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Compliance and Commerce: Impact to the shipping industry from rising bunker prices and emission control regulations

Many factors influence movements in the international shipping markets. The fortunes of the industry fluctuate over time as markets, carrying capacity, and political and regulatory factors come into play. A number of issues, which are perennial in nature, drive revenues and costs in the various segments of the overall market. While demand, capacity and competition continue to be the main factors driving the top line, the cost line is now increasingly being manipulated by powerful influences that are not quite market led in the same way. Paramount among these is the price of bunkers and emission control regulations, which together are having a profound commercial impact on the industry.

Rising oil price

In recent years, marine fuel costs have become a critical factor in the profitability of the industry as a whole. From March 2007 to March 2008 (and the price rise had already been well under way for some time by early 2007), the price of IFO380 in Singapore rose from a monthly average of around US\$320 per tonne to nearly US\$490 per tonne. As a percentage of overall operating overheads, the cost of marine fuel has risen sharply from between 10 and 20 per cent to over 50 per cent in less than two years.

Geopolitical risks have led to nervousness about crude supply. The world's refining capacity has been pretty much static for many years too. Increasing demand (particularly with China as a major new consumer) coupled with crude supply often coming from regions of political instability and constrained refinery production has led to a sustained increase in all oil prices including bunker fuel. Furthermore, as many of the world's refineries become more sophisticated they generate less residual product thus putting additional pressure on bunker supply.

Oil prices are impacted by a complex interplay of natural and artificial forces. And the general set of forces that seems to be at play currently to keep the prices where they are does not seem like a short-term phenomenon. There seems little logical reason to believe that the oil price will ever come down again by any significant or sustained amount, as long as the world continues to burn more oil, and the Asian economies chase the West in consumption volume terms.

Impact on shipping industry

Shipping is a textbook example of the fortunes of an industry that is inextricably linked to the pendulum principle of supply and demand. Although there may be pockets of price fixing and market manipulation, the shipping industry is pretty much a free market on the revenue side. On the whole, powerful and highly competitive individuals have dominated the shipping industry each acting in their own interest, reacting individually to the market.

When strong trade flows demand transport capacity than is readily available, freight

goes up, and the mass response is to rush to build ships to cash in. This leads to overcapacity, which forces freight down. With low rates and high finance costs to cover, it then becomes more attractive to sell older tonnage. Meanwhile, the shipyard s order books begin to slim down, the world fleet reduces and freight begins to rise once again.

There is no straightjacket regulation or voluntary control on the revenue side of shipping. Just the raw impact of the market driven by supply and demand, qualified by all the little local events that adjust and affect the market. So while revenues may be unrestrained by anything but market forces, there are more external controls, which impact cost.

While on the one hand bunker prices are going through the roof, on the other, the shipping industry produces a growing percentage of the world s global-warming emissions per year. According to the International Maritime organisation (IMO), shipping industry generated about 3.5% of the world s total carbon emissions in 2007. Regulations are already in place, and more are being introduced to reduce emissions, thus adding to the cost of operating a ship.

Steadily rising operating costs and volatile revenue will lead shipping companies to develop refined management techniques to deal with different patterns of their markets or face commercial collapse. The ship owner who has carefully balanced his debt portfolio, unencumbered asset value and reserves against any downturn will find his prudence paying off. While those who have overextended to expand his fleet in the hope that the good times will continue may face an uphill task to survive the sluggish market.

Emission control regulation time for the industry to face reality

The IMO's regulation, Marpol Annex VI, requires vessels flagged in, or sailing to or from signatory states to burn fuel with less than 4.5 per cent sulphur. The signatory states, which include most of the world's main shipping countries, together represent over 50 per cent of the world's tonnage. An extension of this regime is the institution of Sulphur Emission Control Areas (SECAs) where fuel burnt must have less than 1.5% sulphur. Both these regulations clearly require the use of more expensive fuel in the designated areas and segregated tanks for sailing in different regions.

Moreover, INTERTANKO, the international tanker owner association, is proposing that the entire shipping industry move away from using residual fuel and that all ships run on distillate fuel. Marpol Annex VI was introduced in May 2005 and since 2006 there have been attempts to update and improve it to control carbon emissions. The INTERTANKO proposal is a significant element in these deliberations as those responsible are wondering whether world opinion about global warming is strong enough to support such a radical suggestion and thinking that perhaps it might be!

INTERTANKO is suggesting the mandatory introduction of 1 per cent sulphur-content distillate fuel as early as 2010 and 0.5 per cent by 2015 for new ships. The suggestion

is radical and could prove so costly and difficult to implement.

Currently, only about 10 per cent of the 200 million tonnes of fuel burnt every year by the shipping industry is distillates. Distillate fuel costs around double the price of residual fuel (On 24th March 2008 in Singapore, IFO 380 was US\$490 per tonne while Marine Gasoil was US\$950 per tonne). The switch to distillates could mean a doubling (by today's prices) or trebling of the price of fuel for running ships (already up to 50 per cent of operating costs). So the sheer cost of running the world fuel on distillates alone would be staggering. Indeed that added cost would eventually end up in the price of goods in the hands of the consumer. The ship-operating industry would also suddenly find itself competing for limited supply of refined product with other users of cleaner fuels such as land based industrial and vehicle users. Demand is expected to surge to an additional 180 million tonnes per year.

