Bachelor thesis IBEB

Erasmus School of Economics

Container Shipping: From Crisis to Recovery

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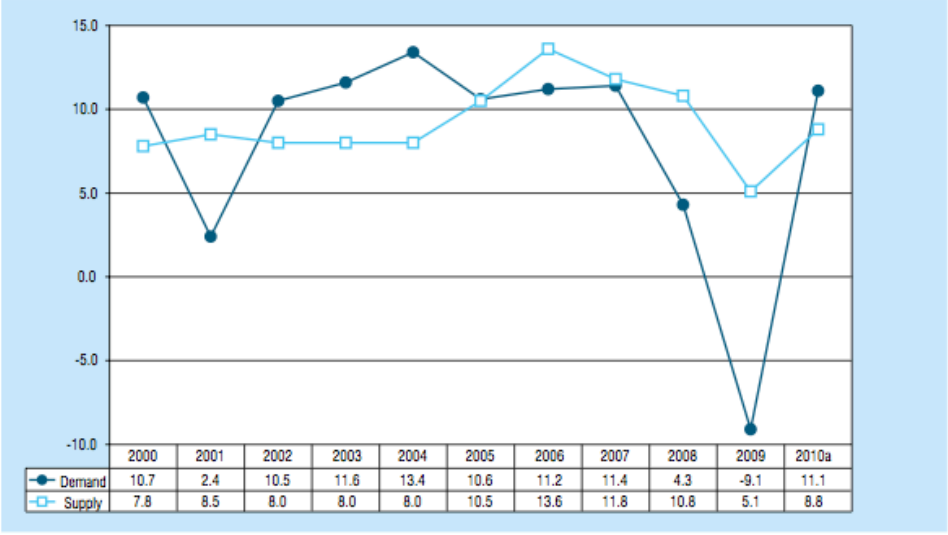
1.Introduction

The world economy has faced a severe global crisis that has spilled from the financial sector to the real economy, jeopardizing international trade, manufactures and every kind of service. Due to globalization, and the interconnection of open economies, the financial crisis turned into a global economic crisis especially when, in 2008, the strong downward fluctuation in the stock market began to increase, materialized in turn by the fall of major financial and insurance banks. In the past, trade volumes grew over three times faster than the worlds' GDP. The transportation industry was one of the worst affected due to it's great elasticity. For instance, in 2009, international trade dropped by 15% when the world's GDP declined by 2.2% (J.Hoffmann, 2010). Transportation being a derived demand it is, consequently, at the root in the fall of transportation volumes. Even though maritime shipping is expected to increase again in the near future, trade volumes will remain below pre-crisis levels for an undetermined period of time. As the Journal of Commerce stated in 2009, "despite the headlines and political bluster surrounding the World Trade Organization, and other trade pacts, the real driving force behind globalization is something far less visible: the declining costs of international transport". Within the maritime industry, bulk and container shipping are two different activities. Since bulk shipping companies operate on spot markets, they have been less affected by the global economic crisis (even though it's recovery is expected to take more time than container shipping). Therefore, it is quite essential to focus on the container shipping industry. As we can see in the table below, in the pre-crisis period, demand in container shipping was greater than its supply, meaning that container carriers were creating large economies of scale. (Review of Maritime Economics 10)

Figure 3.3. Growth of demand and supply in container shipping, 2000–2010[a] *(annual growth rates)*



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010a
Demand	10.7	2.4	10.5	11.6	13.4	10.6	11.2	11.4	4.3	-9.1	11.1
Supply	7.8	8.5	8.0	8.0	8.0	10.5	13.6	11.8	10.8	5.1	8.8

Source: Compiled by the UNCTAD secretariat, on the basis of data from *Clarkson Container Intelligence Monthly*, various issues.

Since 2006, overcapacity has started to increase. This is mainly due to the fact that the demand for consumer goods has started to decrease and has literally plummeted since 2009 as a consequence of the banking crisis. The shipping crisis was triggered by the decrease in the consumption of consumer and manufactured goods. For instance, car manufacturers were forced to stop producing in order to decrease their inventory which, in turn, made the transportation of car parts unneeded. The aim of this paper is to analyze the short term as well as the long term decisions that have been implemented by container shipping companies in order to first, minimize the costs, and second, to encounter the downturn of the financial crisis and reach past levels of earnings. Moreover, some trade routes were more affected than others (Lloyd's List, May 2009). For instance, the intra Asia trade was less affected than Asia - Europe trade. The evolution of the quarterly slot capacity between Asia and Europe, dropped by around 20% in 2009 in both eastbound and westbound trade (Appendix 1). However the intra Asia trade was less affected and has now regained the pre crisis level of trade. It is nevertheless interesting to see that the Great crisis has had both negative and positive effects in the sense that, despite the great revenue losses, the recession gave container carriers the opportunity to review their management decisions and operation methods to recover and attain high levels of earnings. Since this is the main topic, this paper will centre on the following research question:

How did container carriers survive the downturn of the financial crisis, and what are their strategies to bounce back to reach pre crisis levels?

In order to have a greater understanding of the topic, it is of major importance to give a definition to the key words. As previously mentioned, one of the main characteristics of the demand for transportation is it's derived nature. Demand for goods or services is not for it's own sake, but for what it produces. Derived demand is an economic term where demand for one good or service occurs as a result of the demand for another product. This can be used as an explanatory factor concerning the poor performances of container shipping. Since the demand for certain products declined, it's transportation was no more needed putting at stake container vessels.

Even though the impact of the financial crisis on the trading industry was very much highlighted by the mass media, the 2007 financial crisis triggered the conduct of multiple surveys in order to investigate and understand the impact of this crisis on the transportation industry in general. Therefore, in-depth investigation of container shipping industry has not yet been carried out,

explaining the gap in the academic literature so far. The impact of the financial crisis on liner shipping was the centre of interest of I. Samaras from the logistics department of Alexander Technological Education institute of Thessaloniki. To further build up the research of this paper, news articles from the Lloyds List of Containerization International were used.
The methodology used in order to carry out the research on this topic comprises different techniques such as the analysis of the situation in the early stages of the financial crisis and to add to each of the specific actions implemented by liner shipping companies the measures needed to encounter the down side effects of the crisis. Both academic and non-academic (journals) readings have contributed to the completion of this bachelor thesis.

In order to answer the stated research question, the paper will follow a clear path:

First, the research paper will commence with an explanation of how the financial crisis reached the transportation industry and its impact will be quantified in terms of capacity utilization.

Chapter two will give an incentive on the short term strategies carried out by container shipping companies in the early times of the financial crisis. The most important of which being the cancellation / postponement of orders, slow steaming, the merger of loops / services, or slot exchange agreements.

The long term strategies implemented by liner companies will be studied in chapter three. These measures are no longer part of the "cutting costs" strategy of container carriers, but are followed to reach past levels of earnings of pre-crisis. The role of the government gained in importance after the financial *"fiasco"* triggered by the financial crisis of 2008. With the help of government regulation, open economies mainly focused on exports through Export-Import banks (also known as EXIM banks), to encourage the country to export and fill to a maximum container ships and create economies of scale.
Due to the significant changes operated by liner shipping companies, one of the worst affected trade routes (Asia - Europe) is currently bouncing back.

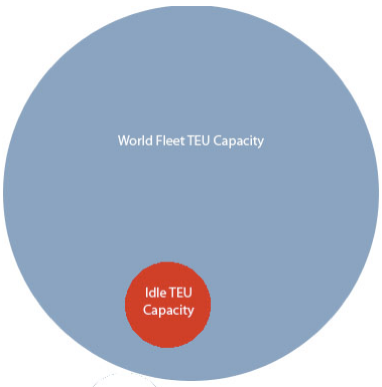
In order to reach a professional level of understanding and to show a real life example of a company that went through the financial crisis, the case of the Japan based Mitsui O.S.K Lines (MOL) will be studied. As the majority of container carriers, MOL managed to get through the great crisis, but

at what costs? What were the results of the MOL strategies? And what is the outlook for the future? Answers to those questions will be provided in chapter four.
The last chapter will give the concluding remarks of this present paper and final thoughts will be expressed.

