2,250,000	4.0%	2.9%
CP Ships	2,008,000	3.6%	2.6%
Mitsui OSK	1,965,000	3.5%	2.5%
Hapag Lloyd	1,918,000	3.4%	2.5%
Wan Hai	1,911,000	3.4%	2.5%
Yangming	1,712,045	3.1%	2.2%
Zim	1,413,560	2.5%	1.8%
Senator	1,145,000	2.1%	1.5%
Hamburg Sud	775,000	1.4%	1.0%
Total to 20 Carriers	55,605,855		71.5%
Total Loaded cntr moves	77,800,000		

From the above we can calculate the concentration ratio of the top four firms in the industry as follows:

$$CR_4 = 12.9 + 5.9 + 5.4 + 4.6 = 28.7\%$$

A CR_4 ratio of less than 40% of the market tends to indicate that the industry is considered to be very competitive, with many firms competing, but none owning a very

[9] (Drewry Shipping Consultants, 2003, p.17)

large chunk of the market. We can see from Table 4 that the top 10 carriers control only 49.2% of the total container market and even when this is expanded to the top twenty carriers this portion only climbs to 71.5%. From the calculated concentration ratio for the top four firms we can see that the market can be said to be very fragmented with individual carriers having low market power.

Finally, within the industry, carriers fall into two distinct groupings as mentioned in the introduction, those that compete on price and those that compete on service differentiation. The Table 5 below illustrates some examples of carriers that compete in these two categories.

Table 5 : Carrier Strategy Types

Strategy Type	***Attributes***	***Examples***
Differentiators	Global in scope, serving both main and niche tradelanes. Generally perceived as having differentiated service and charge premiums over other carriers for superior service and performance	P&O Nedlloyd, Maersk-Sealand (Denmark), Hapag Lloyd (Germany), OOCL (Hong Kong), APL (Singapore)
Cost Based Competitors	Generally serving main East/West tradelanes only. Rarely offering differentiated products and in the main compete on cost	Hyundai Merchant Marine (Korean), Hanjin (Korean), Evergreen (Taiwan), China Shipping.

We will now investigate, using Porters five forces model, the variables for each key factor that determine the opportunities and threats within the industry. Each factor is labelled with a +/- sign where a + sign indicates that this variable increases the threat of entry and vice versa for the – sign.

2.1.1 Threat of Entry

Entry threats to the industry are summarised in Table 6 below and are explored in further detail in the sections below.

Table 6 : Threat of Entry

Threat of Entry	
Moderate	
+	Industry growth – increased volumes of world trade
-	High Scale Threshold - High fixed costs / Economies of Scale / Asset specificity
+	Entrance of government assisted lines from developing countries
+	Low brand identity, advertising and promotion
+	Easy access to distribution channels
-	Declining unit prices/revenue leads to increased competition and thereby increasing scale thereby raising the barrier to entry
-	Industry consolidation in economic upturns
+	Strategic Industry – especially for developing economies to get their manufactured products to market

2.1.1.1 (+) INDUSTRY GROWTH – INCREASED VOLUMES OF WORLD TRADE

As mentioned above, the continued strong growth of world trade and the continued growth in outsourcing of production to lower cost jurisdictions, particularly in China, is resulting in continued strong growth in world container volumes. This increase in cargo flows acts as an incentive to attract new entrants into the container shipping industry. This is particularly marked by the entrance of low-cost Asian based carriers into the major east west trades routes.

2.1.1.2 (-) HIGH SCALE THRESHOLD

Container shipping is, by it its very nature, an industry with very high fixed costs and asset specificity requiring companies to seek economies of scale. The costs of having a global network of offices, and vessel services requires a very high initial outlay for fixed assets. The large quantity of capital necessary to enter the container industry constitutes a tremendous barrier to entry. Due to the asset specificity of the ocean container vessels and the organisation required to operate these assets, exiting from the industry is also very difficult. It should also be noted that the minimum efficient scale is

also very high. Both of these factors combine to act as a deterrent to entry by competitors.

2.1.1.3 (+) GOVERNMENT ASSISTANCE TO CARRIERS

The container shipping industry has two properties that invite government attention which contributes to increased threat of industry entry from government inspired or assisted lines, particularly from developed countries. Firstly, because international transportation is priced in US dollars, it generates large cashflows of hard currency. Secondly, many governments view it as a strategic industry that is vital in order to get the products produced within a country to their international markets. These properties can have a positive impact both on a country's balance of payments as well as affecting the competitiveness of a country's products overseas. The competitive aspect is particularly marked if the transport costs represent a large proportion of the final selling price overseas.

These properties do not have a large impact on container lines based in the developed world, as these companies are generally publicly listed companies. However, for developing economies, the above two factors can prompt the government of an exporting country to set up its own shipping line. This is done in order to provide an opportunity to ship with a domestic carrier thereby keeping hard currency at home when moving goods to developed markets overseas. There is also the fact that if a country's carrier carries goods to its main developed markets then it can also generate US dollar revenue on imports to its home market as well as points in-between. This also has a positive impact on a country's foreign currency reserves.

There are therefore a number of benefits accruing to a government from setting up its own container shipping line. This, in turn, results in increased competition in the industry as a whole and it should also be noted that returns from the shipping activities of these types of carrier are not necessarily driven by profit maximisation. As a result these types of carriers tend to compete wholly on cost. An example of a container carrier of this type would be China Shipping Group (CSG) or Malaysian International Shipping

Corporation (MISC). The involvement of these types of carrier in a market can therefore have a very distorting impact on the individual market.

Given the strategic importance of competitively getting a country's manufactured goods to overseas markets, particularly for developing countries, and the concentration within the liner industry – governments around the world monitor the activities of ocean shipping carriers very closely. This is done in order to ensure that there is no market collusion in setting market prices unfairly high and thereby choking a country's exports by increasing the transport costs and thereby reducing the competitiveness of a country's goods. Governments in Europe, North America and Asia monitor carriers particularly intensively and penalties for such activity are both swift and heavy.

2.1.1.4 (+) LOW BRAND IDENTITY, ADVERTISING AND PROMOTION

The container shipping industry has low brand identity and promotion is a very small cost component to the carriers. Promotion is generally subcontracted to advertising firms and is channelled direct to the shipping public through industry publications and trade press. Carriers also participate in trade shows for particular industries, such as the Boston Seafood Show, but the costs of this are comparatively low in comparison to other industries such as consumer products. The low cost of branding and promotion in the container shipping industry results in this being a very low barrier to entry. It should be added that while carrying containers from A - B in ships that float can be said to be the most basic product – in effect the carrying of containers - there are still many opportunities to differentiate. Methods of differentiating the carrier brand include fixed weekly sailings, schedule reliability and informative, flexible and helpful customer service. However as carriers increasingly offer these services, customers increasingly come to expect them as a base level service. Because many of these types of differentiation are easily copied, they soon become *industry standard* and thus low brand loyalty tends to persist.

2.1.1.5 (+) EASY ACCESS TO DISTRIBUTION CHANNELS

As mentioned above there are very few distribution channels in the industry. Container services are either retailed directly through the carrier's own in-house sales force or sold wholesale through freight forwarders. Freight forwarders perform a similar function in relation to the container shipping industry as travel agents perform in the airline industry.

2.1.1.6 (-) INDUSTRY CONSOLIDATION IN ECONOMIC UPSWINGS

Given that the industry is fragmented there are periodic mergers and take-overs that occur, predominantly during upswings in the business cycle. Industry consolidation leads to economies of scale and consequently the minimum efficient scale of this industry increases. This requires new entrants into the market to be larger if they are to effectively compete. Increased capital requirements to enter the market also act as a deterrent to entry and therefore lower the threat of entry.

2.1.1.7 (-) DECLINING UNIT PRICES

Declining freight prices have led to a vicious cycle where carriers compensate for declining unit revenues by increasing their liftings in order to preserve total revenues. This also has the secondary effect of reducing their average fixed costs through economies of scale. This cycle in effect generates productivity gains while reducing average costs thereby allowing carriers to compete at lower prices. However, adding capacity further contributes to declining revenues, which again leads to further expansion in capacity in order to maintain or increase market share leading to further reductions in costs. This tendency towards capacity expansion also increases the scale barrier to the industry by increasing the MES within the industry. As a result we can say that declining revenues lead to increased productivity and efficiency while at the same time increasing the barriers to entry.

In conclusion we can characterise the threat of entry to the industry as moderate. The large requirements of capital necessary in order to enter combined with the difficulty in exiting due to the scale effects and asset specificity act to reduce the threat to a low to moderate level. However this is counterbalanced by government involvement, easy access to distribution channels and low to moderate brand identity which contributes to increase the threat. P&O Nedlloyd is a well established competitor in the industry and has participated in the industry consolidation that continues to increase the MES of the industry. Continued consolidation within the industry presents the company with the opportunity to participate in raising the MES thereby increasing barriers to entry. In addition a successful differentiation strategy will continue to develop brand identity which also increases barriers to entry. Finally given the growth in world trade that continues to attract competitors, economies of scale can play an important role to capture higher market share and this also acts to increase the MES and entry barriers.

2.1.2 Threat of Substitutes

Substitute threats are summarised in Table 7 below:

Table 7 : Threat of Substitutes

Threat of Substitutes	
Low	
-	Few direct substitutes
+	Foreign Direct Investment reduces need for exports/imports – increased local manufacturing
-	Foreign Direct Investment moves manufacturing from high cost countries to low cost countries

The above threats are examined in further detail below.

2.1.2.1 (-) OCEAN TRANSPORT IS THE LOWEST COST MODE OF TRANSPORT

There are few direct substitutes for ocean container transport. The only close substitute to ocean container transport is bulk vessel transport. This often has a lower unit cost per sea mile than container transport and is usually appropriate for the movement of large bulk commodities, such as grain, steel and wood pulp. If the container market is depressed and container rates fall, the per tonne price of shipping bulk commodities via container falls and in some cases can fall below the bulk carrier unit price. As a result it is often common to see commodities swing from bulk to container transport and back as the prices fluctuate in the open market.

While there are other modes of transport, the fact that ocean freight offers the lowest unit cost means that heavy and voluminous goods have little option other than to move via sea as they would otherwise not be economically tradable. While air transportation can also service international markets it is prohibitively expensive for large, heavy or low value commodities and would make it uneconomical for them to be sold elsewhere. It should be noted that while ocean shipping moves 40% of goods by value, it moves 99% of goods by volume and weight in world trade. There is thus little threat from direct substitutes to the industry.

2.1.2.2 (+) FOREIGN DIRECT INVESTMENT INCREASES LOCAL MANUFACTURING

Foreign Direct Investment (FDI) has the effect that manufacturing is done locally as a result of FDI being used to set up plants and manufacturing facilities close to the markets that they serve. This results in a reduction of goods being sourced from overseas manufacturing facilities and thereby reduced volumes of container movements. An example here is the Japanese car industry. In the mid and late 1980's complete cars were imported from Japan into North America. Due to the increased threat of U.S. protectionism and fluctuations in the Canadian dollar, Japanese manufacturers established plants that manufactured not only finished cars, but also sourced components from local manufacturers such as Magna International in Canada. This reduced the demand for the large number of container shipments that had in the past flowed into

N.America from Asia and which had contained both new autos as well as spare parts. This type of FDI increases the threat that substitutes pose

2.1.2.3 *(-) FOREIGN DIRECT INVESTMENT SHIFTS*

Conversely, the lower cost of container shipping and the increase in FDI in developing countries has also resulted in the migration of manufacturing from the developed to world to developing countries with lower labour costs. This has resulted in an increase in manufactured goods moving from low cost jurisdictions to the developed markets in Europe and North America. The consequence of this is that the volumes of goods on the east west tradelanes, Asia/Europe and Asia/N.America, has increased dramatically. This form of FDI decreases substitutes due to the fact that once manufacturing is located overseas away from the customer base there is little option other than container shipping to get manufactured goods to market. As noted earlier bulk commodities tend to move by bulk carrier.

In conclusion the threat from substitutes for container shipping is low as it is the lowest cost method for moving manufactured goods over great distances. While bulk shipping may seem like an obvious threat, increasing economies of scale in the container shipping industry allow it to compete head on with bulk shipping in some of the traditional commodity markets. There is thus an opportunity here for P&O Nedlloyd to take advantage of these market shifts to increase cargo lifts. This has in fact been taking place in the trade of agricultural products markets from Australia and Western Canada to India. Bulk shipping costs are currently considerably above those of container shipping and as a result more and more of these types of commodity are moving in containers. Foreign direct investment that outsources manufacturing from high to low cost countries is the prevalent form of FDI currently. This also provides the company with added opportunities for growth.

2.1.3 Supplier Power

Factors affecting the leverage and bargaining power of suppliers, such as ports, inland transporters and freight terminals, to shipping lines are summarised in Table 8 below:

Table 8 : Supplier Power

	Supplier Power
	Moderate to low
-	Low threat of vertical forward integration
-	Diverse number of geographically dispersed suppliers
(+/-)	Labour: (-) in downturn and (+) in upswings
(+/-)	Shipbuilders (-) in downturn and (+) in upswings

The market power of these suppliers is examined in detail below.