Besides cost implications from the ship operating perspective, the INTERTANKO scheme seems unfeasible given the current state of the world's refining sector. There is simply not enough capacity to meet the additional demand and global refining planning would have had to have started a while ago. Another point to be considered is the increase in emissions if the refineries were to increase output of distillate fuels.

The INTERTANKO proposal has polarised the positions on either side of the argument: the ship operators and refiners point out the sheer commercial and practical impossibility of implementing the scheme, while the anti climate change enthusiasts support the INTERTANKO proposal as a clarion call from the future.

With positions polarised like this, compromise becomes difficult and agreement will take longer to achieve. A cynic would find it hard to suppress the thought that perhaps that is what the authors of the proposal might have had in mind – let the politicians argue while we carry on business as usual for a while longer.

The shift in trend is inevitable though. There have been a number of local attempts to introduce radical clean air regulations: While SECA is driven by IMO, California has recently tried to impose local emission control regulations, including the use of low sulphur distillate fuel in ship s auxiliary engines within 24 nautical miles of California. The European Union is also threatening unilateral action if the IMO does not act fast. Evidently, there is mounting political will at the international level to make emissions reduction a major issue, and sustain and police it as such.

In the short term, the industry is succeeding in challenging the Californian proposals on the grounds that international and not local authorities should regulate an international industry. John McLaurin, President of the Pacific Merchant Shipping Association (PMSA), which is on the front line of this particular battle, recently had to state explicitly that: The maritime industry accepts its responsibility to reduce air emissions. But his argument that he is trying to keep regulation of an international business as the domain of truly international bodies – principally the IMO – has inevitably been seen by a public

opinion that does not care about subtleties as trying to avoid the imposition of rigorous regulation of fuel emissions and therefore additional costs. The industry maybe winning the odd battle here or there, but the eventual outcome of the war seems inevitable.

No doubt it does take international bodies like the IMO or United Nations longer to resolve conflicting interests and arrive at universally enforceable conclusions than regional or local bodies. By fighting to have decisions on anti climate change regulation that have international implications taken away from the local level, the PMSA has ensured that the arguments will continue and that draconian regulations may continue for some time yet.

Interestingly, industry players seem to continue to look at fuel cost as an uncomfortable and extraneous element, and not so much as a new integral part of their business, which needs to be dealt with holistically. For example, the liner companies have implemented and want to continue with a fuel surcharge system. It is as if the high fuel prices were a kind of non-essential add-on to the other, normal, costs of running a ship. Of course it is true that if any liner company unilaterally hiked their rates to a more realistic level, they would likely lose business. So they present the situation as if their freight rates are just moving up or down as usual, while the maverick fuel element is just an added extra that has to be accounted for differently. The end result may be the same every shipper pays basic freight plus fuel surcharge, and every shipper pays the same. But conceptually, taking fuel cost out of the equation can prevent any direct confrontation arising out of the implications of huge increases of cost associated with fuel.

In 2006 nearly all the liner companies lost money Maersk was practically the only one

still in the black that year. The percentage falls in the net result across the board was universally blamed on the increase in bunker costs. In 2007 they have virtually all recovered well, due to a combination of measures, including more effective imposition of the fuel surcharge and adding additional vessels to routes so that frequency of calls can be maintained while allowing slower sailing to conserve fuel. But the problem is that these are band-aid measures. Nothing has really changed in the way the industry does business.

Part of the problem is that with the fuel surcharge mentality on the one hand, and high enough revenues to not have to care about costs on the other, there is less incentive for the industry to take a longer view. If car owners in Europe in the 1970s and 1980s had been able to absorb the rising cost of gasoline, or pass it on to someone else, maybe the development of the fuel efficient car would have been much slower in Europe than it was. The United States, with fuel prices kept artificially low for much longer, failed to respond to the need to develop efficient vehicles. The devastation of the US vehicle industry is largely a result of this failure to grasp and respond to the bigger picture.

Indeed things are being done arbitrarily to increase operating efficiency of vessels. But they do not seem to be happening at a global level yet, nor do they seem to be part of a radical new strategic thinking. It seems particularly striking how little up take there has generally been in the application of fuel saving measures.

At a Bunkerworld conference in November 2006, three different providers of fuel efficiency mechanisms collectively promised proven fuel savings of up to 40 per cent: A radically innovative hull design for new ships, use of fuel additives and use of kites to

harness wind power. A 40 per cent saving would bring bunker costs down towards pre-rise levels.

If shipping companies can accept that high fuel prices are here to stay and that they are integral to their operation and not just an unpalatable extra, they might start to think more seriously about putting real fuel saving devices on their ships.

The underlying factors are changing and at some point the maritime sector will have to wake up to this. Companies that do adapt in advance will find themselves succeeding. Those that fail to make the radical changes required will find themselves in trouble.

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