Chapter 2: Liner companies cutting costs strategies

The world experienced an unprecedented economic and financial recession triggered by the fall of major financial institutions. The current crisis takes its roots in the excessive global savings flowing from the poorly regulated banking system to the American housing market. The deep financial crisis had far reaching consequences, jeopardizing all industries such as the maritime shipping industry. In 2009, international seaborne trade volumes decreased by 4.5%, while no segments of the shipping industry was spared, containerized transportation encountered the most severe contractions. This sharp decrease reflected the weak demand for consumer goods as well as for manufactured goods. Analysts expect a faster recovery from the container shipping industry rather than the bulk industry (Review of Maritime Transport 2010). This is partly explained by the high volatility of the freight rates and the multiple possible measures implemented by container carriers to face the low demand for transportation. Moreover, every trade route has been affected by the spreading effects of the economic crisis, and container lines are struggling to increase Asia-Europe rates. On the contrary the intra-Asia trades recovered more quickly as exportation and importation between Asian countries remain almost unchanged at high levels. The consequences of the financial crisis on container transportation are several. The low levels of investments from individuals and industries put at stake the demand for transportation. As stated previously in the introduction, one of the major characteristics of the transport industry is its derived nature. Figure 1 provides the container shipping crisis visualized. On February the 4th 2009, the world fleet was composed of some 6,048 vessels and a number of idle carriers was of 255, representing only 4.22% of the total capacity. The shipping industry is known to be particularly capital intensive making it financially vulnerable and risky. Revenues generated by container carriers can, therefore, be unstable (Lin et al 2010). Before

Figure 1:



Source: Lloyd's list, October 2010

the financial bubble exploded, orders for new vessels skyrocketed, especially since the entry of China in the World Trade Organization in 2001, creating in turn, a very large capacity of transportation. However, the economic downturn amplified the excess capacity of transportation issue for liner shipping companies as well as for container terminals. The issues related to the excess capacity of transportation are several and can be observed from an economic and operational perspective. First, from the economic aspect, excess capacity can have significant negative impact on liner shipping companies as well as container terminals. The strategies implemented by liner shipping companies prior to the financial crisis episodes were aimed at acquiring larger vessels in order to reach important economies of scale. The benefits generated by the mentioned were considerable. Economies of scale can be defined as the decrease in unit costs by TEU when increasing the number of containers transported. Therefore, it is not rare to see large shipping companies acquiring 15,000 TEUs container vessels.

Excess capacity implies a strong deficit from the short run marginal costs pricing (Haralambides, 2002) when marginal costs appear to be below the average total costs. This excess capacity (known to be a short run phenomenon) is changing towards overcapacity (long run phenomenon) therefore becoming an even greater issue for every maritime related body.

Second, the economic slowdown has changed the way liner shipping companies and container terminals are operating. For instance, investing in larger and larger container vessels or investing in large scaled terminals can be seen as bets upon expected future demand for transportation. Contrary to container terminals, this may not be the case for shipping companies, as their flexibility gives them the time to implement short and long term strategies to cut costs in case of financial slowdown. Indeed, terminals can decide to invest in port extensions in order to increase its productivity by making available space to enhance container handling and to avoid port congestion. As the demand for transportation has plummeted, large container vessels and port extensions are becoming the biggest liability for liner shipping companies as well as for container terminals. Overcapacity has brought about the non utilization of port infrastructures and the potential resources port authorities could initially provide. As for shipping companies, the strategies implemented will be studied throughout this thesis.

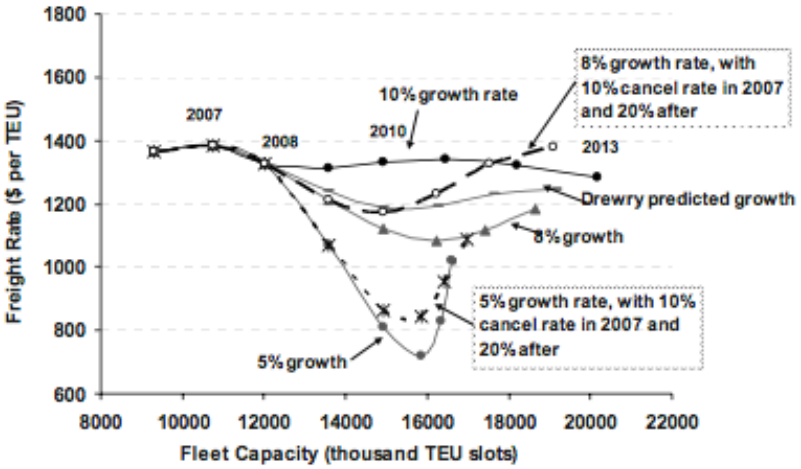
Also, long term charter-agreements had been reached as a consequence of the very high volatility of the Euro and the US dollar exchange rates. The main consequence of which is the decrease in freight rates in the containerized industry. For instance, a decrease of 60% has be registered on the Asia-Europe trade between 2007 and 2009 (Alphaliner, 2010). It is needless to say the Asia-Europe trade route was not the only one affected. The transpacific routes such as US-Asia Westbound, the

Asia-US Eastbound as well as Europe-US Westbound and US-Europe Eastbound have been dramatically affected by the reduction in freight rates. These rates are expected to increase again in 2013. The great crisis compelled decision makers to come up with new methods to counter balance the financial downturn. Therefore, new management strategies have emerged. There are short term strategies implemented by liner carriers aimed at reducing costs to a maximum and long term strategies to reach past levels of earnings.

Cancellation / postponement of orders and scrapping:

The main issue that arose for shipping companies was the unfortunate timing of their order for new and bigger container vessels, exactly when the financial crisis began. This resulted in the overcapacity of transportation. Shipping is known for being very capital intensive, meaning that liner carriers incur very important fixed costs, therefore, not only the shipping industry refrained from ordering new ships, but they also had the strong motivation to cancel existing orders. Therefore, one of the first measures implemented by container carriers was the stopping of their new orders. For instance, in 2008, around 2010 new container vessels were ordered and only 2 in 2009. According to analysts at Lloyd's list, orders for new container carriers dropped by over 90% in 2009 as compared to the same period a year sooner. The cancellation of new orders yields the decrease in the number of deliveries and is supposed to stop the long lasting decrease of freight rates. However the cancellations have not stopped showing deep changes within the shipping industry as they tend to be more prudent in times of economic crisis. The graph below shows the forecast of the container shipping market form 2007 to 2013 by correlating the freight rates and the fleet capacity. First, as known, the graph reveals the large overcapacity of the worlds' fleet. Also, as provided by the model, the freight rates are expected to decrease until 2010 and grow again from 2013 on. Another interesting figure given is the forecast provided by Drewry showing the future growth rate of the container transportation demand. The freight rates are expected to follow the same decreasing trend until 2011 and to increase again in 2013. As previously stated, the cancellation of orders causes the increase of the freight rates and triggers the order of new and bigger container vessels. As shown here, for an expected growth rate of 8%, if 10% of the new orders in 2007 were to be cancelled and 20% after that, the freight rate would start increasing as early as 2010. However, for an expected 5% growth rate, with the same level of cancellation, the freight rate would take more time to recover, by starting to increase only in 2011.

Figure 1:



Source: Liner Shipping Network, Drewry's Container Market Outlook 1999

However, the cancellation of new orders puts at stake shipyards. Therefore, another solution for container carriers to minimize their losses was to postpone their orders. This is what most container companies did in the early stages of the financial crisis. In 2009, liner carriers postponed around 36% of the scheduled deliveries. Table 1, from the Review of Maritime Transport 2009, shows a deduction of 440 container vessels from the current order books.
The cancellation and the postponement of orders were the first investment decision to decrease the excess supply for shipping companies.

The accelerating scrapping process has helped to manage the imbalance between the low demand for transportation and its supply. Ship scrapping, also known as ship demolition, involves the breaking up of ships for scrap recycling with the hulls being dismantled in ship graveyards. It is therefore not surprising that "the vessel industry experienced its largest growth period in history" (Lloyds List, August 2009). The scrapping industry is, as a consequence, one of the very few that benefited form the financial crisis. Triggered by the poor financial viability of container carriers and their low financial liquidity assets, banks have become very reluctant to support projects and have changed the terms and conditions of the contracts, with the container carriers, that were aimed at financing the orders of new vessels. Therefore, the oldest vessels were the first ones to be scrapped. Over a thousand ships were dismantled between 2009 and 2010 which represents around 350,000 TEUs (Loyd's List, 2004). This measure, however popular, accounted for only 1,2% of the world's fleet and congested all the scrapyards (Hoffmann 2009).

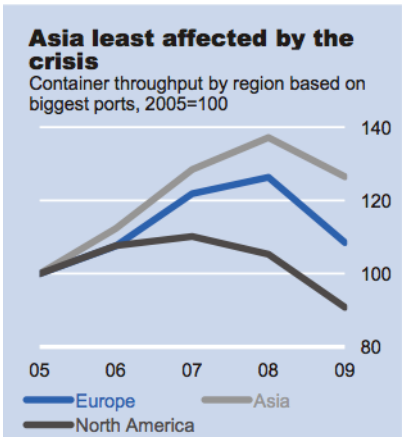
China as well as India saw a record in tonnage imported via the scrapping process. Nevertheless, as prices for scrap metal were low, many container carriers decided to lay-off their vessels instead of dismantling them and wait for better times. In addition to that, the demolition of existing vessels was not profitable enough to compensate the low demand for capacity utilization. For instance, breakers paid over 1 billion dollars for wet tonnage in 2010 which represents not even 2% of the total losses during the crisis (The Economist, september 2009).