2.1.3.1 (-) LOW THREAT OF VERTICAL FORWARD INTEGRATION

Liner shipping has many diverse inputs, from bunker fuel to ports of load and discharge to trucking and rail services to provide intermodal transport from point A to point B not just from port to port. The diversity of inputs and the fragmentation of the container shipping industry make it unattractive for large suppliers of, say fuel oil for example, to integrate forward and take over a shipping line in order to guarantee demand. Given the high fixed costs of the industry and scale barriers to entry the investments would be vast with very little of the overall demand being secured for the supplier.

2.1.3.2 (-) DIVERSE NUMBER OF GEOGRAPHICALLY DISPERSED SUPPLIERS

As mentioned, ocean carriers are serviced by large variety of vendor firms and services. The comparatively small size of the various local suppliers versus the carrier creates market power in favour of the carrier, which thereby diminishes supplier power. Another factor is that while suppliers operate in geographically fixed locations, carriers do not. For example, if costs at the port of Vancouver rise proportionately more than at

the port of Seattle the carrier can choose to call only at the port of Seattle and bypass Vancouver entirely for the discharge of cargo destined for U.S. mid west and Eastern Canada landbridge cargo. This "geographic specificity" also results in reduced supplier power.

In conclusion supplier power is low given the geographically dispersed nature of the industry and the and relatively large size of carriers in comparison to them. It should be noted however that there is a possible exception here – strategic ocean terminals. Given that world container volumes are continuing to expand rapidly there is a potential for a lack of supply of terminal facilities at key ports, for example Singapore or New York. Therefore in the future it is possible that terminal supply may become limited at these congested bottlenecks and therefore supplier power would dramatically increase. There is therefore an opportunity for carriers, particularly those employing differentiation strategies, to secure both supply of service as well as a difficult to copy competitive advantage by becoming more involved with the supply of terminal capacity. P&O Nedlloyd is currently pursuing strategic assets around the world in this regard. Controlling a terminal at a bottleneck also confers market power over direct competitor carriers that also need to use these facilities.

2.1.4 Buyer Power

Factors affecting the leverage and bargaining power of buyers or customers, such as exporters, importers and freight forwarders are summarised in Table 9 below.

Table 9 : Buyer Power

	Buyer Power
	Moderate to High
-	Diverse number of varying sized buyers
-	Low threat of backward vertical integration
+	Low switching costs & Product homogeneity

These are further examined below

2.1.4.1 (-) DIVERSE NUMBER OF VARYING SIZED BUYERS

The fact that there are vast numbers of various diverse shippers of different sizes located all over the world would indicate that buyer power is low. Even the largest customers of container carriers represent a small percentage of its overall book of business on a global level, although this picture can change at a regional and local level. There are, however, a number of customers that are the largest players in their respective industries that do command some market power. Examples would include Bayer AG in the German chemical industry or Weyerhauser in the North American forest products business. These companies act in many respects as benchmarks within their own industries and can command considerable volumes of business. As a result they will consequently tend to have the most competitive arrangements with the carriers due to exercising their market power. Therefore, while the varying size and geographical diversity of customers for shipping services would indicate that buyer power is low, this is not in fact entirely the case for large volume shippers.

2.1.4.2 (+) LOW THREAT OF BACKWARD VERTICAL INTEGRATION

Given the fragmented and highly competitive nature of the container shipping business there is little to gain for shippers to vertically integrate backwards into ocean transport. Again high fixed costs and asset specificity act as a deterrent to vertical backward integration by buyers. The result of this is a reduction of buyer power as the threat of vertical integration cannot be used to pressure the ocean carriers.

2.1.4.3 (+) LOW BUYER SWITCHING COSTS

Container shipping is increasingly viewed as a homogeneous commodity by shippers and this together with the fragmented nature of the industry and large number of competitors results in very low switching costs on the part of customers. In many cases it

is as easy to use one shipping line as it is another. These low switching costs result in increased buyer power and contribute to increased rivalry between carriers.

In conclusion the market power of buyers is relatively high. This is largely due to the fact that switching costs between the services of different carriers are low and that the product is perceived in the marketplace as largely homogeneous, as long as certain service standards are met. Even though customers are fragmented, carrier fragmentation and low switching costs negates the power of carriers to take advantage of a fragmented customer base. Given the differentiation strategy of P&O Nedlloyd opportunities exist for the company to use its differentiated products to both raise switching costs and reduce the perceived product homogeneity in order to reduce buyer power.

2.2 Competitive Analysis

The following competitive analysis looks at the competitive rivalry element within Porter's 5 force model. This outlines the various factors that contribute to rivalry within the container shipping industry. These factors affecting rivalry are summarised in the Table 10 below.

Table 10 : Degree of Rivalry

	Degree of Rivalry
	Intense rivalry
+	Industry fragmentation – large number of competitors
-	Slow industry consolidation
+	Increasing overlapping of routes
-	Existence of non-overlapped / niche routes
+	Consolidation leading to more route overlapping
+	Low product differentiation - homogeneous product
-	Increased volumes of world trade
+	Cyclical demand – fluctuates with the international business cycle
+	Structural overcapacity in the industry
+	Low Switching costs
+	Volatile rivalry due to cultural diversity of rivals and their strategies
+	Antitrust immunity of carriers in Europe and N.America

These factors are examined in further detail below

2.2.1.1 (+) INDUSTRY FRAGMENTATION

As noted before, the concentration in the industry is quite low with the concentration of the top four carriers in terms of market share of loaded TEUs being only 28.7%. This indicates a highly competitive market where no single firm has market power or domination. While entry barriers to the industry are high, exit barriers are also high due to high fixed costs and asset specificity. As a result low profit firms persist in the market which leads to continued market fragmentation.

2.2.1.2 (-) SLOW CONTINUING INDUSTRY CONCENTRATION

There has been continued industry consolidation over the past ten years, the biggest example of which was the take-over by of Maersk Lines of Denmark of Sea-Land Service of the U.S.A. This acquisition led to the creation of Maersk-Sealand in 1998 which, by combining the first and second largest carriers, in terms of loaded containers, created the largest carrier in the industry – more than twice the size of its nearest competitor. The merger of P&O and Nedlloyd group was also a product of this consolidation. This slow consolidation tends to take place only when the market is buoyant and carriers have spare resources to acquire other competitors. This industry consolidation, by reducing the number of competitors, works to reduce industry rivalry at a macro level.

2.2.1.3 (+) INCREASING OVERLAPPING OF ROUTES

At the regional level, route overlapping occurs when a carrier expands its services into routes and tradelanes that it previously did not serve. This serves to increase the competition and therefore the rivalry within that tradelane. When this is replicated in numerous tradelanes, as is the case in the real world, this serves to increase the overall rivalry within the industry. This is encouraged by the continuing drive for economies of

scale and scope within the industry and the constant increase of scale effects. An example would be when Cosco, a Chinese flag carrier, whose core markets were the transpacific and Europe/Asia tradelanes entered the North Atlantic trade in 1996. Consequently while there are currently fewer carriers in total, their increase in scope means that at the regional level of individual tradelanes there are in fact more competitors, thus contributing to increased rivalry. Given that both differentiators as well as cost competitors routes overlap, particularly in the east west tradelanes, the assumptions of cost competitors that container shipping is a commoditised market are severely tested. In fact, as we have seen, returns to low cost operators are generally less that to differentiators.

2.2.1.4 (-) EXISTENCE OF NON-OVERLAPPING / NICHE ROUTES

There continue to be a number of routes and tradelanes that either due to the difficulty of servicing them or due to regulatory constraints remain the domain of niche players. A good example of this is the effect of the Jones Act on Alaska and the dominance of this small trade by local niche operators. This factor has the effect of reducing competition and rivalry, although there are today few niche routes left.

2.2.1.5 (+) CONSOLIDATION LEADING TO MORE ROUTE OVERLAPPING

As mentioned above there is a slow continuing consolidation within the industry. While this consolidation in itself increases rivalry, it does also have the side effect of generally increasing the scope of the remaining carriers. As mentioned, while there are therefore fewer carriers they are competing with each other on more trade lanes. This results in more route overlapping and increased rivalry amongst the carriers.

2.2.1.6 (+) LOW LEVELS OF PRODUCT DIFFERENTIATION

Moving a shipping container from Port A to Port B, the basic product, can be relatively difficult to differentiate. By and large the service need only meet a number of

basic criteria such as getting from A to B in a reasonable timeframe and undamaged to satisfy a large number of exporters. Numerous liner operators increasingly compete on cost savings and price reductions rather than product differentiation. These carriers recognise that all carriers use the same technology (i.e., containers, ships etc) and share many of the same vendors in terms of terminal facilities, railroads and truckers – i.e. outsourced parts of the value chain. The containerisation of cargo has reduced the ability of lines, in some respects, to compete on quality and as a result the actual ocean transportation of containers has become a fairly homogeneous service. This generally leads to the conclusion that decreasing product differentiation is increasing rivalry within the industry. We can state that this is certainly true among the cost competitors and there are low levels of differentiation between these firms. However carriers that offer differentiated products with characteristics such as those outlined in 2.1.1.4 clearly are not competing as directly with the cost competitors as they are with other differentiators. Therefore we can say that there is low product differentiation between differentiators and low product differentiation between cost competitors. As a result we can see that products are homogeneous within the two strategy groups (as outlined on Table 5) but not homogeneous between the two strategy groups. Overall we can therefore say that there is increased rivalry within the each group as a result. Finally, given the clustering of carriers and their strategies outlined in Table 1 in the introduction we can see that rivalry is intense between the two carrier groups (cost based and differentiators) and that there is product homogeneity within the two groups but that rivalry is not as intense between the two product groups.

2.2.1.7 (-) INCREASED VOLUMES OF WORLD TRADE

World seabourne trade continues to grow rapidly as seen from Table 2. This growth was due to a number of factors. Trade liberalisation reduced the barriers to international trade and economic development fuelled an expansion of the amount of goods produced and traded. Also financial deregulation through the General Agreement on Tariffs and Trade (GATT) and the World Trade Organisation (WTO) have further

reduced barriers to trade. These factors combined with the growth of Asia as an industrial centre further increased the volume of international trade. This large increase in the volume of trade reduces rivalry as the amount of cargo to compete over is increasing rapidly. In effect a rising tide of world trade volumes lifts all vessels and there is more business to go around.

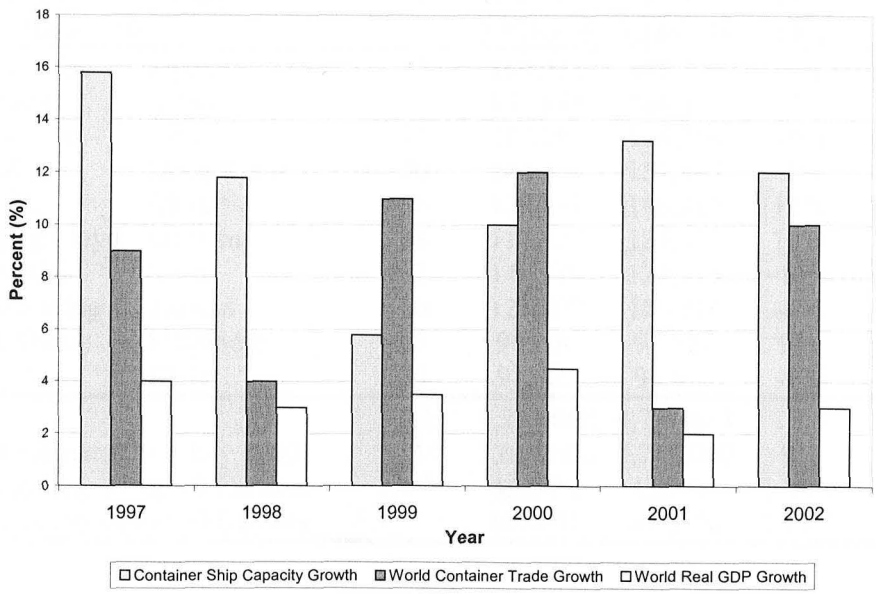
2.2.1.8 (+) CYCLICAL DEMAND

The volume of world trade is directly related to the health of the world economy. When the world economy is in recession volumes of trade falls and vice versa during economic upswings. This results in large swings in profitability for carriers.

2.2.1.9 (+) STRUCTURAL OVERCAPACITY IN THE INDUSTRY

The growth in container slot supply (capacity) in comparison to the growth in world container trade over the period 1997-2002 is illustrated in Figure 3 below:

Figure 3 : % Annual Growth – Container Capacity, World Trade, World GDP[10]



[10] (Drewry Shipping Consultants Ltd, 2003, p.15 and p.33)

As can be seen from the above the industry was taken by surprise by the downturn in container trade growth in 2001. In addition increases in capacity have outstripped increases in container trade growth in four of the six years in question. Given the fact of oversupply this acts as a threat to differentiation due to the fact that competition by both differentiators and cost based operators will increase. Industry capacity figures for selected carriers for 2001-2 are shown in Table 11 below.

