Shipping Out of the Economic Crisis

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During the last 60 years, international trade has been outgrowing the world’s gross domestic product. Indeed, this elasticity has become stronger over time. Since the 1990s, the volume of trade has grown three times faster than the world economy—as long as times were good. By the same token, during the financial crisis the downturn in trade was even stronger than the slump in production. In 2009, the world’s GDP decreased by 2.2 percent, while trade dropped by 14.4 percent as traders and factories used up their inventories.¹ Forecasts for 2010 and 2011 are again positive, and trade is expected to grow at about twice the rate of output. Nevertheless, the volume of trade will for many years remain far below the level consistent with its pre-crisis trend. This is particularly bad news for those who make a living out of transporting this trade by sea—in terms of volume, 90 percent of global trade is moved in this way.²

Transport is one of the cornerstones of globalization. Together with telecommunications, trade liberalization, and international standardization, the increased efficiency of port and shipping services has made it easier to buy and sell merchandise goods, raw materials, and components almost anywhere in the world. According to the Journal of Commerce, “despite all the headlines and political bluster surrounding the World Trade Organization, [North America Free Trade Agreement], and other trade pacts, the real driving force behind globalization is something far less visible: the declining costs of international transport.”³

The maritime business itself is arguably the most globalized of all industries. The service providers are rarely citizens of the nations whose cargo they move. A simple commercial transaction may easily involve people, services, and property from more

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than a dozen different countries: a Greek-owned vessel that is built in Korea may be chartered to a Danish operator who employs Filipino seafarers via a Cypriot crewing agent. The ship is registered in Panama, insured in the United Kingdom, and transports German-made cargo in the name of a Swiss freight forwarder from a Dutch port to Argentina, through terminals that are concessioned to operators from Hong Kong and Dubai. On its journey, the vessel may have repairs done in a Portuguese yard, bunker fuel in Spain, and tranship containers—to be reloaded on a different ship on a different destination—in Brazil. International standardization, an important component of globalization in general, is crucial to the shipping industry. Without standardized containers, globalized intermodal networks would not be possible. Furthermore, standardization enables the application of United Nations regulations on safety and training apply on all international waters.4

SHIPPING IN CIRCLES

Shipping has been hit particularly hard by the economic crisis. The downturn in trade has directly led to a rapid decline in demand for transport and related services. For example, port traffic in the world’s largest container ports, Singapore and Shanghai, decreased by 13.5 and 11 percent respectively in 2009.5 Yet, in spite of this downturn in demand, the shipping fleets’ capacity has been expanding throughout 2009, as vessels ordered in earlier years continued being delivered by the world’s shipyards. Between January 2009 and January 2010, the world fleet’s total container carrying capacity increased by 5.7 percent.6 The dry bulk tonnage for the transport of coal, iron ore, and grains increased by 9 percent.7

The supply side’s response to changes in demand is never immediate (Figure 1). Between 2002 and 2004, demand for containerized trade grew faster than the supply of container carrying capacity, so the industry ordered new tonnage. This tonnage is usually delivered two to three years later, and since 2006, the supply of container ships has been growing faster than demand. In 2009, the difference in growth rates amounts to a staggering 15 percentage points.

Figure 1 - Growth of demand and supply in container shipping, 2000–2009 (annual growth rates)

<table>
<thead>
<tr>
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<th>2000</th>
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<tbody>
<tr>
<td>Demand</td>
<td>10.7</td>
<td>2.4</td>
<td>10.5</td>
<td>11.6</td>
<td>13.4</td>
<td>10.6</td>
<td>11.2</td>
<td>10.9</td>
<td>4.4</td>
<td>-9.7</td>
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<tr>
<td>Supply</td>
<td>7.8</td>
<td>8.5</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>10.5</td>
<td>13.6</td>
<td>11.7</td>
<td>10.9</td>
<td>5.2</td>
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Source: UNCTAD Review of Maritime Transport 2009, updated with data from Clarkson Container Intelligence Monthly (January 2010). Clarkson’s forecast for 2010 is +5.2 percent for both demand and supply.
The resulting oversupply of tonnage has led to a significant drop in container freight rates, which decreased by one third between the end of 2008 and the end of 2009. A similar picture emerges in dry bulk shipping, where the cost of chartering vessels went down by more than half.