1.2 - Vessel cost saving strategies:

Cancellation of loops:

Container shipping routes can be divided into three categories. First, the intra regional trades operating in short hauls (mainly for transshipping). Second, the East-West trades, which goes around the globe following the Northern hemisphere linking major consumer markets such as the US, Europe and Asia (Soo Yeob 2009). Third, the North South trades, connecting developing countries with northern countries. As shown in figure 2, all trade routes were affected by the crisis, especially the Asia-Europe trade. It can also be observed that the least affected was the Intra-Asia trades. This can be explained by the strong linkages that were created between the various Asian countries. Therefore, Intraregional trade growth has risen and shown the potential for Asian countries to face economic and financial crisis coming from overseas. Exports have expanded by reaching new markets with small shipments, making in turn the Intra-Asian trade very flexible and particularly efficient (Brooks, 2009). However, not every trade loop has benefited from the same structural advantages, and trade imbalances have increased on some trade loops, as it was, and still is, the case for the Asia-Europe trade.

Figure 2:



source: Hafen hamburg, 2011

In maritime economics, a loop can be defined as a weekly or by-weekly service involving a given number of container vessels on a certain trade route. For example, for an Asia-Europe trade, 10 ships are needed to make a regular connection. It is known that all container carriers have many vessels on many different trade lanes. For instance, the Marseille-based company CMA CGM has got 10 container vessels on the Asia-Europe trade and in order to minimize the overcapacity, two

out of the ten services have been stopped (Containerization International, May 2009). Those vessels normally in service cascaded to other trade lanes, returned to the shipowner or were simply laid-off. Considering the low levels of profitability arising from the scrapping industry, the most commonly used method was to put the vessels on other trades routes. Also, changes in the type of loop changed as a consequence of the low demand for transportation. Round the world trips (RTW) used to be the most commonly used in the pre-crisis period. However, after the strong downturn, post panamax and super post panamax have turned into great liabilities for the shipowner. Due to the high costs involved in round the world trips, container carriers decided to reduce their frequency. It is needless to say that the routes that guaranteed high volumes have been preferred to less profitable trades. In addition, the most efficient ports were called to instead of others, in order to make the trade as seamless as possible and reach great levels of efficiency.

Merger of services:

In the early stages of the crisis, costly operations spurred by long sailing distances have been revisited in their structure and the way they have been operating. For instance, container carriers operating two separate services, one being between Asia and Europe and the other one between Asia and West Africa, can decide to merge them by integrating the Asia-African loop into the Asia-Europe trade route. The aim of such a measure is to reach new opportunities for container carriers. Consequently, new services have emerged between Europe and West Africa through the creation of connecting-hub-ports (such as the port of Piraeus or Tanger) at the crossroad of the East-West and the North-South route. This kind of measure has been implemented all over the world.
For example, due to low volumes on the transpacific trade lane during the financial crisis, China Shipping Container Lines and Evergreen have merged their two services into one single loop, to make trading more efficient and sustainable in the short and long term (China Marine, 2009). This loop will be operated by six middle sized container vessels (5500 TEUs). The effects will be the reduction in overcapacity by around 3,200 TEUs.
Furthermore, together with another important measure implemented by carriers (slow steaming), changes in routing were carried out in the early stages of the financial crisis. The Suez canal is very practical for liner carriers for round the world trips, since it allows a consequent gain of time, making the trade of goods more efficient. For instance, by going through the Suez canal liner companies save up to 42% of time, going from Ras Tanura (Saoudi Arabia) to Rotterdam (Suez Canal Authority, 2010). However, going through the Suez canal entails high toll fees which can

amount to several thousands of dollars depending on the size of the vessel per passage (up to 600,000$ for one 15,000 TEU). Therefore, despite the week extra transit time, going around the Cape was preferred for the Asia-Europe trade.
Another way to bridge the gap between overcapacity and the demand for transportation are void voyages. Usually implemented during the summer holidays, when the demand for consumer goods is rather low, void voyages can be defined as a rotation or round trip that is cancelled in order to adapt the capacity of transportation to the demand under short notice. Void voyages contribute to the stoping of the freight rates erosion by making space scarce.

Slow steaming:

One of the most popular measures carried out by liner companies as a means to reduce effective supply and operational costs, bring down the fuel consumption and maximize their fleet productivity was the implementation of vessel slow steaming. Slow steaming can be defined as the reduction of the speed of container vessels. There is a double aim behind such a measure. By slowing down container vessels, it is necessary to employ a larger number of vessels in order to maintain the same level of frequency. As a consequence, this prevents liner companies from laying-off their vessels and it also brings down fuel consumption. The average speed of a 6,000 TEU is normally 25 knots (nautical miles/ hour). Directly after the crisis, when oil prices skyrocketed (up to 700$ the ton of fuel in 2008), even though the Asia-Europe trade would take up to 13 days longer, shipowners strove to bring down the speed of their fleet by 10-11 knots to reach 15-16 knots. Not much emphasis was put on the delays caused by slow steaming, since the aim was to reduce to a maximum the inventories and "shipowners could cope with up to 15% overcapacity" (Lloyd's List, September 2010). Reducing the speed of container vessels also helped to restore the freight rates as capacity utilized was maximized. Slow steaming was the preferred way to offset the impact of over supply of capacity triggered by the low productivity expressed in terms of ton-miles per deadweight ton (DWT) of the fleet in operation. The ton-miles per deadweight ton is a function of the tonnage carried, the average mileage per vessel and the capacity in DWT required in order to maintain a weekly frequency. By slowing down container vessels, the overall efficiency is put at stake as containers spend more time at sea. The impact of slow steaming on the fleet's productivity has been analyzed and are shown in the table 1. It is without surprise that the number of days at sea has increased by 30 days on average going from 250 to 280. Moreover, as previously stated, more vessels were added to cope with the stretching effects implemented by

the slow steaming. Therefore, 135 vessels in total were added to the services operating under speed reduction constraints.

Table 1:

Vessel size ranges in TEU	% of services under slow steaming in 2010	Number of vessels in 2010	Days at sea in 2008	Days at sea in 2010	Miles performed in year (% change)	Capacity deployed in dwt (% change)	Thousands of ton-miles per dwt in 2008	Thousands of ton-miles per dwt in 2010	% change in ton-miles per dwt
1000–2000	11.60%	278	241	266	-10.40%	4.10%	19.0	14.7	-22.50%
2000–3000	15.90%	398	247	268	-8.50%	2.80%	20.9	16.7	-19.90%
3000–5000	33.30%	677	250	276	-10.40%	5.80%	23.3	17.8	-23.80%
5000–8000	59.70%	432	251	292	-16.30%	10.20%	25.3	17.3	-31.70%
8000+	80.00%	266	259	298	-15.10%	15.70%	25.1	16.6	-33.90%
Total	34.80%	2051	250	280	-12.00%	7.00%	22.8	16.9	-26.00%

Source: Cariou, P. (2010) Is slow steaming a sustainable means of reducing liner shipping CO2 emissions? Euromed Management Mare Forum, 14 September 2010, Marseilles.

This corresponds to a 7% increase in total capacity. Last but not least, ton-miles per deadweight-ton has decreased by 26%, going from 23 tons carried to 17tons.

Maersk, one of the early adopters of slow steaming, expects this trend to continue due to all the positive effects it provides. It absorbs overcapacity, stops freight rates from declining, reduces bunker costs as well as CO2 emissions and does not impede time delivery performances. In the case of the Danish company, money that has been saved through slow steaming, can be re-invested in other integrated services such as terminal operations or 3PLs (Baltic Transport Journal 2011).

Slot exchange agreements:

In the liner shipping industry, alliances have become more and more popular among container carriers in order to reach economies of scope and to reduce their exposure to financial and economic risks. Horizontal integration in maritime economics can take different forms (Notteboom, 2004). Before 2008 they used to take the form of shipping conferences in order to set the competition between liner shipping companies. In addition, shipping alliances can take the form of operating agreements such as vessel sharing agreements or slot exchange agreements. Last but not least, mergers and acquisitions are another way to reach higher levels of integration. The latter were largely implemented in the early stages of the financial crisis. Shipping alliances do not involve any price setting practices and the prime objective is, against conferences, to reach a higher level of integration through cooperation and harmonization (Haralambides, 2007)Shipping alliances can

also explain why no shipping companies went bankrupt during the financial crisis. Small liner companies were purchased by larger ones. Global alliances can be defined as agreements between two or more carriers where partners hope to learn and acquire from each other the technologies, products, skills and knowledge that are normally not available to their competitors. Slot exchange agreements, also known as vessel sharing agreements (VSA) are aimed at consolidating capacity on trade. There are no barriers to entry concerning slot exchange agreements. The aim is to create economies of scale by using up the capacity available to the liner carrier. Due to the decrease in the demand for transportation, container vessels were sailing half empty. Vessel sharing agreements helped cope with this issue. It is indeed better for liner companies to make full use of one container carrier rather than using two vessels half empty and to share the costs between the users. It is through slot exchange agreement and shipping partnership that liner companies can, again, access and operate in new markets, expand their network and reach a larger array of customers.
In terms of freight rates versus costs, the Asia-US trade was the worst affected by the crisis. Therefore, in 2008, Maersk announced the establishment of a new slot exchange agreement with the Swiss based company MSC and CMA CGM on the trans-pacific trade. This co-operation, known as the Transpacific Stabilization Agreement (TSA), consists of three new services using five 8,000 TEU container vessels between Asia and the US (Lloyds list, September). The aim of this agreement is to address their cost structure and to provide an enhanced customer based service by limiting over capacity, being cost effective and environmental friendly.