Table 11 : Industry Capacity and Growth 2001-2 – Top 20 Carriers[11]

Rank	Operator	Nationality	No. of Ships in 2002	TEU Capacity in 2001	TEU Capacity in 2002	% Growth	% of Market Capacity 2002
1	Maersk	Denmark	312	693,237	773,931	12%	10%
2	MSC	Switzerland	183	296,064	413,814	40%	5%
3	P&O Nedlloyd	UK/Netherlands	160	380,009	406,654	7%	5%
4	Evergreen	Taiwan	143	348,650	403,932	16%	5%
5	Hanjin	Korea	81	299,490	304,409	2%	4%
6	COSCO	China	140	228,060	255,937	12%	3%
7	NOL/APL	Singapore	71	244,848	227,749	-7%	3%
8	CMA-GGM	France	107	176,278	225,436	28%	3%
9	Mitsui OSK	Japan	68	144,014	188,326	31%	2%
10	CP Ships	Canada	92	160,206	187,890	17%	2%
Total 1-10				2,970,856	3,388,078	14%	44%
11	NYK Line	Japan	73	169,921	177,700	5%	2%
12	K-Line	Japan	56	151,945	168,413	11%	2%
13	Zim Line	Israel	77	117,293	164,350	40%	2%
14	OOCL	Hong Kong	50	144,450	157,493	9%	2%
15	CSCL	China	88	128,387	148,212	15%	2%
16	Hapag Lloyd	Germany	38	114,827	135,953	18%	2%
17	Hyundai	Korea	32	140,979	122,713	-13%	2%
18	Yang Ming	Taiwan	40	125,207	120,319	-4%	2%
19	PIL Group	Singapore	83	90,000	97,827	9%	1%
20	CSAV	Chile	39	91,803	90,625	-1%	1%
Total 1-20			1,933	4,245,668	4,771,683	12%	62%
World Fleet estimated at 1 July 2002				7,067,000	7,713,000	9%	100%
% Market Capacity of top 10 Carriers				42.04%	43.93%	1.89%	
% Market Capacity of top 20 Carriers				60.08%	61.87%	1.79%	

[11] (UNCTAD Secretariat compiled on the basis of data from Containerisation International, issues November 2002, p45 and January 2003, p12 and ISL issue August/September 2002, p26)

The reason for container overcapacity is due to the fact that the short term supply of vessels, and thereby slots, is dictated by the time it takes to order, build and deploy vessels, and is extremely inelastic over the short term. This time frame is in the order of one to two years depending on the shipyard and tradelanes on which the vessel is to be deployed.

This 1 to 2 year lead-time to respond to changes in container trade demand tends to result in capacity changes being out of sync with the cargo market. As we can see from Figure 3 , the growth in new capacity was slowing though 1997-1999 while at the same time between 1998-2000 the market growth was increasing. New orders would have been placed with yards in 1999-2000 because of this market growth with vessel delivery and deployment slated for 2000-2002. As we can see the market downturn in 2001 has led to more capacity chasing less cargo again resulting in increased rivalry within the industry. We can also see that from 2001-2002 capacity growth is again slowing while market demand is increasing. If we look at Table 11 we can see that the main culprits for capacity increases are the larger players. The average increase for the top four lines was 19% while for the top 20 carriers as a whole it was 12%. Overcapacity encourages discounting on the part of carriers and fierce price competition. In conclusion, when too much supply is chasing too few customers - rivalry increases.

2.2.1.10 (+) LOW SWITCHING COSTS

Given the low levels of product differentiation between the core services of the carriers, switching costs associated with changing carriers are very low. The situation is similar to switching from using one airline to another. If an exporter has EDI links and large volumes moving with one particular carrier there may indeed be some switching costs, however for the vast majority of shippers there is little disruption caused by switching from one carrier to another. The product has increasingly come to be viewed by shippers as a homogeneous commodity, as mentioned. The result of these low barriers

to switching result in increased competition and rivalry between the carriers in order to retain customers.

2.2.1.11 (+) VOLATILE RIVALRY DUE TO CULTURAL DIVERSITY OF RIVALS

Given its international scope the container shipping industry encompasses a diverse set of rivals with different cultures, histories and philosophies. Container lines tend to reflect their country or region of origin, For example P&O Nedlloyd, a publicly listed Anglo-Dutch container line, operates with a completely different set of cultural and business values than China Shipping Group, a Chinese government operated line. This can lead to instability in the industry and misjudgement of rival's moves. The overall effect of this diversity increases rivalry within the industry.

2.2.1.12 (+) ANTI-TRUST IMMUNITY OF CARRIERS IN EUROPE AND N.AMERICA

Given the strategic nature of the industry and the importance to many countries of free trade, the industry is closely monitored by governments in order to ensure that ocean carriers do not abuse their market power. The flip side to the close monitoring of ocean carriers is that governments in most countries have granted anti-trust immunity to carriers. This is done in order to ensure that carriers themselves are not abused by lawsuits from the shipping community. Suing carriers into bankruptcy would again reduce competition in the industry or at best reduce carrier interest or ability to serve a particular area by increasing the risk of doing business there resulting in lack of, or restricted service to an area. This would interfere with the competitiveness of getting a country's goods to overseas markets and likely raise the cost of doing so, thereby making that country's goods less competitive internationally. Anti-trust immunity therefore has a mild effect of reducing rivalry, without promoting collusion.

In summary the container shipping industry is characterised by intense rivalry and the cyclical nature of the industry contributes strongly to this. In the market upswings

more capacity is ordered but due to short term inelasticity of supply vessels tend to come on-stream just as the market is beginning to fall. Oversupply of capacity in a falling market dramatically increases competition. Consequently the industry goes though alternating cycles of feast followed by famine. During market upswings differentiation is, for those carriers following such a strategy, easier and rivalry between cost based operators on cost decreases. However during market downswings cost based carriers encroach on carriers that are competing on differentiation as there is less cargo to go around and they need to maintain market share to keep costs low. Rivalry amongst differentiators also increases for the same reason. During these downswings cost becomes a dominating driver for the industry in order for carriers to maintain their market share. Thus following a differentiation strategy during these times becomes more difficult. Carriers that can maintain their differentiation strategy during these periods, thereby extracting an albeit smaller premium for their services, while also continuing to reduce cost internally where it doesn't affect the ability to deliver superior service still produce superior results.

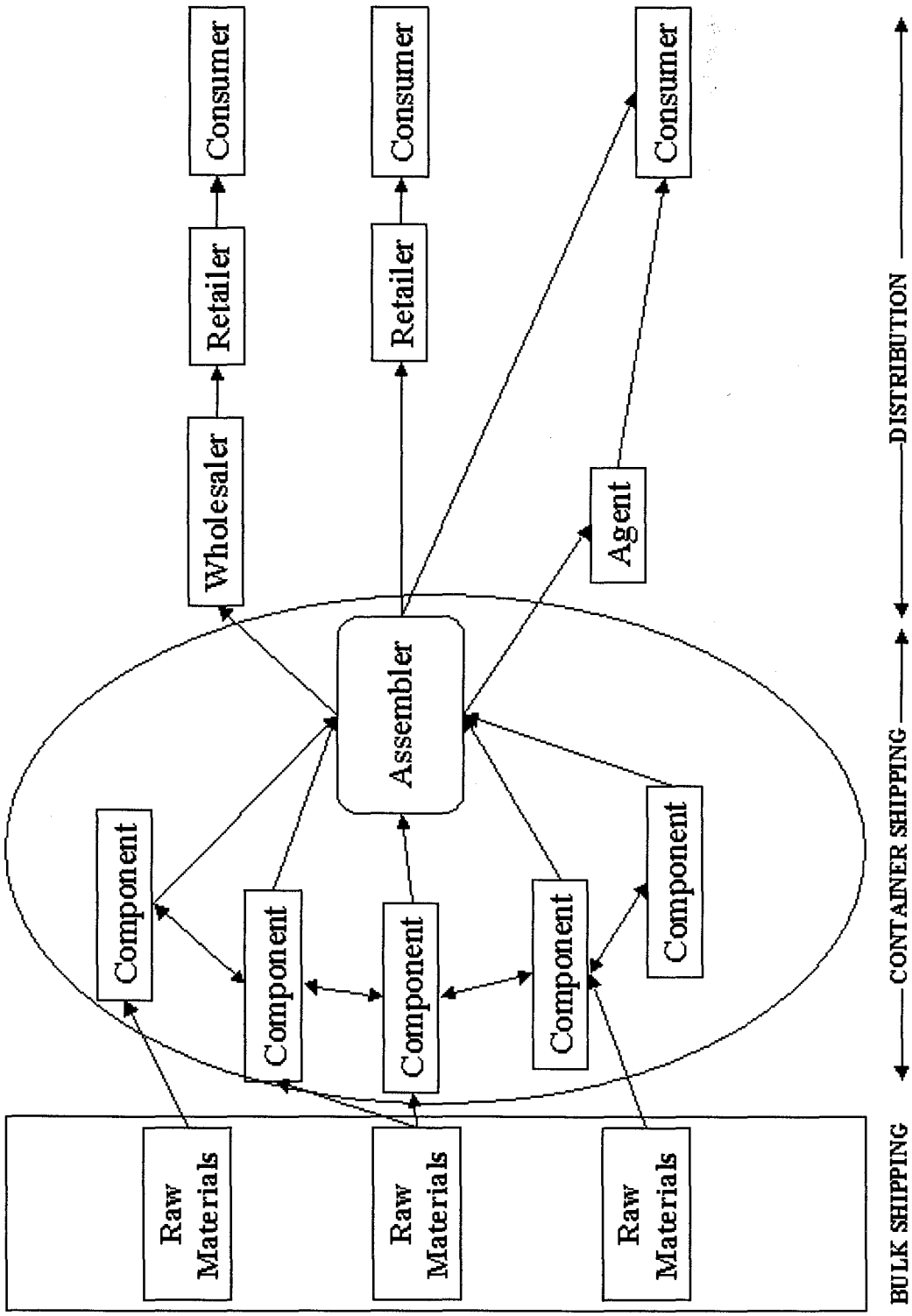
2.3 Container Shipping Value Chain Analysis

The following section will analyse the industry value chain of the container shipping industry in order to identify sources of competitive advantage. Sources of advantage are then translated into a firm level value chain grid in order identify how well or not P&O Nedlloyd performs in these.

2.3.1 Outline and Context of the Industry Level Value Chain

The container shipping industry value chain is shown overleaf in figure 4. Arrows indicate a transportation move. Bulk shipping occupies the left hand portion of the value chain while container shipping occupies the central portion highlighted by the oval marked on the diagram. To the right of liner shipping lies the distribution function.

Figure 4 : Transportation Industry Value Chain



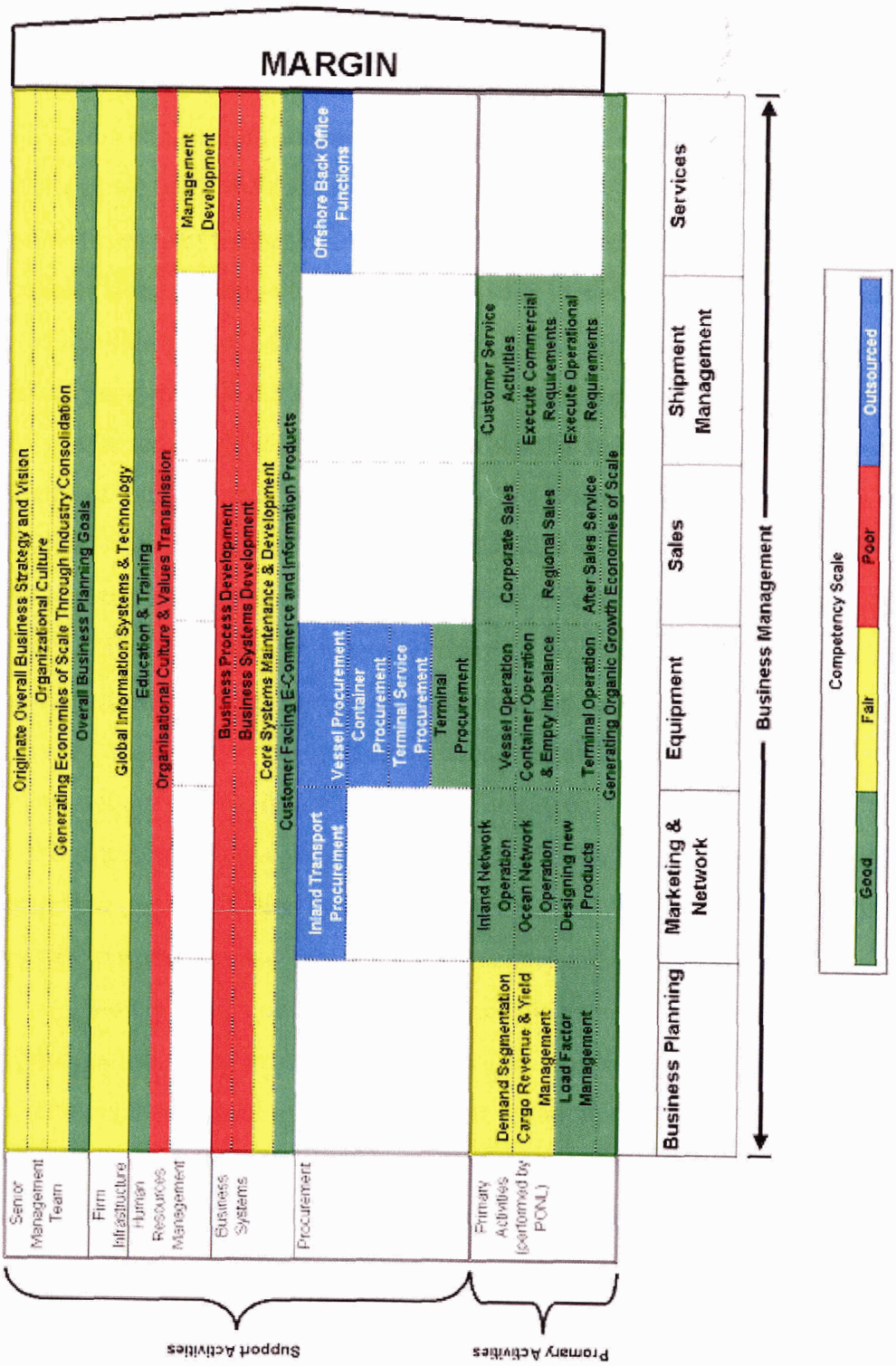
2.3.2 Sources of Competitive Advantage in the Value Chain

We will now look at firm level value chain of P&O Nedlloyd. The value chain is broken up into two main categories, "Primary Activities", and "Support Activities". Primary activities represent the fundamental functions of the company that allow it to generate and service its business and are specific to the individual firm. An example of a primary activity within P&O Nedlloyd would be shipment management. Support activities are the functions within the firm that support the core primary business processes. Examples of support functions are the accounting or finance functions. These support functions are normally quite generic and are not usually specific to the firm, for instance all firms need to have an accounting department.