The low freight and charter rates, combined with the downturn in trade volumes, have led to historical financial losses for the operators. The world’s largest container shipping company, Maersk Line, reported a loss of $2.1 billion in 2009. Hanjin Line lost $1.1 billion during the same year, Neptune Orient Line lost $741 million, and similar losses were recorded all across the industry. The shares of container carriers today are worth two-thirds less than at their peak in 2007.

The maritime business has long been known for being cyclical. In times of growth and high profits, ship owners have positive cashflows and order new capacity. This capacity, however, takes time to deliver. There are waiting times because the shipyards’ order books tend to be full in times of prosperity; any new construction will only be commenced two to three years after being ordered, and then the construction itself can take up to a year. When the industry was booming earlier in the present decade, each year the world saw historical records of new vessel orders. These vessels are still being delivered today—and thus, in spite of the economic crisis, the world fleet is still expanding. The resulting surplus capacity and the shipping companies’ negative cash flows led to a standstill of new orders during most of 2009.

While the dimension of the current boom and bust cycle of the shipping business is extreme, the cyclical nature of the shipping business as such is not new. It has been compared to the “pig-cycle” that was discovered in 1930s in Britain. It basically implies that this boom-and-bust is mostly self-inflicted by the shipping industry. The production of new output responds to changes in price—but only after a time lag, and this time lag is itself the cause of future price changes. Ideally, new vessel additions would arrive in a steady flow, but in practice, investment in a new vessel capacity follows the pig-cycle. Intensive new activity occurs at the peak of the highly profitable boom period, only to see new ships become available at the height of the bust, which is effectively made worse by the delivery of the new ships.

In a nutshell, even without the current economic crisis, the huge order book of new ships would, by today, have led to an oversupply of tonnage and a corresponding decline in vessel prices; and this has been made worse by the economic downturn. In the case of container ships, for example, the fleet is forecasted to continue to grow over the next four to five years, and most of this growth is on account of ships that can carry more than 8,000 20-foot containers. Vessels of this size did not even exist before 2004. Specifically, there are 156 container ships of more than 10,000 20-foot containers due to be delivered by 2013, compared to only 34 ships of that size in service in February.
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2010. With regards to dry bulk vessels, the current order book stands at two thirds of the existing fleet.

How the Industry Adjusts to the Crisis

Freight rates and second hand vessel prices react immediately to a change in the supply and demand balance. The supply of new capacity, however, reacts much more slowly. The industry has five ways to adjust its supply to a decline in demand. Firstly, it will immediately stop ordering new tonnage. Secondly, it may demolish vessels. Thirdly, it may, to some extent, terminate or postpone existing orders at the shipyards. Fourthly, vessels may slow steam, thus reducing the effective capacity supplied by the existing fleet. And finally, the industry may temporarily withdraw existing tonnage from service.

Stopping of New Orders

Orders of new ships have practically come to a standstill. In 2007, 535 containership vessels were contracted, 208 units were ordered in 2008, yet in 2009 there were only two new orders. As regards dry bulk ships, there was a certain year-end surge in orders at Chinese shipyards, mostly from Chinese owners and Chinese financing.