Improve land side operation costs and diminution in administrative costs:

Even though the containerized industry is one of the most capital intensive, the most significant asset management item for liner companies is the containers themselves. Indeed, the biggest source of competitiveness for liner shipping companies is on land since it is no more possible to gain comparative advantage on a simple door to door service (Frémont 2009). For highly integrated carriers, container management represents a big part of the total costs and full attention has been put on this matter. Container management has become one of the most important issues for liners. Because of the decrease in demand for transportation, container needs were reduced and new management decision had to be taken accordingly. This induces the storages of empty containers, preferably in areas showing the strongest advantages and where costs are minimized. Therefore, China has been the preferred location for this purpose. Liner companies have decided to continue their services to outports. Outports can be defined as secondary ports served by third party feeders

only. Also, due to financial issues, container carriers have reduced their on-forwarding costs by limiting their commercial exposure to more costly outports. On-forwarding costs are defined as the sea freight transportation contracts on land.

Moreover, even if they are minor in the total costs for shipping companies, savings on the administrative side have been made. Administrative costs are comprised of all the expenses related to the staff of the company, variable costs or travel expenses. It is clear that liner companies have changed their behavior since the beginning of the great recession. Indeed, communication tools have, to some extent, reduced travel expenses and improved productivity by automating administrative tasks. According to a survey, during the recession, 96% of liner companies had made changes to their shipping processes due to the economy, and one of the strongest measures was cuts on staff (Lloyds list, June 2010). In 2008, to face the stiff competition and to remain competitive in every segment of the shipping industry, the chief executive of Maersk announced a cut of over 2500 employees out of its 25000 staff (Maersk web site). The job cuts come from the line's regional offices as they do not need large regional organization anymore, precisely because of the generalized use of technological means. Moreover, the Danish company also decided to separate from other operational services such as terminals, superstructures to other 3PLs or terminals. After such economic and financial downturn, this is not surprising since liner companies strive to concentrate mainly on their main activities, being the transportation of good.

Chapter 3: Adjustments in the long term and the first signs of recovery.

The short term measures implemented by liner companies in order to encounter the crisis have been very beneficial as the demand for consumer good as well as manufactured goods has increased again. However, the freight rates seem to be taking some time to re-gain and reach pre-crisis levels and the governments' and banks' behavior towards shipping companies has dramatically changed. Therefore, long term measures have been carried out by container carriers and financial institutions to attain past levels of earnings.

In the previous crisis episodes, when profits were highly reduced, significant consolidation within the shipping industry occurred. Many shipping companies merged with some larger ones, and the concept of shipping alliances emerged, replacing in turn shipping conferences. Conferences were aimed at controlling and limiting competition between carriers and agreeing on uniform freight rates. In 2008, conferences were abolished and shipping alliances gained in legitimacy. In the 1990s, APL was taken over by the singapore based company NOL, Hamburg Süd bought Crowley and those are just a few examples. By merging, shipping companies have been able to overcome the crisis to some extent. It is true, as we have previously seen, that no shipping company went bankrupt during the deep recession. But the role of the government should be taken into account in the recovery process.

The role of the government:

The relationship between container carriers and the government has changed due to the financial restrictions with which liners were faced. For instance, in October 2010, the French based liner shipping company CMA CGM, approached the government to consider an investment in the line (Lloyd's list, october 2010). Despite the large gains of the third largest shipping company in 2010, CMA CGM has been struggling with a debt of over a billion euros. Therefore, CMA CGM benefited from an important governmental cash injection to support the company and insure its survival. It is to be noted that helping its most important shipping line is beneficial to the country, as "shipping companies are not to be viewed as a separate entity but highly related to the country's trade capabilities". However, this can have negative effects on competition. In normal competition practices, the government should intervene as little as possible**.**

In the case of the present economic downturn, the governments intervened in the shipping industry via Export-Import banks (EXIM banks). EXIM banks can be defined as financial institutions whose

aim is to guarantee and insure loans to help the exports of one's country, especially for capital improvement projects. This has been very beneficial to shipping companies as banks have become very reluctant to finance shipping investment projects. For instance, the Chinese EXIM bank was of crucial importance during the great recession of 2008. Through the provision of policy financing, the EXIM bank of China promoted the imports and the exports of chinese products (mainly electronic and high tech products) and encouraged further Chinese investments overseas. Also, the Chinese Export-Import bank increased the proportion of its credit lending to its domestic shipowners up to 30% (Lloyds list, December 2010) . Indeed, China was a major player in the handling of the shipping crisis. Chinese shipyards rapidly recovered from the deep decrease in demand for transportation. This was one of the first signs of recovery. The EXIM bank of the United states also played an important role as it enhanced competitiveness and helped in the creation of jobs which, in turn, triggered a faster recovery. Even though the shipping industry is still incurring important losses, it is of major importance to seek increased financial consolidation in the future. In this view, liner shipping companies turned to financial institutions in order to redistribute their debt over a longer period of time to spread their risk exposure and enhance their financial sustainability.

Operational fleet changes:

Container shipping is very capital intensive and the investments in the construction of new buildings is spurred by long term objectives to match the supply of transportation to the expected demand. Therefore, fleet management is crucial for shipowners in order to minimize costs and reach the optimal fleet capacity. New and more efficient orders are expected to arrive in two or three years time. By then, the existing fleet will have been revisited entirely. Older and smaller container vessels (4000 TEUs)will have been cascaded to other shipowners, chartered in or chartered out. This is especially the case between companies which are part of the same shipping alliances. For instance, within the New World Alliance (NWA), less adapted or lucrative vessels from the Japanese based company MOL have been chartered-out to APL in order to answer the needs of the latter to rationalize its investments and to be fully operational on specific trades (Interview, 2011).

Asia-Europe trade route bounces back:

As previously explained, all trade routes have been affected by the spreading effects of the great crisis. The intra Asian routes, the Asia-North America and the Asia-Europe account for more than 80% of the world's container traffic. This is not surprising as China's economic growth is forever growing at very impressive rates. Also, China's entry into the World Trade Organization in 2001 was an important factor in the Chinese economic and financial success. However, the economic downturn on the Asia-Europe trade lane was sharp and the measures to cut the oversupply of transportation capacity were slow to be implemented. A decrease of 22% in carryings was recorded in 2009 compared to the previous year. Nevertheless, The far East-Europe has been one of the trade lanes that recovered the most efficiently from the effects of the crisis (Shipping Economics, September 2010). The table 2 shows the estimated slot capacity by shipping companies and global alliances.

Table 2: Far East-Europe: Estimated slot capacity by line/grouping

Operator	Eastbound			Westbound		
	2008	2009	2010	2008	2009	2010
Maersk Line (6/5/5 loops)	2,027.3	1,878	1,830.3	2,659.1	2,178.1	2,171.4
Grand Alliance (5/4/3 loops)	1,556.1	1,185	1,105	1,816.4	1,367.1	1,284.3
New World Alliance (4/3/3 loops)	1,382.5	994.7	1,053.4	1,350.8	1,066.8	1,108.1
Grand A./New World A. (0/0/1 loop)	—	—	323.9	—	—	323.9
CKYH grouping (7/5/5 loops)	2,258.5	2,048.8	2,049.8	2,244	2,041.8	2,100
UASC (1/1/2 loops)	32.3	51.7	217.6	21.5	34.5	361.3
MSC (3/3/3 loops) [†]	542.6	657.5	632.1	884.8	1,023.3	1,013.7
Evergreen group (2/2/1 loops) [††]	653.5	428.2	220.9	750.6	450.2	331.3
CMA CGM-led services (2/2/2 loops)	344.7	465.1	425.1	786.6	961	878.5
CMA CGM/CSCL (1/1/1 loops)	495.2	440	495.7	495.2	440	495.7
CSCL (1/1/- loops)	415.7	356.4	—	415.7	356.4	—
CSCL/Evergreen (-/1/1 loop)	—	108.2	453	—	108.2	453
CSAV Norasia (1/-/- loop)	327.8	—	—	327.8	—	—
PIL/Wan Hai (1/-/1 loop)	201.1	—	216.4	223.4	—	216.4
UASC/Hanjin (1/-/- loop)	221.5	—	—	221.5	—	—
Zim (1/-/1 loop)	184.1	—	35	184.1	—	35
Other operations**	22.1	22.1	22.1	42.4	33.2	33.7
Combined total	**10,665.2**	**8,635.9**	**9,080.3**	**12,424**	**10,060.7**	**10,806.2**

NOTES: Figures at July 1 for each year.
Figures give estimated physical slot capacity between North European and Far Eastern ports (Malaysia/Japan range), adjusted for slots utilised for intermediate legs to/from the Mediterranean, Red Sea, Gulf and South Asia.
Figures do not include slot charters between groupings.
** Other lines included here are the Hapag-Lloyd Suez pendulum (2008); CMA CGM/DAL Nemo service (2008); CMA CGM/Hapag-Lloyd New NEMO/Suez service (2009/2010); Rickmers-Linie (all years); and Chipolbrok (all years).
[†] MSC total includes one westbound-only loop in all years. [††] In Evergreen 2009 totals, outgoing UAE and replacement CES are counted as a single loop.