The P&O Nedlloyd value chain is shown in Figure 5 overleaf and attempts to outline functions that are performed within the company that generate competitive advantage. While this is not a perfect representation, it does at least give us a framework which can be used to delve deeper into the sources of actual and potential competitive advantage that exist within the industry and that are available to the company. This section will deal with each of these sources individually and will attempt to measure how P&O Nedlloyd has, in the past, performed each of them.

A summary of the individual sources of competitive advantage and which areas of the organisation are responsible for them is outlined in Appendix 3

Figure 5 : P&O Nedlloyd Firm Level Value Chain



2.3.2.1 SENIOR MANAGEMENT

Given that the container industry remains quite fragmented, an obvious source of advantage is expansion of a carriers network through *industry consolidation*. This type of expansion is accomplished through mergers and acquisitions of other carriers thereby eliminating competitors and generating economies of scale. Cost advantage can be acquired here using the economies of scale generated to lower the firm's cost base. This assumes high load factors otherwise economies of scale are lost. This role is performed by senior management within the company due to its highly sensitive nature. It should be noted that this kind of advantage requires a lot of capital and is a highly risky strategy. Also of importance is the fact that mergers with or acquisitions of competitors are only likely to be successful if both carriers have similar strategies. For example a differentiator should not merge with a cost competitor as this is likely to be unsuccessfull. P&O Nedlloyd was the result of a merger and has since acquired a number of other carriers, mainly niche differentiators and so has followed the correct strategy in order to avoid strategic conflict. However these niche carriers were highly specialised, much more so that P&O Nedlloyd, and therefore the acquisitions we not without their difficulties. As a differentiator the company must strive to capture all the value of any other differentiators that are acquired in the future, rather than simply eliminate competitors. Overall P&O Nedlloyd performance on this advantage is fair given that the correct competitors were chosen but implementation problems led to a loss of value from the acquired carriers in terms of experienced and knowlegable personnel and processes.

Another source of competitive advantage is that of effective *goal setting* for the entire organisation by senior management. Defining and implementing a clear, consistent and communicable goal to the organisation is vital in order to assist in aligning the organisation to achieve its objectives. Confusion or infighting at the top in terms strategy gets reflected further down the organisation and having the organisation "on the same page", as it were, is done in order to create an environment where differentiation is encouraged in the pursuit competitive advantage. Unfortunately at P&O Nedlloyd this has been difficult in the past due to often competing philosophies at the upper levels of

the company. This was not helped by the fact that both competing philosophies tended to be reflective of the differing goals of the two parent companies, Royal Nedlloyd Group and P&O Group. As of April 2004 the company has a single owner and, given recent developments, is in the process of goal setting. This will enable the company to compete more effectively as a differentiator.

Linked to this, and also falling under the aegis of senior management to create - at least the framework – is the organisation's *values and culture*. Having the company's goals, organisation and culture all in alignment is a key to enhancing the performance of the entire company, again in pursuit of competitive advantage. Creating an environment where the culture and values underpin and support the firm's goals again creates a setting where differentiation and product innovation are encouraged and corporate performance is enhanced. Innovation and differentiation have long been inherent in P&O Nedlloyd in the past and the company scores well, however these often tended to be islands as no overall framework to confer pass benefits to the rest of the organisation existed. Again, given recent developments, this is changing rapidly at the company and a more differentiation orientated approach is ensuing.

2.3.2.2 BUSINESS MANAGEMENT

Business management encompasses all the functions within the company's value chain as outlined in Figure 5 and is how the company organises and manages its day to day business. There are four identified sources of competitive advantage that pertain to the business management group. Firstly, *load factor management* improvement can generate a cost advantage. Having vessels fully utilised at all times is difficult to achieve given the cyclical nature of the market and a time lag exists in disposing of unused capacity. Vessels are either on long term charter or are owned and there are few alternative uses for spare capacity. Maximising vessel load factors assists the company to take full advantage of its economies of scale. If vessels are under utilised, scale effects, as discussed earlier, are lost. Managing utilisation better than competitors therefore will confer a cost advantage on the company. P&O Nedlloyd had a good track record of

managing capacity utilisation, although in saying this there are carriers that perform better. Striving for continuous improvement in this area can help the company take full advantage of its resources.

Revenue and yield management can also confer a competitive cost advantage. Having efficient systems in place to target and manage both revenue and cost flows better than competitors again assists the company to maximise the use of its resources as well as those of its customer base. P&O Nedlloyd has not, until recently, had systems in place that are able to do this with any scope and accuracy within the company. Consequently this cost advantage has not been fully capitalised upon at the company.

Connected to revenue and cost management and maximising the value of the firm's customer base is *demand segmentation*. This relates to capturing consumer surplus under the demand curve by targeting differentiated products at customers that are willing to pay more than the equilibrium market price. This in effect is a core differentiation strategy. The ability to identify these customers and for marketing to design products to capture their business at a premium confers a significant competitive advantage and is likely to result in sustainable high financial performance by the firm. P&O Nedlloyd does, like other competitors, segment into broad commodity and industry categories. However within the company, and industry as a whole, this has not been developed to the same extent as, for example, the airline industry.

The fourth competitive advantage available to business units is managing the organic growth of the business to match or exceed that of the overall market. This again is related to taking advantage of economies of scale and consequent cost reductions that arise. Table 3 illustrated that while P&O Nedlloyd has been successful at growing its business to generate scale effects, it under-performed the total growth for the market. This implies that the company is, in fact loosing market share and not taking full advantage of its economies of scale.

2.3.2.3 MARKETING

The competitive advantage generated by marketing is related to the demand segmentation issue outlined above. As mentioned, designing unique products that are offered to customers willing to pay premiums for service will confer a competitive advantage. The ease with which these products or services can be copied will determine how sustainable the advantage is.

2.3.2.4 NETWORK OPERATION

The network encompasses the network of trades and services operated by a carrier, principally to carry container freight around the world. The network comprises the marine, as well as the inland and terminal networks. Operating the marine network as efficiently and effectively as possible or at least more so than competitors will create a cost advantage. The same is also true of the inland, rail, feeder, barge and truck networks that serve inland points, outports and depots. While P&O Nedlloyd runs an efficient and extensive set of these networks around the globe it remains essential to benchmark the performance of these against competitors, where possible, in order to ensure that they are being run as efficiently as possible. These networks must be optimised in order to deliver maximum value from the resources deployed.

2.3.2.5 EQUIPMENT OPERATION

Equipment operation encompasses the operation of equipment such as vessels, containers and terminals. Ensuring that these resources are being used at maximum efficiency confers a cost advantage over carriers who do not. Given the geographical dispersion of container and vessel hardware as well as inland transport interests this is a highly complex task requiring skilled staff and management. A system and methodology that maximises the efficiency of the network operation can be difficult to copy and is thereby a source of long-term competitive advantage. In the past P&O Nedlloyd performs these functions well on a global scale. Again benchmarking against competitors is helpful

in order to take advantage of new methods that increase efficient use of equipment and hardware resources.

Operationally, another competitive advantage can be gained by dealing most efficiently with the global container imbalance problem. Table 12 below illustrates the container flows in each direction thus showing very clearly the imbalances that exist on several of the major East/West and North/South tradelanes. The trade flows listed account for 62% of total loaded container flows world-wide.

Table 12 : Loaded Container Flows on Major Tradelanes[12]

Type	Tradelane	Eastbound	Westbound	Imbalance	Total
East/West	Transpacific	8,721	3,964	2.2	12,685
	Transatlantic	1,959	3,169	1.6	5,128
	Europe-Far East	3,752	5,869	1.6	9,621
	Europe-Mid East	1,200	325	3.7	1,525
	N.America-Mid East	226	129	1.8	355
	Far East-Mid East	400	2,250	5.6	2,650
North/South	Europe-Latin America	511	865	1.7	1,376
	Europe-South Asia	395	600	1.5	995
	Europe-Africa	900	950	1.1	1,850
	Europe-Australasia	350	225	1.6	575
	N.America-Latin America	1,030	1,415	1.4	2,445
	N.America-South Asia	178	435	2.4	613
	N.America-Africa	134	119	1.1	253
	N.America-Australasia	193	172	1.1	365
	Far East-Latin America	964	1,066	1.1	2,030
	Far East-South Asia	775	1,025	1.3	1,800
	Far East-Africa	750	525	1.4	1,275
	Far East-Australasia	1,600	925	1.7	2,525
	Total				48,066
	Total World Volume				77804

As can be seen from the above table there are many substantial imbalances on various trade-flows between regions. For example over twice as many containers flow into North America from Asia as are exported back and this results in empty containers building up in North America, as is similarly the case in Europe. There is consequently a need to return empty stocks to equipment demand areas. Carriers that are able balance

[12] (Drewry Shipping Consultants, 2003, p31)

their equipment flows better than competitors, utilising matchback and other programs, will invariably gain a significant cost advantage. Minimising empty, revenueless, container flows is also a complex activity and therefore the competitive advantage accrued can be longer term. The International Container Management division within P&O Nedlloyd manages and tracks the flow of empty containers and does so as efficiently as possible. The company performs this function well but it is difficult to benchmark against competitors. In order to maximise efficiencies the trade forecast and demand management units of business management are also necessary to maximise the efficiency of this activity.

2.3.2.6 PROCUREMENT

A source of competitive advantage, albeit a differention factor exists in the procurement or *acquisition of terminals* at strategic locations that may become bottlenecks due to the continued growth of world trade as mentioned in the conclusion to 2.1.3. Having strategic assets such as these also has the added advantage of not only controlling the supply of terminal services to P&O Nedlloyd, but also to its competitors. Given that terminals at these bottlenecks are unique assets this generates a unique and long-term advantage to the company. P&O Nedlloyd currently has a strategy in place to secure supply in the future at a number of locations around the world and is certainly in the vanguard of container lines that are engaged in this.