Demolitions

Already at the outset of the crisis, some analysts highlighted that ship-scrapping is potentially one of the few shipping-related businesses that may benefit from the economic crisis: “The ship-recycling industry is now experiencing its largest growth period in history, after the financial crisis saw rates for many vessel types collapse. With a threefold increase in ship-scrapping expected globally this year, and more than 1,000 ships destined for the breakers’ yards, there are now fears that existing yards cannot handle the workload.” Although there were capacity constraints at the scrap yards, 2009 did in fact see a surge in ship recycling as ship owners sold their vessels as scrap metal. Notably, China saw a record in tonnage imported for scrapping. Nevertheless, the growth was lower than initially expected. As prices for scrap metal are very low, many vessel owners prefer to hold on and lay off their ships rather than scrap them, hoping for better times to come. The demolition of existing tonnage will not be enough to compensate for the downturn in demand and for the new tonnage that is still leaving the world’s shipyards. While a record of 180 mostly smaller containerships with a combined capacity of 330,000 20-foot containers were sold for demolition in 2009, this still amounts to just 2.5 percent of the existing fleet in terms of capacity—compared to an order book of 36 percent of the fleet.
Termination and Rescheduling of Orders

Since the beginning of the crisis, numerous orders at the world’s shipyards have been rescheduled. The specialized shipping press reported a “dearth of new orders with the renegotiation of existing contracts now taking up more of shipbuilders time than new enquiries.” Activity in the container ship market in 2009 focused “primarily on the restructuring of the existing order book, as possible cancellations and renegotiations of existing deals become an increasing issue.”

Accordingly, the forecasts for delivered vessels were adjusted downwards each month. In January 2009, one leading analyst still projected that capacity would increase by 13.1 percent during the following year, while 12 months later the reported annual growth only amounted to 5.2 percent. In the end, shipyards were somewhat more flexible than most analysts had initially expected. Some shipyards were more flexible than others, notably those that only existed on paper and were only green-field projects when the orders had been placed.

Even as numerous deliveries were postponed, most were not cancelled, as shipyards would not agree to losing the business completely. The shipbuilder Daewoo SME, for example, announced a 44 percent increase in 2009 net income as deliveries jumped by more than half. Some shipyards helped their clients finance the ships through leaseback schemes. In early 2010, the fleet capacity of the world’s top 20 container lines is still on course to expand by more than a third over the next four years.

Slow Steaming

Slow steaming means that the voyage speed of ships is reduced, which then makes it necessary to employ a larger number of ships to maintain the same frequency. Employing nine or ten vessels on a service that usually only requires eight ships has two main potential advantages: first, it reduces the need to lay off ships, and second, it saves fuel. During the economic downturn, shippers were not too concerned about delays in the delivery of goods as they were mostly aiming to reduce their inventory anyhow.

However, the impact on voyage times is significant: at 25 knots (nautical-miles per hour) a typical East-West voyage time is 16 days, whereas at 14 knots it extends to 29 days. This was not a major problem for shippers when they were using up their inventories, but as the economy is now picking up, traders and factories will no longer accept the longer delivery times.

The Idle Fleet

Many surplus vessels are not effectively deployed and are instead laid off or idle. As of early 2010, 12 percent of global container carrying capacity is idle and anchored at different harbors. Put differently, today there are more than 500 container ships idled...
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at anchorages around the globe, and double that quantity still due to be delivered. Although the economy is picking up, the surplus tonnage will remain for years to come.

As ships are temporarily withdrawn from service, actual fleet deployment, i.e., the assignment of container ships to trade-routes, has effectively decreased during 2009. The container capacity deployed on the main trade routes between East Asia and Europe and between East Asia and North America was 20 percent lower in January 2010 than one year earlier.

Interestingly, the reduction in fleet deployment was less drastic on major South-South routes as trade among developing countries has been affected less by the economic downturn than most of the developed world’s trade. The deployment between southern Africa and East Asia went down by only 7 percent; between East Asia and South America it decreased by 13 percent, and the fleet deployment between southern Africa and South America actually increased by 3.4 percent during 2009. This reflects the positive role that developing countries and South-South trade in particular are playing in favor of the global economic recovery.