As observed, the figures were much better in 2009 than in 2008 for container shipping carriers as they had managed to reduce the overcapacity. This yielded a favorable situation for liner shipping companies. Capacity utilization increased again and economies of scale consequently arose.

Therefore, some companies decided to deploy extra vessels to cope with the rush as the cut of slot capacity had been harsh.

Freight rates on this specific trade lane have inevitably increased as they had been declining for over a year and a half. However, considering the financial results of most container shipping companies, this was not enough to carry on all liners' operations on the Asia-Europe trade route. Spot rates skyrocketed at the beginning of 2009 to reach around 2150$ to then decreased slightly to under 2000$.

It is also interesting to study the effects of the measures implemented by liner shipping companies on the number of loops operated by liner shipping companies. The number of services declined from 35 to 28 but the tonnage requirement decreased by 23 (going from 301 to 278). This is mainly due to the implementation of slow steaming by all shipping companies. Indeed, the average number of container vessels in operation within this Asia-Europe trade lane increased from 8.6 in february 2009 to 9.9 in june 2010. After a long lasting decrease of slot capacity, figures started to show a better outlook in the year 2010. Indeed, as provided in the table 3, on both Eastbound and Westbound tracks, the evolution of slot capacity is striking. Slot capacity decreased during six quarters in a row from December 2008 to march 2010 and picked up again from then on at an exponential rate. It is to be noted that the Asian continent kept its export advantages as trade imbalance still show.

Table 3: Evolution of slot capacity by quarter
Annualized normal capacity in '000 TEU

Date	Eastbound		Westbound	
	Capacity	Y/Y % change	Capacity	Y/Y % change
2005 (Dec. 31)	8,618.8	+ 16.9	9,145.8	+ 16.0
2006 (Dec. 31)	8,980.9	+ 4.2	9,836.1	+ 7.5
2007 (Dec. 31)	10,121.5	+ 12.7	11,593.7	+ 17.9
2008 (Jun. 30)	10,665.2	+ 9.4	12,424.0	+13.3
2008 (Dec. 31)	9,685.3	– 4.3	10,998.6	– 5.1
2009 (Mar. 31)	8,130.1	– 18.6	9,438.7	– 18.7
2009 (Jun. 30)	8,635.9	– 19.0	10,060.7	– 19.0
2009 (Sep. 30)	8,548.5	– 20.9	10,070.4	– 18.6
2009 (Dec. 31)	8,118.8	– 16.2	9,728.5	– 11.5
2010 (Mar. 31)	7,860.1	– 3.3	9,506.5	+ 0.7
2010 (Jun. 30)	9,080.3	+ 5.1	10,806.2	+ 7.4
2010 (Sep. 30)*	10,234	+ 19.7	11,939	+ 18.6

NOTES: The figures give estimated physical slot capacity between North European and Far Eastern ports (Malaysia/Japan range), adjusted for slots utilised for intermediate legs to/from the Mediterranean, Red Sea, Gulf and South Asia, either directly or by transhipment. The figures are for the respective operations, and do not take into account slot charters between groupings.

*estimated

Source: Boxfile Containership Database

Interestingly enough, not all liner shipping companies that abandoned the far East-Europe trade route have returned, yielding more flexibility and opportunities for the remaining competitors. This is the case for the Chilean based company CSAV Norasia who was particularly expanding on this trade route in pre-crisis episodes, but dropped the Asia-Europe trade loop as a consequence of the crisis (Lloyds List, September 2010). Those evolutions implied an increase of slot supply by around 15 per cent during the year 2010 and the freight rates remained just over the average of 2008. Therefore, the outlook for the Asia-Europe trade for the future is encouraging considering the more recent evolution in the containerized industry as the world's most important container carrier, Maersk, recently ordered 10 new 18,000 TEU vessels to be implemented on this specific trade route.

When the demand side of transportation is catching up with pre-crisis levels:

While shipping companies and shipyards are still struggling to recover from the over supply of transportation capacity, the outlook on the demand side is improving considering the recent economic amelioration. For instance, the Asian economy experienced a 2.4 per cent growth rate and the European demand for consumer goods increased too, while companies strove to cut back a maximum on their inventories (Lloyd's List, may 2011). The table 1 from the appendix is an extract from an analysis carried out by the well recognized maritime statistics consultant Seabury who expresses the evolution of ocean volumes (in terms of TEUs) from 2000 to 2015 between areas of origin and destination. As observed, the carryings between Asia and Europe amounted to 10,167,542 TEUs in the year ending march 2008 and fell to 7,946,187 TEUs the following year. Then as the demand for consumer goods slightly picked up, the number of TEUs shipped increased in 2010 to reach 9.395.859 TEUs. The perspective for the future concerning the containerized industry is positive. Indeed, in 2011, the carryings reached over 10 million TEUs and figures for 2015 are promising as the ocean volume is expected to be around 13 million containers. Aa well as that, and more specifically, in 2009, the Chinese based company China Shipping performed better than expected, recording an 18 per cent increase in cargo carried reaching a 32 per cent increase on a year to year basis. (Lloyds list, February, 2010). According to China Shipping's CEO, "most of the success of the company is due to the measures introduced in our operations, namely slow steaming or the postponement of orders and other major operational changes" (K. Shuchun, 2010).

The Asia-Europe freight rates also rose in the first quarter of 2010 with a price index of 122 (with a base year 2008 of 100). The aim for container shipping companies is to cut inventories to their pre-crises levels, hoping reaching normal levels of growth in the maritime industry.

The great winners of the financial crisis, on the demand side, are the factories and importers who are posting new orders. This is simply due to the fact that freight rates are still quite low (below the peaks of 2008) and that the capacity of transportation is not limited. Therefore, even though the oversupply has had negative effects on liner shipping companies, importers and exporters highly benefited from the situation. As a consequence, operations carried out by liner shipping companies have gained in effectiveness as time in ports have significantly decreased (Hoffman, 2010). Hence, some of the congestion issues have been solved as the numbers of ships decreased and the overall transportation process have been improved. The great recession has pushed decision makers in the shipping industry to bring corrections to the transportation mechanisms and international trade.

From the shipping companies' perspective, private investments decision have been key elements in the way the crisis was handled. For instance, as demand for transportation was at its lowest level, average prices for container carriers significantly decreased. Therefore, orders for new and more efficient vessels have recently increased in view of an increase in the demand for transportation. Due to the derived nature of transportation, container carrier companies hope to recover from the crisis to reach past levels of earnings. The Danish company MAERSK ordered in late 2010 ten new 18,000 container vessels to grasp the expanding demand for consumer goods. Another striking example is the case of the Taiwanese container carrier Evergreen. The company was very cautious about the ordering of new container carriers as if it had predicted the financial and economic downturn of 2008. No new orders were negotiated prior to the crisis. However, in April 2010, triggered by a 300 million dollar loss, Evergreen confirmed its negotiation with shipyards to build a hundred new container vessels of different sizes to have enough capacity when the demand revives (The Journal of Commerce, April 2010). Even though this does not fit in the research of this paper, public investments have played, and still play, an important role. Indeed, container terminal activities have been totally revisited since the early stages of the crisis. Just as liner shipping companies cancelled or postponed their orders, many container terminal enlargement projects have been cancelled regardless of the future predictions. This could have dangerous implications for future growth as infrastructure and superstructure would be lacking to handle eventual extensive container flows. Since transportation activities are vital to one's country, governments have recognized the need to subsidize terminal enlargement projects. This would lead to the increase in

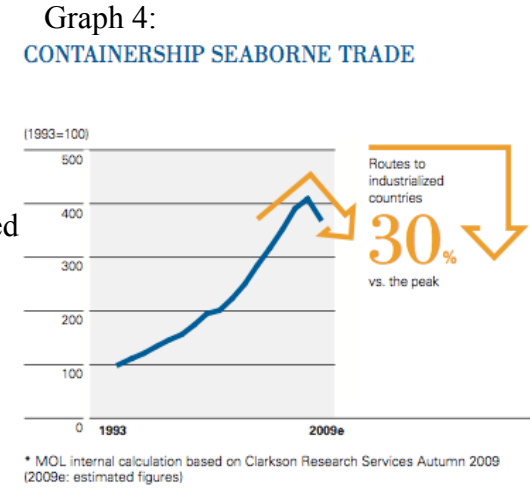
container throughput (via inland transportation as well as transshipment), increased connectivity between regions, and enhanced frequency.