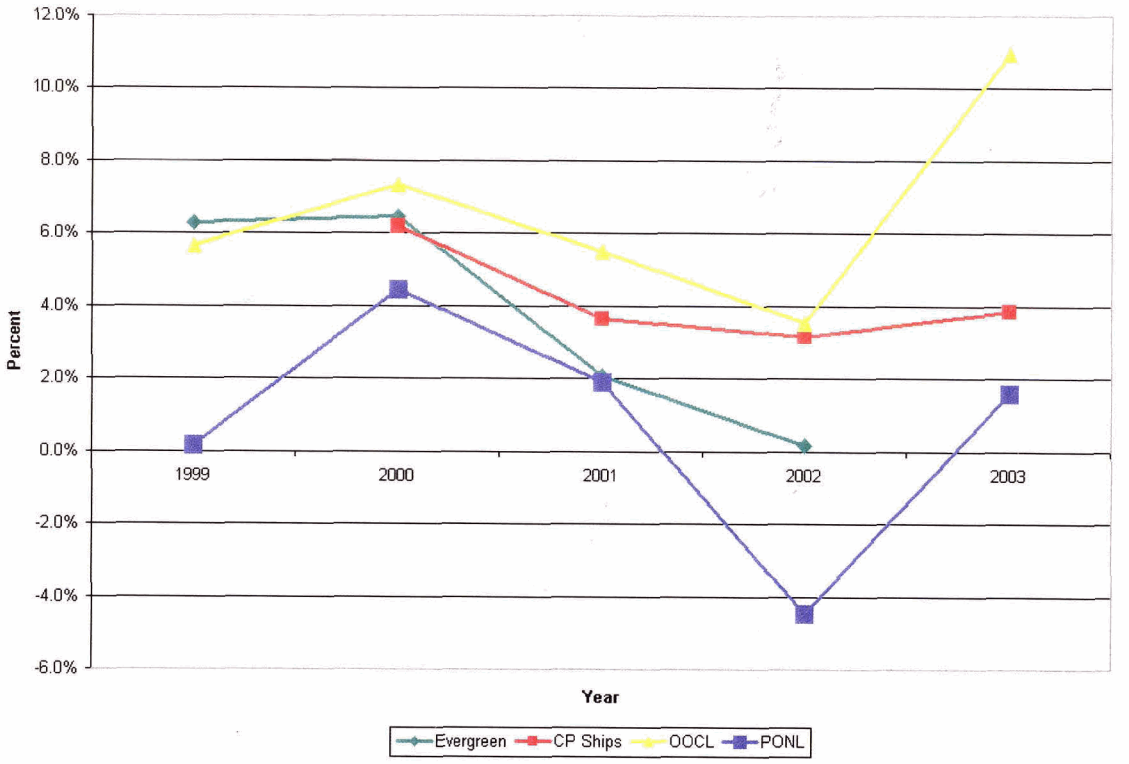
Another cost advantage can be gained by outsourcing and consolidating back office functions to low cost jurisdictions. This involves moving non customer facing functions, such as data input for example, to service centres in say India or China. The cost advantage generated here is temporary as competitors can also offshore these functions in a relatively short period of time. However there can be problems in the initial start-up as error rates tend to be high during the start up phase and front end quality can, as a result be impaired. P&O Nedlloyd was one of the first carriers to outsource this function and currently has two service centres, one at Pune in India and another in Shanghai. Functions such as data input to generate bills of lading is done at these

locations for customers that are located in Europe and North America. To date this strategy has reduced front-line costs and numerous other carriers have followed suit.

There are three other sources of cost based advantage within the industry value chain that rely on superior procurement procedures and the use of economies of scale. These are the procurement of marine and container hardware and the procurement of the inland transport activities to serve inland and hub points. Procuring these more cost effectively than competitors generates cost advantages. Table 11 showed that P&O Nedlloyd is ranked third in terms of vessel capacity and can use its own scale effects to reduce average costs by using procurement methods that maximise buying power. It is difficult to benchmark this activity against competitors but managing the trends in these procurement costs over time can be used to benchmark the success in these activities. It is however possible to use operating margin, the difference between total sales revenue and operational costs expressed as a percentage of total sales, to identify how P&O Nedlloyd is doing in this respect. Figure 6 below illustrates the operating margins of P&O Nedlloyd against three of its competitors.

While the data for all carriers is incomplete, we can clearly see the trend emerging that indicates that P&O Nedlloyd is clearly under-performing its competitors. By referring to the dominant strategies in Table 1 it is interesting to note that OOCL, as a differentiator, is significantly outperforming the non differentiators.

Figure 6 : % Operating Margin of selected Carriers[13]



Once again P&O Nedlloyd can be seen under-performing. This is especially interesting given that OOCL in particular is a smaller carrier than P&O Nedlloyd and is performing much better than its larger rivals. The true importance of economies of scale and cost savings in comparison to differentiation strategies will be explored in greater detail later.

2.3.2.7 SALES

Sales, both corporate and regional, can offer a competitive advantage. While the low cost operators tend to have basic sales functions in order to simply promote their product, the differentiators attempt to use the quality of their sales activities in order to sell service at a premium. Again we see that carriers who offer this differentiate themselves from the low cost operators and there is therefore a competitive advantage

[13] See Appendix 4, p.81

between these two groups of carriers. However in order to outperform other differentiators relationship selling is employed. Therefore we can say that while the sales function confers an advantage over low cost operators, it does not necessarily do so over other differentiators as they are equally capable of cultivating relationships. Consistent excellent overall service to customers who value this type of service is the only way to create a sustainable advantage over other differentiators. In effect doing it better and more often over the long term and minimising errors (problems will always arise) can add value to the company brand and thereby decrease product homogeneity. After sales service and the problem solving ability of both sales and the rest of the organisation also helps to achieve this end. P&O Nedlloyd largely performs its sales function with a dedicated in-house staff and is perceived in the market as having a high quality service and is regarded as being in the premium service bracket. Building on this competency both regionally with local clients and corporately with large global accounts and offering constantly superior service to other differentiators will continue to achieve and enhance the competitive advantage here.

2.3.2.8 SHIPMENT MANAGEMENT

Shipment management encompasses the customer service and operational functions in the company that facilitate the front end delivery of the service to the customer. This area is also where container lines tend to see the most opportunity to differentiate themselves to achieve competitive advantage. As noted in the introduction, cost based operators provide adequate service cheaply to customers that are predominantly cost driven while differentiators provide higher quality service to customers that are service driven. The operational and customer service levels delivered by the organisation differentiate the product from the low cost carriers, but again it is generally only cost driven customers that will use these carriers. High levels of service are expected by service driven customers that utilise the differentiators and therefore sustainable competitive advantage can only be gained by constant innovation and improvement of the product and service before other differentiation competitors.

2.3.2.9 FINANCIAL MANAGEMENT

Financial management can create a competitive cost advantage by using modern financial tools and techniques to maximise the efficiency of capital flows within the company. Container shipping companies both generate and use large quantities of funds and capital in their operations around the world. Maximising the efficiency of the movement of these to and from various jurisdictions around the world as well as taking advantage of short term free cash flow investment opportunities can deliver a cost advantage to the company. In addition to this, having working capital tied up in accounts receivable for long period of time also robs the company of financial efficiency and maintaining tight control of accounts receivable, throughout all its regions, assists to reduce the company's overall cost of capital. P&O Nedlloyd has in the past had some problems with outstanding receivables but continues to make progress in this area. The Treasury department within the company currently makes use of sophisticated financial tools and techniques in order to efficiently move capital around the company.

2.3.2.10 ORGANISATION SYSTEMS & INFORMATION TECHNOLOGY

Management of information systems and technology are also a source of potential competitive advantages. As stated the core business of the container industry is highly complex and information rich, and by extension knowledge rich. The ability of a carrier to offer better operational and service levels is therefore highly dependent on the efficiency of the company's information systems and technology infrastructure. Given the fact that this infrastructure reflects the company's core processes, we can see that process development, evaluation and improvement are crucial as well. Having core processes that are more efficient and suitable to current market conditions than those of competitors can create not only a cost, but also a differentiation advantage by offering better quality information faster and cheaper than competitors. Continuing evolution of system and process development and improvement to assist delivery this information both internally and externally to customers is the natural follow up to this.

P&O Nedlloyd has an older legacy system in place that was inefficient in delivering information and data both to customers as well as internally and the company's performance in the past on this front has been poor. This situation is however in the process of being rectified with state of the art new hardware and software being provided to service the information needs of the organisation internally as well as to the customer facing e-commerce products, which are some of the best in the industry. This represents a dramatic improvement on past capabilities. Modern systems will help to create and maintain both cost and differentiation advantages by keeping the average cost of information down and improving quality while allowing the company more flexibility to improve and evolve the systems and processes to meet evolving customer needs. It should be noted that IS & IT improvements are costly to implement with a standard 3:1 ratio of implementation costs to system costs due to the geographic dispersion of the organisation. In cyclical downturns it is therefore much more difficult to invest in these capabilities due to the reduced resources available.

2.3.2.11 HUMAN RESOURCES

As mentioned before human capital is important in the industry to deal with the fact of complexity. The development of strategies to deliver competitive advantage and a culture of constant improvement to outperform competitors requires a thinking, analysing and dynamic organisation. While the same can be said of companies in many industries shipping has a high *people* component and it is therefore likely that people and their knowledge assets are perhaps one of the company's most valuable assets, albeit one that does not necessarily appear on the balance sheet. While it is true that knowledge requirements are not uniform throughout the company there is no question that it confers benefits in all aspects of the organisation. In effect smart companies generally have higher returns than their less knowledge intensive competitors. The development of the firm's human capital assets can therefore provide a significant competitive advantage by increasing the knowledge assets of the company and therefore its ability to simply perform its full range of activities better than its competitors.

At P&O Nedlloyd there are numerous training programs for employees both to meet industry standards as well as business process improvement. While it is again difficult to benchmark against competitors, the company is perceived to be average in its organisational development. There is also a program of continued investment in its top 200 staff, however this runs the risk of creating an *"us and them"* scenario whereby those just outside the top 200 become unsure how the company categorises them. It is not clear how this number was arrived at and whether or not it is the appropriate number in a growing company. Appropriate and differentiated inclusive investment in all the company's human assets will provide a solid base for competitive advantage in the industry.

As we can see from the above there are numerous sources of competitive advantage that can provide both cost based and differentiated advantages to carriers. We will now use these, combined with the variables outlined in the five forces model to determine the key success factors within the industry.

2.4 Key Success Factors

Measuring success in the container shipping industry is, like all businesses, generally measured over the long term by the financial return to stakeholders. Internally P&O Nedlloyd measures its success as "industry leadership based on financial performance, customer satisfaction and staff engagement". Container lines also have to carry an optimum quantity of freight and consequently must manage both the revenue side as well as the fact that vessels need to be filled in order to keep load factors high in order to take advantage of scale effects. Another potential measure of success is whether a carrier maintains its market share given that the world container trade continues to grow rapidly.

This study will use Return on Investment as a general measure of financial success. Figures for return on sales and return on equity are difficult to measure within the industry given the various corporate structures and reporting standards around the

world. Achieving healthy operating margins will also be considered an indicator of success as will market share, given the growth in the industry.

In looking at successful carriers based on these criteria some patterns and key success factors emerge from the sources of competitive advantage in the value chain and the industry analysis.

2.4.1 Choice of Strategy

From the data in Table 1 we can see a definite picture emerging that the choice of strategy can have a significant bearing on the financial success of a carrier. The differentiators tend to be clustered at the higher end of the ROI scale while the cost based operators are clustered in the lower end. P&O Nedlloyd is an outlier and is under-performing its major competitors.

Using the data from table 1 we can construct a table and graph that shows the upper and lower quartile ROI performance. This is shown in Table 13 and Figure

Table 13 : Upper and Lower Quartile Average ROI 1999-2003[14]

	1999	2000	2001	2002	2003	Average %
Average Top Quartile	8.4	7.2	10.1	10.5	19.7	11.2
Average Bottom Quartile	4.5	6.0	4.0	0.5	7.4	4.5

[14] See Appendix 2, p.76

Figure 7 : Upper and Lower Quartile Average ROI Chart 1999-2003[15]

We can see from the above that the upper quartile of top performing carriers largely managed to hold their own in the 2001-2 downturn and have rebounded strongly in 2003. The bottom quartile, on the other hand, almost exactly tracks the market average, albeit slightly under performing the market average by 2.4 % on average. P&O Nedlloyd also tracked the market but has over this period, with the exception of 2000, always under performed the average - in the case of 2002 disastrously.

[15] See Appendix 2, p.76

As noted earlier the under performing quartile all have cost based strategies while the top performing quartile all have differentiation strategies. We can therefore conclude that the latter strategy is creating considerably higher returns and thereby wealth to stakeholders than the cost based approach. Within this picture P&O Nedlloyd clearly has a problem and largely appears to sit as a residual exception. It is following a differentiation strategy but continues to deliver inferior returns to investors. Clearly strategy matters but does not, in the case of P&O Nedlloyd explain everything.

From the above we can therefore conclude that differention is a key success factor in high performance within this industry and has been adopted by the most consistently successful lines. It appears that servicing customers that are service driven rather than cost driven provides higher returns for the carriers that serve them. In saying this, there will always be customers that are either price or service driven and as a result there will continue to be two distinct carrier groupings that service these two market segments as outlined in table 5. It is simply that greater returns are available in the sector that demands service and operational differentiation than in the cost driven sector.

2.4.2 Cost

We can also deduce that cost is obviously a key success factor in the industry as well. By cost, we are referring here to operational efficiency rather than to cost based strategies. Economies of scale in combination with a firm's procurement strategy can dramatically increase the buying power of the individual carrier. For example the procurement of everything from vessels to trucking services for P&O Nedlloyd is in the order of US$5 billion per year. As we can see, economies of scale go hand in hand with reduced procurement cost and result in cost advantages. Having a lower cost base than competitors, for example other differentiators, can either be used to generate increased margins for the firm or enable it to compete on a lower cost basis with other competitors at the same service levels. Assuming that load factors are maintained at a high level, this will result in increased market share and increasing economies of scale. It should be noted, however, that as the industry currently stands, many of the ocean carriers, both

differentiators and cost based operators, are of similar size - with the possible exception of Maersk Sealand.

As mentioned in the introduction, carriers must pay close attention to their costs internally in order to remain competitive with their peers in each of the two overall strategies. In economic downturns the market becomes very price sensitive, particularly when there is spare capacity in the market i.e. oversupply. Cost based firms compete aggressively with each other to maintain market share and differentiators also compete more aggressively amongst themselves for the same reason. Differentiators also experience more difficulty in charging premiums for their services against their direct competitors services and therefore, out of necessity, must have a similar or better cost bases to their competitors.

