

Oceanic transport alters dynamics of trade

Rising international trade has increased demand for transport, especially for ocean freight, since 98% of intercontinental trade is transported by sea. Now with increasing fuel prices and high volatilities in freight rates the profitability of food and feed companies might be endangered, according to a report by Rabobank International.

By Dick Ziggers

In addition to commodity price volatility, changes in freight rates can considerably impact the profitability of food companies that are increasingly dependent on international markets for origination and delivery. For instance, grains and oilseeds have relatively low unit values, so freight rates might account for a large portion of the cost at the delivery point. As a result, fluctuations in ocean freight rates have a strong impact on the commodity trade (Table 1).

Ricardo Scaff of Rabobank International F&A Research and Advisory department says in his report about oceanic transport that for the overall impact of transport costs on the profitability of food companies, the increasing occurrence of delivery surcharges, fees and fines needs to be taken into account, as well as travel delays due to port congestion and heightened security.

Shipyards preferences

The characteristics of the cargo determine the type of vessel utilised for its transport (Table 2). Although some trends are common across all vessel types, there are also peculiarities to each sub-market that need to be considered. The freight market is notoriously cyclical. The spike in demand led shipping companies to order



The dry bulk market has presented the highest volatility among the markets for the different type of vessels.

new vessels and many large shipyards are completely booked until 2008. Disruptions in steel supplies and high energy and raw material prices have not prevented cargo companies from continuing to place orders.

“The demand for one kind of vessel might – and frequently does – affect the supply/demand equilibrium of a different type of vessel. For example, the demand for iron ore, usually transported in Capesize vessels, has strengthened demand for Panamax vessels that usually transport grain,” Scaff illustrates.

Vessel supply is also interlinked. Shipyards are usually not specialised and their allocation of production capacity, among different vessel types, affects the overall supply. Many shipyards would rather build liquefied natural gas (LNG) carriers, tankers or containerships than bulkers, because of the higher price they fetch. In June 2005, outstanding orders for LNG vessels totalled 121, compared to the entire LNG fleet of 179 vessels, reducing yard capacity for building new bulkers or containerships.

Additionally, dry bulkers with an average useful life of 25 years, are not as regulated as tankers in respect of age limit and double hull constraints. Therefore, when freight prices are attractive, ship owners might extend the useful life of their vessels. Bulkers that would normally be scrapped continue working, which results in a more elastic supply than the existing situation in the tankers’ market.

Table 1 – Comparison of soy prices and shipping costs at selected periods

	Q1 03	Q1 04	Q1 05
Soybean price (\$/t)	209.1	324.4	208.3
Freight cost US-China (\$/t)	26.5	46.63	57.5
Ratio	7.9	7.0	3.6

Source: Rabobank



The Panama Canal is an important factor in determining the size of ocean freightliners.

Seasonality and clearinghouses

Finally, the longer the route is the less available vessels travelling that route are. For example, it would take longer for Argentina or Brazil to supply soybeans to China, than it would for the US to do the same. That fact brings some seasonality to the market and creates distinct periods where vessel availability declines, although the absolute number of vessels remains the same.

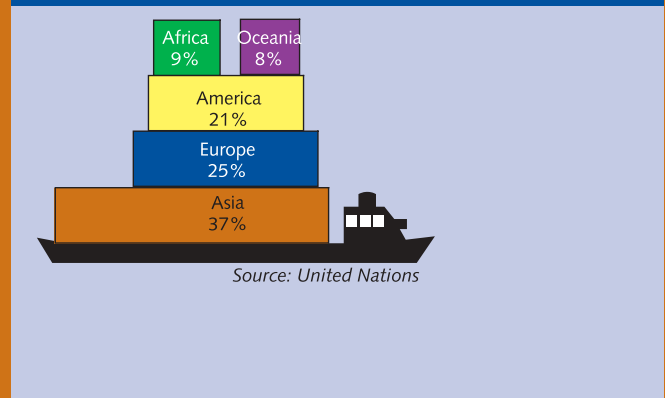
The ocean freight market is going through an important change as the Norwegian clearinghouse NOS faces increasing competition from other clearinghouses. The New York Mercantile Exchange (NYMEX) introduced freight swap future contracts and is focusing on the tanker market. The London based LCH Clearnet will focus on the dry business. The new model that these houses are creating might be a threat to traditional shipbrokers, especially as an electronic trading system is developed, and they are able to execute clients' orders more efficiently. Scaff suggests that this model is likely to bring more transparency to these markets and may attract speculators, increasing liquidity and sometimes volatility of the market.

Chinese influence

Asia accounts for 37% of world trade (Figure 1) and is also the continent with the fastest economic growth. China's economy grows at fast pace. The country was responsible for more than 20% of the 2004 world trade growth, so freight rates are strongly dependent on the level of activity of China's economy and trade.

In 2001 China entered the World Trade Organisation (WTO). Continuing trade liberalisation helped China's exports rise from 10% of GDP to more than 30% in 2004. As China benefits from its less expensive labour, it elongates the world supply chain. China's imports come mostly in bulkers, while exports utilise containerships.

Figure 1 – Distribution of world trade by tonnes, 2003



Source: United Nations

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Bulkers

Iron ore and coal account for approximately 50% of total bulkers' freight and are mostly transported in large Capesize vessels. Soybeans and wheat are the most traded grains (Figure 2). Grains are predominantly transported in Panamax vessels or less regularly in Handymax vessels.