Consolidation: Adjustment in the Long Term

In previous periods of low profits, we saw significant consolidation in the container shipping industry. In the U.S. during the 1990s, Sea-Land was taken over by Maersk (Denmark), American President Lines by NOL (Singapore), and parts of Crowley by Hamburg Süd (Germany). Since the start of the current crisis, profits have not only been low, but actually mostly negative. Nevertheless, all of the top 25 companies have been able to maintain their independence—over the last couple of years there have been no mergers or acquisitions among them.

Still, the currently incurred losses cannot be sustained. Some government agencies and industry associations are already seeking ways to assist member companies, but find themselves confronted with competition (antitrust) authorities. In the European Union, for example, the Competition Directorate is contesting a government loan guarantee for the container carrier Hapag-Lloyd. A scheme by a group of European container ship owners to jointly manage capacity was similarly contested by the Competition Directorate. In the long run, there is probably no way around further industry consolidation.

Bouncing Back and the Counter-Cyclical Side of Shipping

While ship owners and yards are thus still struggling to cope with the oversupply of tonnage, perspectives on the demand side are improving. The United States economy grew at its fastest pace in six years in the fourth quarter of 2009, expanding by 5.7
percent as companies scaled back their attempts to cut inventories. U.S. container ports reported higher imports in December 2009 than in December 2008, marking the first year-over-year monthly increase in containerized imports in two and a half years. China Shipping Group reported a better-than-expected 18.1 percent increase in carried cargo volumes in January 2009, with year-on-year growth reaching 32.2 percent. Once inventories are back to their pre-crisis stocks, these exceptional growth rates will return to normal levels.

**Supply Meets Demand**

Importers and factories that are now posting new orders overseas are in a lucky position, as there is ample spare capacity to transport their goods, and freight rates are far below the peaks of 2008. While the oversupply of tonnage has had a negative impact on the transport industry's profitability, it has had mostly positive implications for importers and exporters.

Waiting times in ports and freight rates have significantly fallen, bringing some relief to traders in the form of lower transport costs and smoother operations. Shipping one ton of dry bulk cargo over 1,000 nautical miles by sea in early 2010 cost between $4 and $7 as compared to $10 to $16 in 2008.

In a way, the pro-cyclical investment patterns of the shipping industry effectively act as a counter-cyclical corrective mechanism to international trade. While the economy was overheating and trade boomed, high freight costs and port congestion on occasion acted as a break that somewhat spoiled the party. As the business world and policy makers look to the next annual meeting of the World Economic Forum in Davos in 2011 to discuss how to revive global trade, they will be happy to note that transaction costs today are relatively low and there is no shortage of capacity to carry the reviving trade in goods.

A notable exception has been port congestion in relation to the Chinese demand for iron ore, which continued to increase in 2009. This resulted in a large proportion of the fleet calling at the exporting ports of Australia, Brazil, and India, as well as the importing Chinese ports, pushing up vessel waiting times and freight rates. At its maximum on 26 June 2009, almost one-fifth of the specialized fleet was reported to have queued outside a port in one of those four countries.

**Seizing the Opportunity: Countercyclical Private Investment**

Exceptions prove the rule. In container shipping, Asia's largest carrier, Evergreen, is the only top 20 company with a currently empty order book for new vessels, though it is now planning to acquire 100 new container ships. Evergreen seems to have predicted the onset of the crisis back in 2006 and refrained from placing new orders, when many
of its rivals were still expanding.\textsuperscript{28}

In general, counter-cyclical ordering makes a lot of sense. Ordering new ships at the low point of a cycle will be cheaper, delivery can take place earlier, and the company will have new and modern ships at the moment demand revives. The flip side to this approach is that it is risky; the cost of financing will be high, just as a higher cash deposit may be required to offset the high risk. Still, there appears to be a lot of truth in the old (and perhaps cynical) saying that a successful ship owner does not earn money on transport, but on buying and selling vessels at the right moment.