Given that the industry continues to be fragmented and that industry consolidation is, albeit at a slow pace, taking place in market upswings, carriers that manage to grow, either organically or though merger & acquisition will enjoy substantial economies of scale and thereby a cost advantage over smaller carriers. An additional advantage of the economies of scale within the industry is that the *minimum efficient scale* within the industry is raised and this has the result of raising the barriers of entry to the industry. Cost based competitive advantages are possible to replicate by competitors and it is likely that long term competitive advantage based on cost will be difficult to maintain by any single carrier. The competitive advantage generated by increased MES in the industry confers the same advantage on all the carriers in the industry and not on a single firm.

Another source of competitive cost advantage that has appeared recently is the outsourcing back-office operations to jurisdictions with lower labour costs such as India and China. Again this will give a cost advantage to carriers that adopt this strategy but as it is also easily copied the advantage is only temporary. Currently many carriers, including P&O Nedlloyd have set up or are in the process of setting up back office service centres in both India and China. Finally the use of complex financial tools and techniques can also confer a cost advantage as outlined earlier.

2.4.3 *Economies of Scale and Scope*

Economies of scale and the cost advantages that they can generate have been mentioned numerous times in this study. It is however not clear that this is in fact a key success factor while the industry continues to remain fragmented. For example the financial performance of OOCL in terms of operating margin (figure 6) does not seem to be affected by its lesser size in comparison to other carriers. On the other hand Maersk Sealand which is substantially larger than its nearest rivals does substantially outperform its competitors throughout the 1999-2003 period in question. It may be that economies of scale only make a real difference to carriers that have obtained a dominant position in the market.

2.4.4 *Product & Service Differentiation*

As mentioned earlier, a differentiation strategy is a key success factor in the industry. Flowing from this we can see that offering differentiated products and charging a premium for them is providing superior returns over the purely cost based strategies of some carriers. Marketing plays a key role here by identifying market opportunities for new products and innovation in order to stay ahead of competitors. This can be aided by feedback from business management in terms of looking at current and potential demand segmentation. Sales, both regional and corporately play a role as well by promoting these unique products to the customer base through their networks and providing feedback to business management and marketing. It should be noted here that these type of products are not likely to be utilised by purely cost driven customers and must therefore be squarely pitched at service driven customers. Here again marketing, business management and sales combine their efforts to ensure that the firm's customer base is adequately defined and segmented. As a result, many carriers, particularly differentiators have put increasing emphasis and committed resources to customer relationship management (CRM) systems. We can confidently state that for differentiators, defining and knowing the customer base is a key success factor. The ability of sales to offer better

solutions to customer problems than competitors is also a competitive advantage and key success factor.

2.4.5 Operational Excellence

Operational excellence also helps to differentiate the carrier's product from those of others. This is defined as the reliability of the network to efficiently and consistently deliver cargo around the world without costly errors and problems. A network that delivers consistently superior quality of service can be difficult to replicate as there are so many contributing variables. Factors such as vessel and container age, third party transport providers, terminal operators etc contribute to better operational service capability. Operational excellence can therefore also be characterised as a key success factor

2.4.6 Securing Supply of Strategic Assets

This topic was mentioned in the sources of competitive advantage although this can apply to any strategic asset, not just terminals. As mentioned container volumes continue to grow and terminal services are likely to become limited in the future at strategic bottlenecks. Owning this resource as a captive supplier will certainly create competitive advantage but this is more likely to be a *future* key success factor.

2.4.7 Information Systems and Technology

Given the complexity and geographic dispersion of the industry, information systems and technology are also key factors in a carrier's success. Inefficient systems have a large negative effect on the level of service and errors that will occur throughout the process of moving cargo overseas thereby diminishing operational excellence. In addition the success of the sales and marketing function to communicate and promote the product and its advantages to the customer is largely a function of information flow. Timely, efficient, cheap and reliable information flow from within the company to the

customer provides a competitive advantage due to the complex nature of the industry and the difficulty that many carriers have with this function. Inefficient systems can seriously hamper the ability of carriers to differentiate. Information systems and technology has the capacity to play a key role in the success of the company by helping it to satisfy the evolving information demands of the customer, in effect staying ahead of the curve. Again this will be key to any differentiation strategy.

2.4.8 Organisational Goals, Values and Culture

As pointed out in the sources of strategic competitive advantage, clear unambiguous goals for the organisation and the alignment of its culture and values with these goals is also a key success factor. Given the large human and knowledge component of the industry this would seem obvious. Constant organisational change is not consistent with high performing companies. Given that a firm's success largely stems from delivering value to its customers, the ability to deliver that value comes from having sound conceptions of what customers want and value. As a result organising and managing people to deliver that value is paramount. Various research suggests that a connection exists between customer satisfaction and employee attitudes[16]. As a result of this it is clear that having organisation values and culture aligned with the firms goals is a key factor for success, especially in a knowledge intensive, service orientated industry such as container shipping.

In conclusion we can see that differentiation in and of itself is in fact a key success factor in this industry in terms of generating superior financial performance. However cost is also important key success factor, although not as an overall strategy. For example differentiators competing with other differentiators must continue to maintain tight control over their cost structures in order to be successful. Cost is therefore not a competing success factor to an overall differentiation strategy. Economies of scale,

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[16] (Schmitt & Allscheid, 1995, p.521-536)

as mentioned, do not in the current fragmented market appear as a key success factor, although further industry consolidation may change this if one or a small number of carriers begins to dominate the market. Again operational excellence and satisfying customers with the right products that they are looking for creates success and appropriate information system and technology resources help to support and deliver this is. Finally the organisational goals of the company are important. The business itself is decentralised and therefore a flexible, responsive and aligned organisation and management will be more capable of dealing with market opportunities and threats than one that is not. The role in success of this factor is likely to grow as the industry becomes more knowledge intensive.

2.5 Strategic Alternatives

Given the key success factors outlined above there are a number of strategic alternatives available to P&O Nedlloyd. These are detailed below.

2.5.1 Increased Differentiation of Existing P&O Nedlloyd Products

While P&O Nedlloyd currently has a differentiation strategy, it is apparent that it is delivering few financial rewards for the company. This is possibly due to the fact that the company is not the most competitive differentiator in the market for these types of service and remains a second or third choice for customers looking for differentiated products. Lastly it is also possible that the company is targeting its differentiated products at the wrong customer. Selling differentiated products in the cost driven end of the market will also result in poor financial performance. This also touches on the issue of demand segmentation covered below. In any case, increased focus on *being* a differentiator to the *appropriate* target market with existing products would help solve this. The strategic alternative here is to increase the differentiation of the current product offering and ensure that it is targeted at the correct customers.

2.5.2 *Development of New Differentiated P&O Nedlloyd Products*

As mentioned above P&O Nedlloyd's poor performance may be due to the fact that the company's products are not sufficiently different from those of its main rivals to warrant a price premium or to secure customers using brand loyalty. In addition to the above, other competitors may also be faster to market with new products, whether they be container shipping services or logistics services that capture other profit pools by expanding along the value chain into distribution. Having differentiated products that, in particular, raise switching costs for customers are also an alternative. The company must have a strategy to generate constant product and service innovation within the company.

2.5.3 *Increase Operational Efficiency*

As illustrated earlier P&O Nedlloyd has surprisingly poor operational margins in comparison to its competitors. Increasing the current operational efficiency is an alternative that must be pursued by the company in order to generate sustained profitability. Particular attention must be paid to the company's operations and procurement. It should however be stated that this should not be done as part of a low cost strategy that will affect the company's ability to differentiate its products and service. Low cost strategies, as opposed to operational efficiency, are not, as explored earlier, successful in the container industry.

2.5.4 *Pursue Economies of Scale*

Pursuing economies of scale aids in increased operational efficiency but again should not hinder the company's ability to differentiate. These scale effects are not necessarily a key to success while the industry remains fragmented but in saying this, as consolidation takes place it is likely to play a larger role in success in the future.

Economies of scale can be achieved through either organic growth or the elimination of rivals through either merger or acquisition. A measure of the success of this strategy will be to ensure that the company's business grows at least by the same

amount as world trade growth, although in order to be a successful leader and capture scale effects it in fact needs to grow at a higher rate that the growth of world trade. Matching overall trade growth implies that the company's market share is in fact standing still.

P&O Nedlloyd was born out of a merger that was as the result of continuing consolidation in the industry and also in order to achieve economies of scale. While consolidation is ongoing, the industry as a whole still remains fragmented and high exit barriers encourage the persistence of under performing carriers. P&O Nedlloyd has itself continued with this consolidation strategy by acquiring other carriers. However not even Maersk Sealand have achieved market dominance. Corporate growth can be achieved in two ways as outlined below

2.5.4.1 ORGANIC GROWTH

This occurs by P&O Nedlloyd organically growing its own business. The company needs to have a successful differentiated product in order to achieve this in an intensely competitive market otherwise this is likely to be difficult and can lead to erosion of profitability, particularly in market downturns, if competing with a more homogeneous product

2.5.4.2 HORIZONTAL MERGER AND ACQUISITION

This strategy captures existing market share by buying or merging with rivals. Because, as mentioned earlier, carriers are seen as strategic assets for their home markets and because of potential government and regulatory intervention there are barriers to this and it will potentially be difficult to get regulatory approval for such mergers and acquisitions. However it is possible that an oligopoly may eventually emerge with carriers forming into regional super carriers. This strategy would also require large amounts of capital and would likely push up fixed costs. However increased market power may offset these.

2.5.5 *Focus on Capturing Consumer Surplus*

Identifying and providing products and services to consumers who are willing to pay premiums is also key to the success of differentiators. While there is some demand segmentation in the industry, as noted earlier, there is still ample opportunity to focus on this competency and turn it into a strategic competitive advantage by developing systems, methodologies and processes to do it better than competitors.

2.5.6 *Acquisition of Strategic Assets*

As mentioned above, this is an area – particularly in conjunction with terminals - that is likely to become a key to success in the future given the fact of increasing world demand. Having a terminal assets strategy and a competency to run them creates an increasingly important competitive advantage and can counter external competitive threat.

2.5.7 *Create and Maintain Competitive Edge in Information Systems*

Information technology and the information rich nature of the industry behoves differentiators to have systems that can deliver quality information to the company and its customers quickly and efficiently. With the advent of e-commerce there is also a considerable amount of the company's information technology that is also customer facing. Creating and maintaining innovative tools to meet the changing information needs of customers and the company both reduces cost internally and can create new product offerings that enhance the customers experience of dealing with the company. Maintaining an edge over competitors in this field is clearly an alternative for the company, although individual advantages are short lived.

2.5.8 *Alignment of Organisational Goals, Values and Culture*

As mentioned before clear goals and organisational alignment with these goals enhance the customers experience and also help to retain employees and thus valuable

knowledge assets within the company. This increasingly important aspect of the company is key to maintaining the ability of the firm to compete as differentiator.

In conclusion, these strategic alternatives if fully implemented would greatly aid the company to become the leading differentiator in the industry.

3 INTERNAL ANALYSIS

The following internal analysis will examine the feasibility of the strategic alternatives proposed in 2.5 above in relation to the internal strengths and weaknesses of P&O Nedlloyd. Each of the alternatives will be discussed in relation to how the company is or is not able to support them. As discussed in 2.5.1 above there are a number of possible factors that may be responsible for the lack of financial success of the current differentiation strategy at P&O Nedlloyd. For reference these are listed again below.

- Products are not differentiated enough
- Products are aimed at the wrong target market
- Competitors are faster to market with new innovations
- Competitors are expanding further along the value chain than P&O Nedlloyd

3.1 Increased Differentiation of Existing P&O Nedlloyd Products

Given the fact that P&O Nedlloyd is already pursuing a differentiation strategy in the container shipping industry we can assume that increasing the focus and depth of its existing strategy as this type of competitor should be fairly straight-forward.

Current management preferences at the company have as their goal the transformation of P&O Nedlloyd into a high performance leader that delivers superior financial performance to stake holders. The company has a long history as a differentiator and it would be problematic for the company to have any other strategy. Therefore this strategic alternative fits very closely with current management preferences. The current management capabilities are driven by strong backgrounds in differentiation both from within P&O Nedlloyd itself as well as from external differentiator companies. Current management is therefore well placed to define and implement strategies that increase the company's ability to differentiate its existing products from those of its competitors.

There should be little need for additional human, operational or financial resources with the possible exception of minimal extra resources needed to implement changes to the existing products and service levels. This alternative is simply an issue of

managing to differentiate the current products more than they currently are with existing resources. Organisational structure and culture should also present few problems in implementing this alternative as they are both already set up to deliver a differentiated product. Organisational systems however may require additional resources and changes to these systems should be driven by changes in the underlying processes that drive the organisation to improve its current differentiation strategy.

In conclusion the company clearly needs to focus on improving the quality of its existing differentiated products in order to take advantage of its current strategy Plans for improvement need to be made and benchmarks to measure improvements and their effectiveness also need to be implemented. The current management preferences, available resources and organisational structure largely support this alternative. The only potential weakness within the company to implement this alternative is the need for systems changes needed to support identified potential improvements to the product and service

3.2 Development of New Differentiated P&O Nedlloyd Products

The current management strategy is dedicated to turning P&O Nedlloyd into a leading *high performance* company. Leadership as a differentiator in the industry can only be achieved using a philosophy of constant improvement and innovation. Therefore in addition to improving the current product offering the company must also be engaged in a constant spiral of improvement and must seek to constantly bring new innovations both in its products and services as well as in its operations to bear.