The financial crisis of 2008 triggered an important change in the maritime shipping industry. Strategies implemented by liner shipping companies have been totally revisited with respect to new financial constraints and harsh market conditions. Liner shipping companies expect more market concentration and competition due to the increased pressure on freight rates. However, most important trade lanes have recovered from the downturn, showing encouraging figures for the future as it is the case for the Asia-Europe trade route.

Chapter 4: The case of Mitsui.O.S.K. Lines

Container shipping has often been referred as to a microcosm of the global economy. It is this very specific industry that experienced the highest growth in pre-crisis episodes. However, in the second half of the fiscal year 2008, shipping companies were forced to navigate in extreme conditions and almost no visibility. As previously explained, demand plunged as well as freight rates, banks became reluctant towards liner shipping companies and huge outlays on vessels was needed. Container seaborne trade dramatically decreased in the first half of fiscal 2009. As graph 4 shows, routes to industrialized countries plummeted by 30% compared to the peak attained before the second half of fiscal 2008. As a consequence, Mitsui o.s.k. Lines (MOL) returned to the drawing board to find ways to encounter the downturn of the financial crisis in the best conditions. MOL scaled back operations in the hope of recovering as quickly as possible.

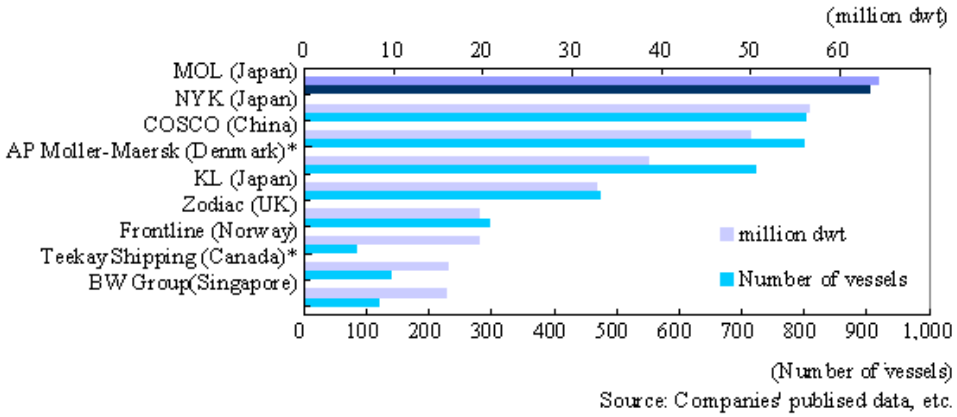
Graph 4:



Profile of the company and its market position:

MOL is a major international shipping company with a very diversified portfolio of activities and an extensive network which covers all areas around the world within the maritime sector. The company was created with the merging of two companies, namely Mitsui & Co and OSK lines in 1964. The japanese company is one of the worlds most important shipowners as it operates just under 1000 ships, comprising dry bulkers, tankers, LNG (liquified natural gas) carriers, car carriers, container ships and domestic transports.

Table 4: World Major Carrier Fleet Size Ranking (All Vessel)



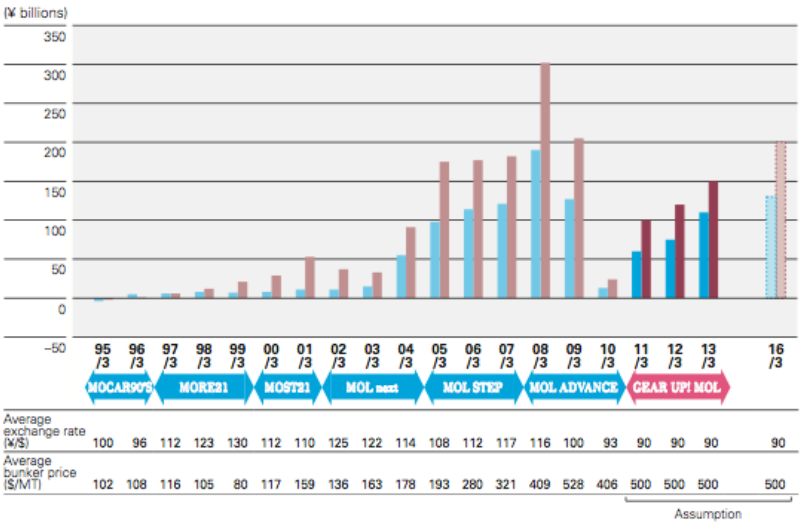
Also, Mitsui OSK Line is part of one of the most important global shipping alliances, the New World Alliance, which was created in 1998 when MOL teamed up with APL and Hyundai MM to operate joint services on major trade lanes. The company is ranked 12th biggest container shipping company of the 100 container lines (MDS Transmodal, April 2007). Other than transportation activities, MOL operates in various other sectors such as construction, real estate, trading and marine engineering. Throughout the diversity of activities portfolio, MOL managed to spread their exposure to financial and economic risks. MOL's market position is therefore very strong, and is an important player in the maritime shipping industry.

Business decisions in the early times of the crisis:

MOL, as all container shipping companies experienced a sharp decrease in revenues during the crisis. However, the Japanese company due to its well recognized management strategies, was one of the very few liner shipping companies to post a profit in fiscal 2009. The reasons for such results are several. Safety was the prime focus of MOL, meaning that zero accidents would be permitted, no delays in order to provide the world's leading transport quality and no cargo damages would be allowed.

From a financial perspective, the group's business performances, after the strong decrease in 2009, have recovered and are expected to follow the same positive trend in 2011, 2012. As observed in the table below, net income has decreased, going from over 200 billon to just over 20 billon yen.

Table 5: MOL Business Performance.



In the wake of the Lehman Brother collapse, MOL returned over 150 ships (all activities comprised) and 30 container vessels also sold or simply returned. The fleet downsize was necessary to adjust with the sharp decrease in the demand for transportation. The first aim of the Japanese company was to focus its attention on the emerging countries. For instance, extra services have been added between Africa and the United States, and between Asia and South America (especially in the car industry). According to Junichiro Ikeda, managing executive officer in the container shipping business, competitiveness does not lie in bigger vessels, but on the ability to enter and exit in spot markets by using the right ship for the right port in order to be fully operational in a large variety of ports around the world. Moreover, this will let MOL reach an even more diversified array of customers.

One of the most striking general consequences of the financial crisis was the long lasting decrease of freight rates. Indeed, they decreased by 10 per cent over the fiscal 2009. MOL managers cut capacity of transportation by more than 30 per cent on the Asia-Europe trade lane, in order to make space scarcer and to fill up to a maximum container vessels. This implied a decrease in the number of loops from 4 to 3. As seen in chapter two, direct services between Asia and East Africa were cancelled by MOL. In place, they implemented connecting-hub-ports to go via Europe to fill up the vessels and to makes short connections with Africa. Also, freight rates on the South-North route are expected to experience the highest growth rate in 2010 and 2011. Therefore, more focus has been brought to this trade lane. This goes with the long history of operations on this route.
New loops were opened in the early stages of the crisis: An Asia-North America East coast via the Suez canal (also known as SVE) as well as an Asia-America North-West trade lane (PN1).
As the idle fleet was an important issue, Mitsui OSK Lines scrapped 17 container vessels and returned 19 chartered vessels. This resulted in a net decrease of 14 vessels and in a cost reduction. Moreover, MOL managed to further cut operational expenses by using privately owned vessels instead of paying extra fees for using feeder services from other companies.
Another very well accepted cost saving measure was the reduction of bunker costs after the important increase in fuel expenses (which peaked at $142 the barrel in 2009). Slow steaming is one of the consequences. The container vessel speed went from 25 knots to only 14 knots (ultra slow steaming). Over 30 billions dollars were saved following to those measures. Therefore, investments in new, cutting edge container vessels took place which will be placed on long haul voyages such as

Asia-Europe and Asia-North America. Twenty eight new container carriers will enter operations in the next three years.
Japan's Mitsui OSK Lines announced a strong rebound in the container business in 2010 (Lloyds List, October 2010). Substantial improvement has been operated in liner services, yielding a "vast increase" in profits on this specific segment after the important losses of the previous year. Cargo volumes between North America and Europe have increased by over 40 per cent. As a consequence, MOL reviewed its profit forecast on the container ship segment, going from a 25 billion to a 35 billion yen profit.

