

**Freight Outlook for the Cement Industry**

***DRY BULK FREIGHT MARKET***  
***CURRENT and FUTURE TRENDS***

A BRIEF OVERVIEW OF BULK SHIPPING

2007 PROJECTIONS AND RECOMMENDATIONS

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Recently, when discussing the rise in freight rates, the mantra was “China, China and China” but now the forces extend to India and the rest of the developing world. In the last three years we have seen freight rates go to record highs. Many predicted a firming market, but it is safe to say that nobody predicted the levels to which they have risen. Before we get into the why’s and wherefore’s and make some predictions, we have to step back for to look at some market basics first.

**Overview of dry bulk shipping.** Cement is considered one of the “minor bulks”.

While it is of supreme importance to present company, it is only a small part of the world shipping scene. It is necessary to look at the other commodities and larger ship types that drive the overall freight market.

The major dry bulk cargoes moving on big ships are iron ore, coking coal, steam coal, and grain. These cargoes move primarily on Capesizes, the biggest ships that must go around the capes, as they are too big for the Panama canal. The ships are from 80,000 dwt up, with a yardstick ship 180,000 dwt, and they are always gearless.

The next size down, Panamax, (60-80,000 dwt usually gearless) specialize in grain, with coal and some ore as well. Some cement has moved in recent years from Asia to the U.S. Gulf on Panamaxes, but rates have gone from \$15/mt three years ago to almost three times that now. Handy (10-40,000 dwt) and Handy-max (40-60,000 “supramax” 50-60,000 dwt) ships also carry the major bulks, but they carry all the remaining dry bulk cargoes, the “minor bulks”, phosphate rock, potash, other fertilizers, bauxite and alumina, CEMENT, clinker and gypsum, steel and non-ferrous ores, and others such as forest products and sugar. While there are specialized ships for some of these cargoes (for example, forest products more mainly on open-hatch types), most move on handy and handy-max bulkcarriers almost all of which are craned, and some of which are equipped with their own grabs for self-loading and self-discharging. In addition to conventional bulkcarriers, cement is moved on specialized pneumatic ships, with their own pumping system designed to discharge the cargo into shore side silos in a closed, dust-free operation. However, I won’t go into detail on this type of ship, as we are focusing on cement as a sector, in the larger multipurpose bulkcarrier market; most

cement (which includes clinker) moves on conventional ships, and is unloaded either with grabs or auger type (Siwertell) or pneumatic (Kovako) equipment.

**Fundamentals of the shipping market.** While there is some insulation from one size ship to the next due to port restrictions and cargo gear, if the big ship market is very strong, charterers of those ship finally start to split stems (which is going on now), and take smaller ships for their requirements, and the overall market takes off. This is what has happened in these last three years. Conversely, if the market for the big ships is poor, eventually their owners start fixing smaller cargoes, either as full cargoes or parcels, and the whole market slumps. Sometimes rates for smaller ships can remain firm while those for the larger ones languish, and vice versa, but generally do not stay out of sync for long. For the ore and coal markets, commodities that move primarily on the big ships, volumes of trade are traditionally tied very closely to the world economy, and make up about fifty percent of all cargo moved. China has upset this usual relationship by imports of iron ore increasing at much faster rates than pure macroeconomic growth.

Grain consumption is tied to increasing prosperity, with variations from season to season, depending on the harvest cycle, altered by weather and delays in inland transport. Capesizes usually aren't particularly affected by weather and congestion, but they have been in this period.

In addition to the pure volume of cargo and ships, there are other factors in freight rates as well, namely fuel prices, exchange rates and interest rates. Fuel prices have increased with the run-up in oil prices, and will be a big factor in next year's contract rates. Suffice it to say, most Owners ask for bunker escalation/de-escalation clauses, unless they formed hedge their fuel prices. Interest rates impact on ship financing, but we assume at worst a modest rate increase in the foreseeable future, so there should not be any effect for the nearby negotiations. Currencies have a big effect. When the dollar is weak, as it is now, there is upward pressure on freight rates, as non-dollar costs to owners increase, and the inverse is

true when the dollar strengthens. There is an inverse effect where the commodities themselves are priced in dollars: with cheaper commodities there is more demand.

As in all free markets, rates are determined by supply and demand, the supply of ships and the demand of the charterers to move cargoes.

The worlds' shipowners collectively try to supply ships in the right numbers, sizes and types to satisfy the fluctuating demand of charterers. The growth of dry cargo shipping demand corresponds very closely to the growth of world GDP. Typically, this grew at an average of 2% per annum. New ships are supplied, and old ones scrapped, at rates targeting this growth in demand, to keep returns on shipping at acceptable levels.

The world has changed lately as we know. One positive thing has been the liberalizing of economies in the developing world, with the scrapping of Communism, and the triumph of globalization. China isn't the only developing nation which is growing, but with its 1.3 billion population and annual growth rate of 8-10% per annum for some time now, its demand for industrial raw materials to fuel its infrastructure growth caught the world by surprise.