Bringing new products to market may require additional human and financial resources. In market upturns more resources are available to do this and vice versa in downturns. Consequently having a product innovation planning horizon that is measured on the same scale as the business cycle will help companies to, as it were, prepare for the famine during the feast. Operational innovations on the other hand may not necessarily require extra resources and may be more concentrated around generating innovative ways to organise the company's network in order to gain competitive advantage.

Implementing this alternative may again stretch the systems resources of the organisation especially given the lead times required to develop supporting systems for new products and processes. The systems function within the organisation in effect needs to have a planning horizon similar to that of the overall innovation and process planning horizon in order to be able to take advantage of resources when they are more abundant. However having scalable and modular core systems that reflect the underlying business processes are an effective method to minimise resources needed to support new processes and products. The dispersed nature of the organisational structure already generates a lot of potential feedback for innovation and ideas. However there is a potential lack of two-way central and regional co-ordination in order that good ideas in one area of the organisation are evaluated and implemented, if appropriate, throughout the company. The company already has a culture that is capable of generating ideas and innovation as it already generates differentiated products.

In conclusion, the key focus of implementing this alternative will be a more efficient way of evaluating, implementing and disseminating innovation throughout the organisation and the avoidance of knowledge islands.

3.3 Increase Operational Efficiency (OE)

The company management team is already aligned with the objective of increasing operational efficiency at the firm. Increasing OE is pursued using a strategy of improving core business processes to make them more efficient and pursuing cost savings in order to wring as many dollars as possible from the value chain. However it is possible that this goal can confuse the organisation as it can sometimes be difficult to distinguish between operational efficiency and a cost based strategy – which is something that will be detrimental to the culture and focus of the organisation. As we have seen, cost-based strategies produce inferior returns in the container shipping industry. Thus it can be stated that the company's management preferences are aligned with increasing operational efficiency.

Given that increasing OE is simply about making better, more efficient use of the company's existing resources there are no issues regarding needing extra human, financial or operational resources. Implementing this alternative will likely require increasing integration between the business processes and systems. The company's core systems, which have in the past been cumbersome, are currently being updated with state of the art technology. It is therefore expected that this investment will greatly enhance the company's ability to support increases in operational efficiency. Therefore there are relatively few system obstacles to implementing this alternative. The structure and culture of the organisation are also aligned with this alternative, although again having a process to evaluate and distribute learned improvements in OE in one area of the company to the other would be beneficial.

In conclusion the advent of new system investment will improve the company's ability to implement this strategy alternative, few extra resources are needed and structure and culture are aligned with this goal. However is should be noted that it is important that management clearly define and explain the difference between operational efficiency and having an overall cost based strategy. Simply because the company wants improved cost savings does not meant that it wants to compete with its rivals on cost.

3.4 Pursue Economies of Scale

This strategy alternative derives from continuing industry consolidation, particularly in economic upswings, the need to prevent market domination by rivals and is driven by the need for lower cost bases and increased minimum efficient scale in the industry in order to deter entry. Economies of scale can be achieved, as noted earlier, through organic growth and increased market share or alternatively though merger with or acquisition of rivals which eliminated competitors. Management preferences have in the past been aligned with this goal and management has set a goal to pursue growth that is more rapid than that of overall world trade growth. The company will consider both consolidation and organic strategies to pursue this growth but not simultaneously given

the available resources. The pursuit, particularly of a consolidation strategy, will depend on the business cycle.

P&O Nedlloyd was itself the product of a merger and the company has since continued to acquire smaller lines. Further proof of management alignment to this alternative is obvious by the fact that the companies that were subsequently acquired were, like P&O Nedlloyd, differentiators. Given that industry consolidation is likely to continue and that one of the stated goals is leadership in the container shipping market this management preference is unlikely to change. While organic growth emanates from within the company and management continues to pursue market leadership though this route, it is likely that the company will continue to pursue a strategy that involves the acquisition of rival differentiators. This will only be done when and where it is both possible and appropriate.

Pursuing organic market share growth requires only incremental additional financial, human or operational resources in order to maintain products and service levels. However acquiring rivals generally requires large amounts of capital and there is generally a period of both organisation and operational dislocation. The scale of this dislocation depends on the relative sizes of the two companies. Small companies that are acquired tend to be simply absorbed into the larger one while larger companies tend to be a merger scenario. Risks pursuing a consolidation strategy are high and the resources required to execute them are substantial.

Resources required for organic growth are, as noted, only incremental in order to maintain product and service levels. There are consequently no obstacles to the company pursuing organic growth in order to achieve economies of scale. However due to the large quantity of resources needed to pursue a consolidation strategy the company is only likely able to undertake such a venture during market upswings in the industry when financial resources are more readily available and when investors are more likely to support such a strategy. The structure, systems and culture of the organisation are also aligned with incremental organic growth and also acquisition of smaller competitors.

However in a merger situation with a similar sized rival all of these elements are likely to be substantially changed in evolve into a new organisation.

In conclusion, the organisation is aligned with this strategy alternative if the economies of scale are generated through organic growth or the acquisition of small competitors. However the acquisition of or merger with other competitors of similar size would present a whole new set of problems and challenges to the resources and organisation of the company.

3.5 Focus on Capturing Consumer Surplus

As noted above, identification of the right or preferred customers and serving them with the appropriate differentiated products must be a strategy followed by differentiators in order to be successful. Current management at P&O Nedlloyd is aligned with this alternative and the Trade Management Division is responsible for handling customer market segmentation and the required service characteristics. It should be noted here that Trades Management also comprises many of the functions of a typical marketing department. While responsibility for this function lies in the Trades Management Division it should be noted that there are many other parts of the organisation that also have a high degree of contact with the firm's customer base and consequently it is difficult for one department, i.e. Trades, to have the full range of information regarding the customer at both a central and regional level. There are currently no organisational structures in place that facilitate the capture of total customer information. In addition to this, the systems function within the organisation does not yet support a company wide customer profiling approach although there are numerous local and regional work-arounds and solutions. As a result of these factors, the company's approach to demand segmentation and its knowledge of its customer base is somewhat fragmented.

In terms of resources required to implement this alternative the company will need to consolidate its customer knowledge in a more structured manner. This is can be accomplished by using information technology and designing an organisational structure

that can efficiently capture and disseminate the full range of customer knowledge throughout the company as necessary.

The company likely needs to look at designing a process that enables the above to occur and then designing an implementing a system to support this process. This will require financial, human and operational resources, the scale of which are dependent on the level of knowledge that it is determined by management that the various levels in the organisation need to have about the firm's customers. In conclusion this alternative appears to be necessary to enhance the company's ability to differentiate itself but will also require substantial investment in process, systems and support. It will also require a decision as to what level of detail the company needs to know about its customers, who needs to know it and how it is maintained. A detailed analysis of the benefits of the varying levels of this will be necessary.

3.6 Acquisition of Strategic Assets

The management preference of the company also supports this strategy alternative. The company management has a policy geared towards the assembling of a dynamic and flexible network and has made it clear that it will invest, where appropriate, in elements of its network in order to support its core business. This will be done for reasons of cost, service consistency, strategy or to counter competitive threat. We can therefore see that this is already part of the company's strategy from a management perspective.

The human, operational and financial resources necessary to implement this strategy are already in place due to the fact that many strategic assets are already either leased e.g. containers and vessels, or utilised under contract, e.g. terminals. Acquiring ownership of them will require financial resources although in many cases the operation of them may be leased out. It is the goal of P&O Nedlloyd that these assets will not act as alternate profit centres and will only be used for the reasons mentioned above in order to guarantee competitive advantage. These assets, particularly terminal assets, will largely fall outside the P&O Nedlloyd organisation.

3.7 Create and Maintain Competitive Edge in Information Systems

The current management is aware that customers are placing increasing emphasis on the informational aspects of the company's product. As outlined above this area can provide competitive advantage, particularly with customer facing e-commerce products, however it is generally a temporary one as these products are easily copied. In order to derive competitive advantage from this area the company must have continually evolving improvements and innovations to its internal and external information systems and technology products. These must follow on from innovations in the underlying business process rather than the other way round. In effect the systems should fit the processes rather than vice versa.

The company does not have a core competency in software and application production and these functions are already largely outsourced. However the design and development of functionality must be a core competency of the information systems division within the company. Having the same off the shelf software and applications as rivals confers no competitive advantage as they are not unique to the company and do not help to differentiate from the products of rivals. While management at the company is already implementing just such a strategy it is not yet clear that the concept of constant innovation and improvement to reflect the evolving IT needs of the organisation and business processes is completely in place yet.

Financial resources are necessary to achieve this strategy alternative although as mentioned before a modular, scalable and adaptable core system dramatically reduces the cost of this strategy. As a lot of the actual production of such products is outsourced already few human and operational resources, other than management functions are needed. The structural geographic dispersion of the organisation is not conducive to being able to communicate all local customer needs and requirements to the centre and thus local or regional front-line innovation ideas that can benefit the rest of the organisation may be lost. Increased structural integration between the organisation's front-line, business process owners and the Business Systems Division will be key to

success here. A culture of constant innovation and improvement, sponsored by top management will also provide the grease that lubricates the cogs of this alternative.

3.8 Alignment of Organisational Goals, Values and Culture

The current management strategy towards the above, while sometimes unclear in the past, is currently being provided by senior management clearly and effectively. The goals, values and culture that are being mapped out are consistent with the goal of creating a high performance company that leads the industry in service, financial performance and staff engagement. The structure of the organisation is also becoming less centralised with employees being encouraged to become engaged in *their* company and a culture of inclusion rather than isolation is being built. Creating a culture of staff attitudes and engagement, as noted before, has been well proven as a key element contributing to customer satisfaction. Management, as noted earlier, must make clear to the organisation the distinction between operational efficiency and cost saving and low cost strategy. Low cost strategy comes with an entirely different culture and the differences must be made clear in order to avoid engendering the wrong culture in the organisation.

In conclusion the company appears to already be engaged in implementing this particular strategic alternative.

4 RECOMMENDATIONS

The following broad recommendations are made based on the above internal analysis detailing the feasibility of the suggested strategic alternatives and are detailed individually as follows

4.1 Increased Differentiation of Existing P&O Nedlloyd Products

The company needs to assess the current effectiveness of the its current products and establish, both internally and from customers, what problems exist with them. There will likely be a plethora of suggestions and issues but the results of this study need to be evaluated in order to establish trends or key issues that are affecting the performance of the company's existing products as they stand in the market place. Once these trends and issues have been identified appropriate solutions or options for improvement can be identified and examined. Following on from this, solutions to improve the attractiveness of the existing differentiated products in the target market can then be implemented as appropriate within given resource constraints. Once this is done the existing product improvements must be benchmarked for their effectiveness, thereby providing feedback for further fine tuning and initiating the process of constant tuning and improvement.

4.2 Development of New Differentiated P&O Nedlloyd Products

It is likely that any study of the competitiveness and effectiveness of the company's existing products will uncover areas where opportunities for potential new products exist. The company should consider the constant evaluation of evolving market demands, both niche and otherwise, as a priority. This should be done in both near and medium term horizons as following a differentiation strategy demands nothing less. By way of example, when Intel released the Pentium I chip in the mid 1990's it was already in the initial stages of development of the Pentium III chip, which was not in fact scheduled for production until 1999/2000. This type of philosophy, where constant

anticipation of the evolution of market demand is standard, is a hallmark of high performance companies.

P&O Nedlloyd also needs to determine and forecast the evolving demands of the market that it is competing in. Defining what products the preferred market is currently demanding and how these product demands may evolve will enable the company to determine what new differentiated products it should consider developing. Once potential new product options have been identified they must be evaluated in order to determine underlying trends in demand and, from these, the focus of both the existing products as well as enhanced new products can be developed. Implementation of improvements to existing products within the environment of evolving demand must be undertaken within the limits of available resource constraints. While not all great ideas will be feasible or beneficial, the company must have an ability to constantly generate and evaluate pools of new ideas.

4.3 Increase Operational Efficiency

P&O Nedlloyd, as is the case throughout the industry, continues to strive for operational efficiency, New systems currently being developed will greatly assist in this process and the company continues to move forward in this respect. In saying this, however, there is still room to increase the integration between the processes that increase OE and the systems that support these processes. In particular the company must focus on its ability to disseminate OE improvements that have been generated in one area of the organisation to other areas, if appropriate. This must be done in order to ensure that the entire organisation benefits and the full effect of improvements is captured throughout the entire organisation. In saying this however the company must be careful to ensure that the cost of this dissemination does not exceed the financial benefit of the improvements. In addition to the above management must communicate to the organisation the clear distinction between operational efficiency and a cost based strategy in order to avoid mis-aligned goals and confusion within the organisation.