The recovery from the economic crisis and the acceleration of the business development was also made possible through the promotion of competitive terminal projects to ensure and facilitate the traceability of the containers from the point of departure to the end user. For instance, The Japanese company will be one of the major shareholders operating in the Maasvlakte II in the port of Rotterdam together with other major shipping companies such as APL, Hyundai and CMA CGM. MOL will be part of the agreement which covers the building of the new superstructure, new equipment facilities and to be one of the most active companies in the port development. Moreover, MOL has exponentially increased its operations in Vietnam, more precisely in the container port of Cai Mep as they were one of the first companies to commence operations through the accommodation of larger container buildings. If, for instance, new markets arise in those areas, liner shipping companies will aggressively target them and operate new services. However, if the business does not follow according to expectations, MOL will have the opportunity to exit the market. This flexibility also relies on the fact that MOL does not only operates large container vessels but also medium and small sized ones. This yields better adjustment possibilities according to the demand.

The encouraging financial results of 2010:

First, it is important to have a sight on MOL's operating capacity plan expectations regarding the major trade routes on which they operate. The table below shows precisely those figures.

Table 6: MOL operating capacity plan

[Containership Supply/Demand Projection]

	2010	2011	2012
Supply growth	+7.4%	+5.2%	+6.3%
Demand growth	+6.7%	+6.4%	+6.0%

Source: Supply growth=Drewry, Demand=Global Insight

[MOL operating capacity plan]

	2012 Capacity
East-West routes	Adjust flexibly to match trade growth
North-South routes	Increase 30-40% from 2008
Intra-Asia	Increase 20-30% from 2008

MOL is expected to increase its capacity of transportation of the major trade lanes, namely East-West, North South and Intra-Asia routes from 30 to 40 per cent. This will consolidate MOL's financial resources. The consolidated financial highlight provides more precise figures on how MOL performed during the economic crisis and in the aftermath.

Table 7: Business climate during year 2010.

Consolidated financial highlights (Billions of Yen)

	FY2009 From Apr. 1, 2009 to Mar. 31, 2010	FY2010 From Apr. 1, 2010 to Mar. 31, 2011	Year-on-year comparison (variance)
Revenue	1,347.9	1,543.6	195.6/14.5%
Operating income	20.9	123.4	102.4/489.3%
Ordinary income	24.2	121.6	97.3/401.9%
Net income	12.7	58.2	45.5/358.1%
Exchange rate	¥93.25/US$	¥86.48/US$	-¥6.77/US$
Bunker price	US$406/MT	US$490/MT	US$84/MT

During the fiscal year 2009, even though the concern about the global economic recession persisted, the economy continued along a path of modest recovery. Revenues slightly increased between 2009 and 2010 and net income rose from 12.7 to 58.2 billion yen (720 million dollars). It is of pure speculation to assert the fact that the measures implemented were beneficial considering the

important rise in bunker costs, the sovereign risk crisis in Europe and the monetary environment in the Middle Est.

The following table expresses the business conditions including revenues as well as the income and loss across the different business segments.

Table 8: Business conditions per business segment.

Upper: Revenue, Lower: Segment Income/Loss (Ordinary Income/Loss) (Billions of Yen)

	FY2009 From Apr. 1, 2009 to Mar. 31, 2010	FY2010 From Apr. 1, 2010 to Mar. 31, 2011	Year-on-year comparison (variance)
Bulkships	723.2	792.6	69.4/9.6%
	66.9	70.8	3.8/5.7%
Containerships	468.0	590.2	122.2/26.1%
	-56.8	38.8	95.7/-
Ferry and Domestic Transport	51.0	50.2	-0.7/-1.5%
	-2.3	-0.5	1.7/-
Associated Businesses	114.6	124.1	9.4/8.3%
	9.7	10.6	0.9/9.9%
Others	17.7	15.4	-2.3/-13.2%
	1.2	3.3	2.0/166.1%

(Note) Revenue includes internal sales or transfers among segments.

Based on a year to year comparison, the containerized industry is the business segment that improved the most especially on the East-West and South-North trade. The increase amounted to 122.2 per cent.

In 2010, Mitsui O.S.K. Lines was a very successful company due the numerous cost efficient measures that were implemented. Slow steaming, routing management and vessel operationalization have been the key features to the recovery of the Japanese based company. Older container vessels have been scrapped or returned to the charter and new vessels have been ordered to support the expected increase in demand for transportation triggered by the encouraging GDP growth rated around the world. MOL operated in many different market and in specialized spot markets as well as long haul voyages. All this taken into account we can consider MOL as being a healthy survivor of the financial and economic crisis. Recent financial results have shown the potential of Mitsui in remaining a key player in the maritime industry and of securing its position of the worlds first shipowner.

Chapter 5: Conclusion

The fiscal year 2009 experienced the worst financial and economic recession over decades which implied a sharp decrease in volume traded via sea. For instance, comprising all shipping segments, seaborne trade declined by over 4.5% in 2009. Dry bulk and containerized transportation were the worst affected during the crisis. All shipping companies witnessed important losses and stove to find ways to cut costs to a maximum and to recover in the most efficient manner. The strategies carried out by liner shipping companies were several and some were more easily implemented than others. Since the main issue for container carriers was the overcapacity of transportation, one of the first measures to be carried out was the scrapping of some vessels (principally the oldest) and the laying off of others. Some container vessels were returned to the charter and some others were cascaded to more profitable trade lanes. The latter was mostly the case between liner shipping companies operating within the same alliance as it has been the case within the New World Alliance. Slow steaming, a well recognized practice, has been implemented by all liner shipping companies to bring down bunker costs and to overcome the overcapacity issue. By slowing down vessels, companies have been able to place more on some loops in order to keep up with the performances and to remain a reliable company. Also, structural changes have occurred as a consequence of the financial downturn. Changes of routing have been operated, some loops cancelled and some particular services have merged. This has been the case precisely between Asia and Africa. The Asia-Europe replaced the Asia-Africa trade lane but the connection to Africa has been assured via transshipment services through hub-ports in Europe. Slot exchange agreements or vessel sharing agreements (VSA) played an important role in the recovery process in the short-mid term. VSAs is one of the characteristics of global shipping companies. For instance, within the Grand Alliance, Hapag Lloyd and OOCL concluded slot exchange agreements in the early times of the crisis (Loyds list, march 2009). This same integrated consortium was elected the most efficient container alliance in 2009 (NYK Liner, press release 2009). Land side cost reductions have been of prime importance especially for highly integrated companies such as Maersk. Vertically integrated companies operate in many different segments related to the maritime industry such as logistics services, or inland transportation services. There has been a strong incentive to separate from such services in order to fully concentrate on their prime occupation being the transportation of goods from one point to another.

As the banking system triggered the deep economic downturn, it is without surprise that banks have become very reluctant to deal with shipowners. Terms and conditions have changed consequently.

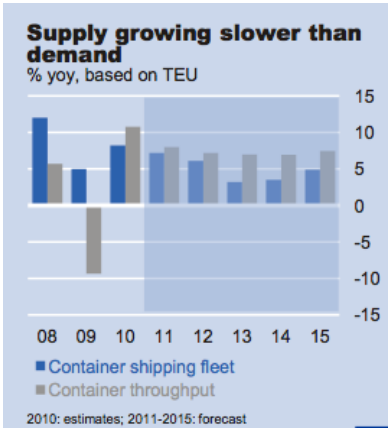
Besides this, the government intervention via the EXIM banks helped liner shipping companies to survive and sustain their capacity in order to support the exports of ones' country. The case of the Chinese EXIM bank has been expressed.

Due to all the measures carried out by shipping companies, the major trade lanes have recovered, and more especially the Asia-Europe trade route. Container vessels have been added on this route, demand for transportation has increased again and the freight rates have stabilized.

The case of the Japanese shipping company MOL has given a real life incentive of the matter as MOL has managed to get through the crisis in good condition.

Overall, due to the effects of the measures carried out by liner shipping companies, container throughput increased by 7% in 2010. In the meantime, the freight rates have recovered even though they lie below pre crisis levels. Between 2011 and 2015, the demand for transportation is expected to grow faster than the supply and the overcapacity issue will be mitigated. Also, charter rates are expected to increase again at a high rate. On the demand side, the forever increase in the international labor division, the income increase as well as consumption opportunities from the emerging world are the key factors that will trigger the demand for transportation.

Figure 6:



As observed in this table, the supply will struggle to keep up with the demand, yielding interesting opportunities for liner shipping companies. The decrease in the container shipping fleet can be explained by the surge from the shipping companies to acquire larger and more efficient container vessels and lay out, scrap the oldest, smaller vessels. This will, in turn, imply a higher transshipment share.

All in all, the shipping industry has been highly successful in the handling of the financial crisis and shipping companies have been, for most of them, proactive regarding the sharp decrease of the demand and the implied effects.