The dry bulker market has presented the highest volatility among the markets for the different type of vessels. There was a noticeable hike in rates that occurred after September 2003, with the subsequent

Table 2 – Selected types of vessels, use and size, 2003

Class	Use	Cargo annual movement	Type	Carrying capacity
Bulkers	Coal, iron ore, grains, oilseeds, fertilisers	2.1 x 10 ⁹ t	Capesize	>80,000 DWT ¹
			Panamax	50,000
			Handymax	-80,000 DWT
Containerships	Cotton, some grains, animal protein, oils	1,65 x 10 ⁹ t	Handysize	-50,000 DWT
			<1,000 TEU to >8,000 TEU	<30,000 DWT
Containerships				1,250,000 TEU ²
Reefers	Fruits, vegetables, animal protein and dairy products	33 x 10 ⁶ t	Controlled temperature, refrigerated shipping	340,000 cubic feet
Tankers	Petroleum products	500 x 10 ⁶ t	Ultra Large Crude Carrier to Handymax size	>320,000 DWT to <30,000 DWT
LNG Carriers	Liquefied petroleum	150 x 10 ⁹ m ³		Usually 135,000 cubic feet

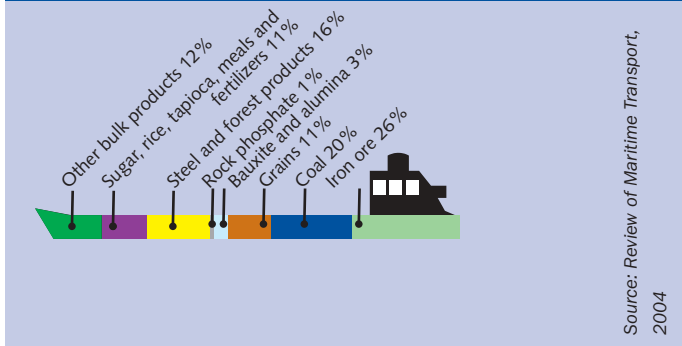
¹ Dead Weight Tonne

² Twenty Foot Equivalent Unit, a standard measure for container cargo

Source: Rabobank and Review Maritime Transport 2004

Market

Figure 2 – World seaborne bulkers trade by commodity, 2003



period showing increasing volatility. The most noticeable recent trend has been the decline in rates through the first half of 2005.

Demand for bulkers has increased significantly, driven by the world's strong economic performance and increasing commodity trade. At the same time bulk vessel capacity increased by 21.4 million DWT, or approximately 4% of total capacity. The net result has seen excess capacity in this market diminish. Strong returns since October 2003 have led freight companies to invest in new vessels, despite the increase in the price of bulkers, which has more than doubled during the past three years. During 2005 the bulk fleet capacity is forecast to increase by almost 8%, but the absolute number of outstanding orders is much larger. It accounts for approximately 20% of the bulk fleet, a historically high number (Table 3).

Since early 2005, the decline in the pace of growth of the global economy and the increase in the bulker transport fleet have caused a reduction in freight rates. From the peak reached in December, freight rates have declined by more than 50%.

Of all bulk vessel classes, the Capesize market has been most affected by volatile freight environment and subsequent declines in 2005: freight rates declined from \$80,000 per day to around \$36,000 per day during the first half of 2005. "This decline was the result of slower demand, more vessels and more bearish expectations regarding future freight rates," Scaff writes.

Moving forward

The world economy is forecast to grow at a 4.3% (5.1% in 2004) according to the International Monetary

Table 3 – Order book for bulk vessels (delivery 2006-2008)

Type of vessel	Quantity
Capesize	265
Handymax	194
Handysize	136
Panamax	88

Fund (IMF). Although the growth rate has declined it is still a positive performance, which will sustain a high level of international trade. The US and China are key in supporting strong level of freight rates, so any slowdown in these economies would negatively impact demand for ocean transport.

Since December 2004 bulk freight rates have declined significantly. However, steady demand and the relatively long lead-time needed to release new vessels might prevent freight rates from declining much further in the short term. The Baltic Forward Assessments (BFA) shows future freight rates close to the current levels, but some market analysts forecast a strong decline in freight rates during the next 18 months for Panamax and Handymax vessels, and a less marked decline in freight rates for Capesize vessels due to a higher supply/demand ratio.

The reduction in freight rates that is evident for bulkers might not be accompanied by a reduction in volatility since this sector is still operating at near capacity (above 90%). For other types of vessels, such as reefers and containerships, freight rates are expected to stay at high levels during 2005 and the first half of 2006, due to strong demand, while price volatility should be not as high as in the bulker market. However, the increase in ocean transport fees (Panama fees are 30-35% higher than in 2004) and surcharges, due to increasing fuel prices, will also affect clients of shipping companies and reduce the effect of declining bulker freight rates, and increase costs for those who use containerships even further.

Improve infrastructure

As new vessels are delivered and international trade expands, countries that improve their infrastructure will benefit more from declining freight rates and increasing port activity. The trend for vessels to become larger and ports will need to be deeper to allow these large vessels to dock. Countries that are geographically distant from the major importers will benefit, while the advantage of proximity that has maintained some regional markets will diminish, increasing international competitiveness.

As international trade increases, oceanic transport becomes more important; not only as a cost to be borne, but also as a competitive advantage for companies with transport know-how. From his survey Scaff concludes that in the future transport optimisation, partnerships with freight carriers, long-term contracts and the use of forward contracts will become increasingly important. ●