4.4 Pursue Economies of Scale

In order to take advantage of economies of scale the company must constantly pursue organic growth that exceeds that of world container trade growth. It must additionally keep its loadfactors high in order to ensure that these effects are not lost. As discussed earlier scale is likely to become increasingly important due to continuing industry consolidation. P&O Nedlloyd must also have a consolidation strategy of looking for opportunities to consolidate with other differentiators within the industry that are a strategic fit with the company. However this should be a longer term strategy and secondary to organic growth due to the risks, potential for organisational dislocation and amount of capital needed. A consolidation strategy will largely be dependent on the overall business cycle.

4.5 Focus on Capturing Consumer Surplus

In this area the company must identify all areas within the organisation that contain customer information and knowledge. Once this is achieved processes and channels to both collect, update and disseminate this information to all relevant levels of the company must be established and when accomplished this valuable source of information should be consolidated in some form of central systems resource, possibly some form of customer relationship management system. It may also be beneficial to have a customer research group formed around such a valuable resource. Once this overall resource is in place all levels of the organisation will have the proper tools to be able to make better judgements on customer requirements. Such a resource is in alignment with an overall differentiation strategy and should be given priority.

4.6 Acquisition of Strategic Assets

The company should continue to look at acquiring control of key strategic assets, where appropriate. As mentioned earlier strategic terminals is a good example here. Only

assets that confer competitive advantage should be considered however. Again this strategy alternative must be accommodated within resource limits.

4.7 Create and Maintain Competitive Edge in Information Systems

From the internal analysis we determined that IS & IT are areas within the company where pure differentiation through constant innovation are key success factors. Constant innovation is required due to the temporary nature of competitive advantage conferred. Strengthening the integration between the business processes and owners in order to determine evolving requirements and opportunities is key due to the fact that the processes should reflect the business itself and the systems functions should be reflective of this in order to fully support them. The strategy of minimising the cost of system production through outsourcing should be continued while maintaining managerial control of the requirements must remain in-house.

4.8 Alignment of Organisational Goals, Values and Culture

This is perhaps one of the main areas where the company must concentrate on improvement. A common theme throughout all of the strategy alternatives is the need for a culture of innovation and improvement at all levels within the company. The organisational goal of the company as a leading differentiator must be to create a high performance knowledge driven company. This is a complex and difficult task and is only achieved through constant improvement and evolution rather than revolution. This kind of organisation is difficult to replicate and therefore confers a long term strategic competitive advantage over rivals which leads to higher returns to stakeholders over the long term.

While perhaps idealistic, inspiring employees to seek inclusion in "their" company through share ownership and for everyone to regard themselves as "officers of the Company" is likely to lead to higher commitment and engagement from employees which as we have seen is directly connected to customer satisfaction. This type of

organisation with tightly aligned structure and shared culture supporting clearly defined goals has been key to success of many of the worlds leading companies. It should be noted that the company appears to applying the correct strategy here.

In conclusion Royal P&O Nedlloyd N.V operates in a highly a challenging industry which is highly dynamic and very broad in scope. The major challenge facing the company is that it must internally reflect the dynamics of the market in which it is involved. This means that its processes need to be designed from the outside in rather than from the inside out, in effect from the customer's point of view. The company must fit its business rather than trying to make its business fit the company. Given the plethora of new information technologies available, the onus should be on using these new technologies to improve the rules, procedures, management methods and decision making processes within the company. The removal of bottle necks should also have top priority. One approach to this would be for the company to figure out what the front end of the organisation should look like and then use the technology to organise the back end in such as way as not to disappoint the customer. While errors will always exist, expeditious problem solving can just as easily repair the customer's experience and add value to the brand.

In addition to this the internal flow of information should be highly efficient, in effect it should be rapid, reliable and cheap. This too adds value. P&O Nedlloyd exists to co-ordinate physical processes, which it may or may not own, and deploy intellectual assets to create the value that customers desire. The key questions to be asked when designing a strategy for the backend are:

- What do I need to know to serve my customer ?
- What does my customer want to know ?

Keeping these in mind when designing internal processes and systems that allows the company to reflect its business will also substantially change the company's fortunes. Finally the company needs to concentrate on its organisation structure and culture to create and promote an inclusive culture that measures itself by asking the question "Is

this better than the competition ?". In addition the company must adopt an "innovate or die" attitude to its products and services in order that it can attain and maintain a position as a leading differentiator in the industry.

While there are many challenges facing the organisation the creation of a high performance company with an open, challenging and focused culture will greatly aid the company in finding profitable solutions to its problems in the future.

APPENDIX 1: INTERNATIONAL FREIGHT RATES (US$/TEU)[17]

Period	Asia/US EB	US/Asia WB	Eur/Asia EB	Asia/Eur WB	US/Eur EB	Eur/US WB	Average Freight Rate
1993_04	1731	1272	1033	1666	1342	1234	1,380
1994_01	1758	1246	1057	1651	1408	1298	1,403
1994_02	1718	1255	1089	1622	1395	1305	1,397
1994_03	1727	1315	1142	1596	1374	1333	1,415
1994_04	1726	1302	1181	1581	1382	1377	1,425
1995_01	1698	1323	1217	1544	1403	1434	1,437
1995_02	1826	1356	1320	1532	1412	1388	1,472
1995_03	1870	1571	1309	1493	1386	1374	1,501
1995_04	1865	1473	1257	1455	1442	1349	1,474
1996_01	1746	1339	1219	1369	1480	1384	1,423
1996_02	1628	1428	1218	1346	1496	1344	1,410
1996_03	1630	1508	1167	1337	1600	1339	1,430
1996_04	1548	1384	1137	1281	1621	1341	1,385
1997_01	1473	1280	995	1112	1459	1302	1,270
1997_02	1407	1277	1036	1156	1446	1246	1,261
1997_03	1369	1428	1067	1187	1611	1306	1,328
1997_04	1362	1182	1056	1155	1471	1288	1,252
1998_01	1345	1119	1040	1183	1472	1284	1,241
1998_02	1459	1015	869	1227	1477	1210	1,210
1998_03	1561	999	873	1353	1397	1221	1,234
1998_04	1614	842	807	1465	1308	1188	1,204
1999_01	1619	832	716	1512	1165	1100	1,157
1999_02	2018	871	723	1525	1111	1045	1,216
1999_03	2203	818	730	1568	1040	1054	1,236
1999_04	2188	736	776	1612	1031	1127	1,245
2000_01	2125	751	664	1594	939	1148	1,204
2000_02	1953	852	710	1597	958	1198	1,211
2000_03	2041	939	793	1673	1022	1264	1,289
2000_04	1932	867	797	1618	987	1255	1,243
2001_01	1874	877	826	1566	938	1290	1,229
2001_02	1765	869	760	1468	943	1236	1,174
2001_03	1624	801	688	1296	890	1253	1,092
2001_04	1605	720	663	1154	899	1223	1,044
2002_01	1594	812	601	1073	912	1189	1,030
2002_02	1469	807	646	1105	862	1156	1,008
2002_03	1479	812	694	1208	865	1191	1,042
2002_04	1502	773	721	1287	774	1176	1,039
2003_01	1493	794	706	1397	771	1212	1,062
Period	Asia/US	US/Asia	Eur/Asia	Asia/Eur	US/Eur EB	Eur/US	Average

[17] (Containerisation International Online, Freight Rates, www.ci-online.co.uk)

	EB	WB	EB	WB		WB	Freight Rate
2003_02	1687	832	755	1543	774	1341	1,155
2003_03	1979	839	773	1653	778	1395	1,236
2003_04	1892	810	754	1662	795	1432	1,224
2004_01	1850	802	733	1686	778	1437	1,214

The freight rates shown are all-in, i.e. including CAFs and BAFs etc, plus THCs where gate/gate rates have been agreed, and inland haulage where CY/CY rates have been agreed. All rates are average rates of all commodities carried by major carriers. Rates to and from the US refer to the average for all three coasts.

APPENDIX 2: AVERAGE RETURN ON INVESTMENT[18]

Rank	Carrier	1999	2000	2001	2002	2003	Average %
1	Maersk	10.4	11.2	15.8	14.3	16.5	13.6
2	OOCL	6.3	7.7	5	10.5	32.1	12.3
3	Hapag Lloyd	8.5	2.7	9.6	6.6	10.5	7.6
4	APL	6.1	12.6	6.4	4.6		7.4
5	K-Line	5.2	7	3.6	5.7	12.6	6.8
6	CPS	7.3	9.7	7.2	3.3	5.2	6.5
7	CMA	3.9	11.4	2.3	5.2	9.6	6.5
8	NYK	5	6.3	4.9	5.4	6.7	5.7
9	MOL	5.1	6.9	5.5	4.3		5.5
10	Hanjin	4.9	7.5	4.4	0.2	8.1	5.0
11	HMM	4.7	6.2	4.5	-0.6	6.7	4.3
12	EVER	3.9	4.3	3.1	2		3.3
13	PONL	0.2	9.3	3.9	-12.1	4.3	1.1
	Average %	5.5	7.91	5.86	3.8	11.2	6.9

[18] (Containerisation International Online, Shipping Line Financials, www.ci-online.co.uk)

APPENDIX 3: SUMMARY OF SOURCES OF COMPETITIVE ADVANTAGE

Function	Activity	Sources of Competitive Advantage	Strategy	Past Performance
Senior Management	Economies of scale (1)	Expansion of overall network capabilities through industry consolidation	Cost	Fair
	Organisation Goal Setting	Defining a clear, consistent, easily communicable goal to the organisation	Differentiation	Poor
	Organisation Values/Culture	Aligning the organisation's values and culture with the corporate goal	Differentiation	Poor
Business Management	Load Factor Management	Without high load factor utilisation, economies of scale are lost.	Cost	Fair
	Revenue & Yield Management	Targeting and managing revenue and cost flows better than other carriers generates a cost advantage as it is highly complex	Cost	Poor
	Demand Segmentation	Capturing consumer surplus with differentiated products	Differentiation	Poor
	Economies of scale (2)	Expansion of overall network capabilities through organic growth	Cost	Good
Marketing	Marketing	Identifying and designing unique products that are hard to copy by competitors	Differentiation	Good
Network Operation	Ocean Network	Optimisation of ocean network to deliver maximum value	Cost	Good
	Inland Network	Optimisation of inland network to deliver maximum value	Cost	Good
Equipment Operation	Vessel Operation	Maximise efficiency of vessel operations	Cost	Good
	Container Operation	Maximise efficiency of container operations	Cost	Good

Function	Activity	Sources of Competitive Advantage	Strategy	Past Performance
	Container Imbalances	Minimising the effect of imbalanced tradelanes.	Cost	Good
	Terminal Operation	Maximise efficiency of terminal & hub operations	Cost	Good
Procurement	Vessel Hardware	Use economies of scale to secure cost advantage in vessel procurement	Cost	Good
	Container Equipment	Use economies of scale to secure cost advantage in container procurement	Cost	Good
	Inland Transport	Use economies of scale to secure cost advantage in inland transport procurement	Cost	Fair
	Terminal Procurement	Identify and acquire key strategic terminals and hubs that are crucial to products. Secure supply and consistent cost in high growth markets.	Differentiation & Cost	Good
	Outsource Back office Functions	Outsource back office functions to low cost jurisdictions		
Sales	Corporate	Provide one point of contact and superior flexible service and product promotion for multi regional global clients	Differentiation	Fair
	Regional	Provide superior flexible service and regional promotion for products and provide market feedback.	Differentiation	Fair
	After Sales Service	Provide fastest error handling and problem solution in the market	Differentiation	Fair
Shipment Management	Customer Service Activities	Provide superior flexible customer service to clients - maximise customer ease	Differentiation	Fair

Function	Activity	Sources of Competitive Advantage	Strategy	Past Performance
	Operational Activities	Provide reliable, consistent and improving levels of operational service - minimise errors	Differentiation	Good
Financial Management	Financial Control/Reporting	Maximising efficiency of capital flows within the company	Cost	Good
	Collection Periods	Minimisiation of outstanding accounts receivable	Cost	Fair
Organisation Systems & Information Technology	Process Development	Continual improvement and standardisation of underlying business processes and methods to better serve the customer and reflect the evolution of customer demand	Differentiation & Cost	Poor
	System Development	Maximising the flow and efficiency of information both internally and to the customer ad meeting evolving customer demand for information	Differentiation & Cost	Poor
	Customer facing IT Systems	Delivering better information to the customer, more quickly and keeping up with customer's information needs generates differentiation	Differentiation	Good
	IT Systems	Maximising efficiency of current systems	Cost	Poor
Human Resources	Human Capital Development	Investing in and development of human knowledge capital within the company	Differentiation	Poor

APPENDIX 4: OPERATING MARGIN[19]

	Carrier	1999	2000	2001	2002	2003
Operating Margin	Evergreen	6.3%	6.4%	2.1%	0.2%	
	CP Ships		6.2%	3.6%	3.2%	3.9%
	OOCL	5.7%	7.3%	5.5%	3.5%	11.0%
	PONL	0.2%	4.5%	1.9%	-4.5%	1.6%

[19] (Annual Reports: P&O Nedlloyd, 1999-2003; Evergreen Marine Corp.; 1999-2002; Orient Overseas Container Line, 1999-2003; CP Ships, 2000-2003)

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