The world as a whole has experienced above average growth of late, and in 2007 may be in the 3-4% area, and the world's shipping industry simply hasn't built enough ships to meet demand.

Graphs of freight rates for the last year showing the volatility over the last year:

## Baltic Indices and Routes



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The latest numbers (November 20):

Baltic Capesize t/c average: \$/day 63,285

Baltic Panamax t/c: \$/day 32,584

Baltic Supramax t/c average: \$27,862

Baltic Handysize t/c average: \$19,182 (operational since May)

Figures for 2007 are a little more reassuring on the supply side. The following table shows the current dry cargo fleet, ships on order for delivery 2005 and ships over 25 years of age, all in million dwt, figures from Lloyd's Shipping Economist, November 2006:

| Size          | Handy | Handymax | Panamax | Capesize | Total  |
|---------------|-------|----------|---------|----------|--------|
| Current       | 69.23 | 65.23    | 92.71   | 135.19   | 362.36 |
| Deliveries 07 | 01.60 | 04.54    | 04.4    | 09.37    | 19.91  |
| Growth rate   | 2.3%  | 6.9%     | 4.7%    | 6.9%     | 5.5%   |
| Dwt 25+       | 24.06 | 03.92    | 07.96   | 06.0     | 41.92  |
| % > 25 years  | 34.8% | 5.9%     | 8.5%    | 4.4%     | 11.5%  |

This is not any attempt at a mathematically rigorous analysis of supply of ships and cargoes, but rather an observation that there should be sufficient new ships delivered in 2007 to cover natural increases in quantities of shipments. Of course, if the economies of China and elsewhere stall, which we don't think is likely, the market could slide. On the other hand, there are a lot of old ships to be scrapped if the market were to slump, and that helps put a floor under any decline. If the market stays high, owners will keep the old ships running.

Spot versus Contract: According to some published reports, over ninety percent of all dry bulk cargo is moved on contracts of affreightment, period timecharters of one year or longer, or on ships owned by the cargo interests, such as grain, steel or mining companies. The spot market, therefore, is highly leveraged: a two percent increase in cargo volume in the overall market equates to a twenty percent increase in volume for the spot market; likewise, small changes in the availability of ships has an inverse effect. Volatility: since charterers have been burned badly in these last few years, more business is being done under contracts and period charters, and we feel that this will make the spot market even more volatile as there is less and less tonnage trading in the spot market.

The state of the spot market affects the contract market, which tends to reflect the spot market at the time of fixing. The bottom line is that the fourth quarter, now, is fixing time for next year's cement contracts, and the bad news for cement charterers is they are trying to fix next year's contracts while the market is strong. Note: while cement charterers typically fix one year contracts, we are starting to see more multi-year contracts, where owners are willing to

give rates lower than the current market—and lower than next year's rates, and if commercially feasible, this is something that charterers should consider.

Forward Freight Agreements or FFA's. These contracts have become more widespread, and have replaced the old BIFFEX market, which was a failure. Unlike the BIFFEX market, which was an exchange based futures market, FFA's are often with counterparties, so there is credit risk, but there are some FFA contracts sold via exchanges. These contracts work like traditional index derived futures contract. The contracts can be bought and sold, and expire at the end of the month with cash settlements. Theoretically, one of the six BHMI routes might be a good representation of a cement route; however, contracts are not sold for most routes. In addition, when it comes time to unwind the position by selling the paper and buying the physical freight, if there isn't a ship around whose owners will do cement, the hedge will have been meaningless. FFA's do work for owners hedging a fleet, and grain companies hedging large positions, but they simply aren't appropriate for the average cement charterer.

**Projections and recommendations for upcoming contract negotiations, and freight rates through 2007.** Predicting freight rates, like predicting the future in any market, is a risky job, and, of course, the risk of error gets greater as time goes on. We do expect that the market may decline somewhat during 2007, but barring economic calamity in China or elsewhere we don't foresee a collapse—although there are analysts who are bearish. But if the market does come down, there will be a lot of cheaper ships, but many will be on timecharterer where the charterparty excludes cement.

The big dilemma for cement importers is that freight rates are so high that the landed cost of cement imports is far higher than that of domestic production. With cement and concrete prices declining in some areas, it is critically important to get the quantities right. Ratewise, our recommendation for charterers is to take rates if you can live with them, and avoid trying to guess the freight market. It may go down, but it also may go up; that is something that mortals don't know. You should not expect to get much flexibility in quantity from owners. Remember that they are covering their commitment with Forward Freight Agreements, and

those are future contracts, not option. If you are comfortable on quantity, there are discounts to be had for multiyear contracts, and those should be considered. The main object is to fix with financially reliable owners. If there are price shocks, the importer does not want to be stuck with sales contracts to perform, and have non-performing owners in a higher freight market. For owners, it is still a competitive market, and it is going to be interesting to watch negotiations for 2007 contracts play out.