**Countercyclical Public Investment**

Many port capacity expansion projects have been put on hold, deferred, or cancelled over the past year. This is dangerous, as a lack of port infrastructure investment today may ultimately turn into a serious problem when trade resumes its positive growth.\textsuperscript{29}

Private sector investment in transport infrastructure and services is well known for being pro-cyclical: in times of booming trade, operators plan for expansions, investment increases, and the number of projects grows; in a downturn, investment projects are put on hold. Given the time lag between planning an investment and its actual conclusion, especially for large infrastructure projects that require extensive feasibility and environmental impact studies, it is important to keep in mind the long-term requirements for a country’s foreign trade to expand. A decline in transport investment today will inevitably entail capacity restrictions on trade in the medium-term future.

While many economic stimulus packages aim at short-term measures to stimulate economic demand and employment, some measures in these packages also target long-term and innovative investments in public infrastructure or aim at closing investment gaps. Many of these investments are in transport infrastructure, such as the building or upgrading of roads, waterways, and railroad infrastructure, as well as the dredging of seaports.\textsuperscript{30}

Recognizing the need to support private investments, governments also provide guarantees for private investment, accelerate the approval processes of projects, and encourage public-private partnerships for infrastructure. In the long term, timely investments in transport and trade facilitation lead to increased throughput and frequency of transport services, resulting in lower freight costs and improved connectivity. Unfortunately, investment in public infrastructure has in the past often lagged behind requirements, leading to capacity shortages in ports and other transport infrastructures. The economic crisis and the national stimulus packages and support programs by international development banks provide an opportunity to advance investment in these areas. As much private investment is put on hold, public investment should fill a gap
and build the capacities countries need for the economic recovery. Such investments will become a strategic component to overcome the crisis when made part of anti-cyclical expansionary fiscal policies to promote recovery through trade.

**The Further Emergence of China in Maritime Businesses**

To some extent, the shipping cycle may look like history repeating itself. Yet with every such cycle, some lasting change takes place, and in the context of the recent “financial crisis,” the emergence of China on the market for ship finance could be such a lasting change.

If we remind ourselves that the current economic crisis started out as a “financial crisis” for the shipping business, it is particularly interesting to note that Chinese banks have lent billions of dollars to ship owners since the banking crisis started in September 2008. They thus replaced traditional sources of financing from Germany and the United Kingdom and helped owners to take delivery of previously ordered ships. 31

Developments in China are particularly noteworthy with regard to the supply of, and demand for, shipping services. On the supply side, Chinese shipping companies are among the fastest growing, and the country is host to the most important container and crane manufacturers. On the demand side, Chinese containerized exports make up a quarter of the world total, and Chinese ports are among the fastest growing in the world.

China is one of the few countries that participates in almost all maritime sub-sectors, such as ship building, port operations, nautical schools, ship scrapping, and vessel owning and registration. 32 However, this does not mean that Chinese-owned ships will necessarily use the Chinese flag, or that only they will be deployed to transport national trade. Fortye percent of the Chinese-controlled fleet is registered in China (i.e., uses the Chinese flag) versus the 60 percent that use a foreign flag. More than half of the Chinese-controlled fleet are dry bulk carriers, followed by oil tankers, general cargo vessels, and relatively few container ships.

China depends on the international shipping industry for its exports of goods. Through a combination of expanding its domestic shipyards (shipyards in Shanghai recorded a 50 percent increase in the value of exports in 2009) and becoming a key provider of international ship financing, the country is making sure that there will always be sufficient shipping capacity to transport its foreign trade at low freight costs. 33

**Notes**


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Note: This percentage is excluding intra-European Union trade. See also UNCTAD: *Review of Maritime Transport*, Geneva, 2009.

3. *The Journal of Commerce*, 15 April 1997. While there have been arguments if the actual unit costs of transport have gone down, the service quality, speed, and coverage have without a doubt improved.


27. Clarkson Research Services: *Dry Bulk Trade Outlook* (November 2009).


30. UNCTAD: *Successful trade and development strategies for mitigating the impact of the global economic and financial crisis*, Geneva (February 2010).