Chapter 6: appendix

Table 1:

	Ocean volume (TEU)	Africa	Asia Pacific	Europe	Latin America	M. East & South Asia	North America	All destinations
	M. East & South Asia	491,222	1,226,437	1,228,133	90,869	2,143,079	860,543	**6,040,282**
	North America	147,002	4,801,464	1,667,015	1,152,316	705,407	38,007	**8,511,210**
	Special Categories & Errors	0	0	0	0	0	0	**0**
	All origins	**3,793,842**	**36,141,256**	**12,748,931**	**5,581,703**	**8,779,763**	**17,033,623**	**84,079,118**
2006	Africa	308,181	421,122	684,946	42,538	185,856	116,693	**1,759,335**
	Asia Pacific	1,432,751	26,543,879	8,493,550	1,687,446	4,069,391	12,459,855	**54,686,870**
	Europe	1,465,965	4,784,184	0	1,038,261	2,042,626	2,850,449	**12,181,484**
	Latin America	265,212	1,069,944	1,604,693	2,144,870	289,266	2,068,671	**7,442,656**
	M. East & South Asia	605,315	1,380,129	1,358,612	90,695	2,727,049	905,523	**7,067,324**
	North America	150,585	5,038,516	1,659,441	1,207,084	688,991	33,334	**8,777,950**
	Special Categories & Errors	0	0	0	0	0	0	**0**
	All origins	**4,228,009**	**39,237,773**	**13,801,242**	**6,210,893**	**10,003,178**	**18,434,525**	**91,915,620**
2007	Africa	399,546	430,492	736,474	43,952	197,403	104,533	**1,912,400**
	Asia Pacific	1,674,787	29,288,484	10,098,178	1,984,767	4,833,890	12,751,709	**60,631,814**
	Europe	1,572,973	4,926,600	0	1,103,959	2,198,576	2,675,205	**12,477,312**
	Latin America	281,670	1,166,248	1,766,375	2,249,506	355,651	1,966,217	**7,785,667**
	M. East & South Asia	734,872	1,455,907	1,539,556	115,157	3,123,326	908,933	**7,877,751**
	North America	185,593	5,711,065	1,834,477	1,357,561	892,172	35,066	**10,015,934**
	Special Categories & Errors	0	0	0	0	0	0	**0**
	All origins	**4,849,441**	**42,978,796**	**15,975,061**	**6,854,901**	**11,601,018**	**18,441,662**	**100,700,879**
2008	Africa	384,761	418,901	736,335	40,843	209,203	101,224	**1,891,268**
	Asia Pacific	1,842,639	29,793,731	10,167,542	2,170,486	5,390,873	11,885,616	**61,250,887**
	Europe	1,677,800	5,087,711	0	1,105,858	2,347,484	2,468,335	**12,687,190**
	Latin America	276,555	1,233,483	1,716,161	2,326,668	398,821	1,838,196	**7,789,884**
	M. East & South Asia	974,703	1,511,279	1,543,570	121,692	4,043,123	902,750	**9,097,116**
	North America	200,023	5,994,819	1,928,540	1,493,640	956,099	35,836	**10,608,957**
	Special Categories & Errors	0	0	0	0	0	0	**0**
	All origins	**5,356,481**	**44,039,923**	**16,092,148**	**7,259,189**	**13,345,604**	**17,231,957**	**103,325,301**
2009	Africa	372,374	449,301	647,758	40,534	223,439	80,892	**1,814,298**
	Asia Pacific	1,872,436	27,860,090	7,946,187	1,771,380	5,160,120	9,790,273	**54,400,486**
	Europe	1,662,552	5,280,611	0	868,958	2,314,598	1,861,042	**11,987,761**
	Latin America	248,066	1,255,341	1,513,694	2,023,886	408,886	1,510,267	**6,960,140**
	M. East & South Asia	1,009,441	1,585,206	1,298,915	96,425	3,679,234	724,815	**8,394,036**
	North America	187,629	5,973,964	1,370,162	1,221,536	1,046,492	28,351	**9,828,133**
	Special Categories & Errors	0	0	0	0	0	0	**0**
	All origins	**5,352,499**	**42,404,512**	**12,776,717**	**6,022,717**	**12,832,769**	**13,995,639**	**93,384,853**
2010	Africa	392,261	547,555	670,438	46,879	235,257	83,758	**1,976,148**
	Asia Pacific	2,191,169	31,892,950	9,395,859	2,511,738	6,111,797	11,668,704	**63,772,217**
	Europe	1,792,872	5,493,800	0	1,161,836	2,467,231	2,148,219	**13,063,958**
	Latin America	233,291	1,446,599	1,552,261	2,214,973	416,407	1,611,033	**7,474,565**

	Ocean volume (TEU)	Africa	Asia Pacific	Europe	Latin America	M. East & South Asia	North America	All destinations
	M. East & South Asia	1,081,185	2,022,471	1,474,464	118,141	3,905,389	837,849	**9,439,499**
	North America	189,751	6,772,484	1,569,839	1,442,980	1,154,428	29,983	**11,159,465**
	Special Categories & Errors	0	0	0	0	0	0	**0**
	All origins	**5,880,529**	**48,175,860**	**14,662,860**	**7,496,547**	**14,290,510**	**16,379,547**	**106,885,853**
2011	Africa	419,593	573,898	687,024	50,698	253,282	87,824	**2,072,319**
	Asia Pacific	2,391,958	34,266,079	10,059,365	2,744,745	6,730,172	12,305,354	**68,497,672**
	Europe	1,892,219	5,940,518	0	1,236,825	2,664,517	2,222,879	**13,956,959**
	Latin America	252,675	1,566,445	1,653,636	2,397,670	460,228	1,710,279	**8,040,933**
	M. East & South Asia	1,180,943	2,218,003	1,583,556	130,795	4,261,450	904,259	**10,279,006**
	North America	202,923	7,230,236	1,650,702	1,526,365	1,264,557	30,754	**11,905,537**
	Special Categories & Errors	0	0	0	0	0	0	**0**
	All origins	**6,340,311**	**51,795,179**	**15,634,282**	**8,087,098**	**15,634,206**	**17,261,349**	**114,752,425**
2012	Africa	464,642	599,298	690,792	56,923	282,152	91,815	**2,185,622**
	Asia Pacific	2,633,142	37,281,600	10,666,829	3,098,792	7,583,492	13,079,731	**74,343,586**
	Europe	1,980,474	6,402,798	0	1,338,850	2,876,719	2,306,036	**14,904,877**
	Latin America	274,150	1,767,149	1,761,556	2,727,857	513,315	1,850,714	**8,894,740**
	M. East & South Asia	1,273,990	2,374,195	1,635,884	145,263	4,544,847	969,194	**10,943,372**
	North America	215,205	7,674,486	1,695,435	1,641,203	1,413,492	31,805	**12,671,626**
	Special Categories & Errors	0	0	0	0	0	0	**0**
	All origins	**6,841,603**	**56,099,525**	**16,450,496**	**9,008,888**	**17,214,017**	**18,329,294**	**123,943,823**
2013	Africa	502,615	632,074	696,611	63,520	311,866	95,633	**2,302,319**
	Asia Pacific	2,886,587	40,719,260	11,322,954	3,506,856	8,587,141	13,779,021	**80,801,819**
	Europe	2,071,463	6,904,612	0	1,454,091	3,110,114	2,373,257	**15,913,537**
	Latin America	296,618	1,978,198	1,868,263	3,076,996	574,247	1,980,114	**9,774,437**
	M. East & South Asia	1,377,965	2,590,189	1,717,199	165,196	4,942,590	1,043,881	**11,837,020**
	North America	227,428	8,153,500	1,741,586	1,768,008	1,571,157	32,310	**13,493,990**
	Special Categories & Errors	0	0	0	0	0	0	**0**
	All origins	**7,362,678**	**60,977,833**	**17,346,612**	**10,034,667**	**19,097,114**	**19,304,217**	**134,123,121**
2014	Africa	541,976	663,484	705,424	71,262	344,082	99,845	**2,426,073**
	Asia Pacific	3,157,365	44,313,783	12,046,969	3,976,028	9,721,867	14,479,004	**87,695,017**
	Europe	2,173,983	7,422,948	0	1,587,664	3,360,249	2,447,130	**16,991,975**
	Latin America	319,308	2,203,003	1,985,943	3,469,223	639,230	2,118,060	**10,734,767**
	M. East & South Asia	1,488,731	2,811,464	1,805,129	188,303	5,380,278	1,124,653	**12,798,558**
	North America	240,311	8,655,660	1,797,417	1,909,060	1,749,252	33,134	**14,384,834**
	Special Categories & Errors	0	0	0	0	0	0	**0**
	All origins	**7,921,675**	**66,070,342**	**18,340,883**	**11,201,540**	**21,194,958**	**20,301,826**	**145,031,224**
2015	Africa	585,255	694,067	717,702	78,747	378,361	104,403	**2,558,536**
	Asia Pacific	3,438,842	48,135,291	12,861,032	4,470,855	10,972,993	15,185,703	**95,064,715**
	Europe	2,290,689	8,006,403	0	1,730,705	3,645,837	2,540,611	**18,214,245**
	Latin America	342,971	2,447,227	2,120,162	3,902,197	709,350	2,267,923	**11,789,830**

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