



DSF/07/74



SHIPPING MARKET REVIEW 1ST HALF 2008

AUGUST 2008

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Executive Summary

Please read carefully the disclaimer at the end of this report.

This report reviews the central developments in shipping in the period from January to July 2008 for the main shipping segments in which Danish Ship Finance has exposures, and indicates possible future market directions.

World Demand Indicators

The recessionary tendencies in North America and Europe have sounded the alarm bells for the global economy.

On the one hand, we are in the middle of a financial crisis where North American and European banks are reporting significant losses and thus are contracting credit. Credit is the very epicentre of the problem. European and in particular North American consumers have overspent for years. They have used their asset-based savings, mostly in the form of real estate, to prolong the spending spree using Mortgage Equity Withdrawals. The flip side of the coin is a historical low savings rate in North America.

On the other hand, global GDP growth is still predicted to be high and many emerging economies are expected to present strong growth rates for 2009. Thus, some pundits argue that the world economy has de-coupled from the traditional growth locomotives – North America and Europe.

We do not subscribe to this argument as we do not consider the low domestic savings of North America and Europe a domestic issue. In an interconnected world economy, where not only goods but also services are traded, low North American and European consumption quickly becomes an issue of world economic importance as it is ultimately consumption rather than investment or output that is a true measure of economic power.

Therefore, we argue that the prosperity of many emerging market economies – for example the Chinese – depend on North American and/or European consumption in order to sustain long term growth. Here is why.

The Chinese economy is primarily driven by a mixture of investment and exports and less by domestic demand (consumption), which is, as in many other emerging market economies, lagging behind and represents a modest contributor to economic growth. Today, less than 8% of the Chinese population (approximately 100 million people) earn enough to contribute positively to the economic growth. The Chinese economy is therefore dependent on the European and the North American consumers in particular to purchase their output until their own domestic market matures.

The snowball effect does not stop here. The Chinese economic growth has created an almost insatiable demand for raw materials. This demand has been one of the main drivers behind the recent years' Dry Bulk market euphoria and has contributed significantly to the economic prosperity of raw material (including oil) exporting regions.

We therefore argue that long-term global GDP growth is dependent on North American and European consumption until emerging markets mature sufficiently to represent an alternative. Nevertheless, this is not equal to saying that we do not recognise the importance of GDP growth generated from short-term factors such as expansive fiscal policy instruments. What we argue is that such stimuli are by their very nature short-lived and unlikely to generate second-round effects.

For the next few years, we expect price elasticity to re-enter the equation. That is, we expect the high commodity prices to lower end-user demand and economic growth, and hence we expect lower global GDP forecasts.

Generally speaking, we see a trend towards overcapacity as global demand wanes and the capacity of the merchant fleet continues to increase. We therefore expect vessel earnings to decline and ship prices to follow suit.

- **Ship Building:** Shipyard capacity finally seems to have outpaced demand, but have ship prices peaked? We believe so. Measured in terms of required earnings per day, current price levels seem unsustainable over 20 or 25 years. However, we do not expect significant short-term newbuilding price reductions as the current orderbook is large and delivery time still well above any critical level. A question remains: Will Greenfield Shipyards deliver on time? If they do not, some pressure will be removed from the market.
- **Crude Tankers:** Crude Tanker spot earnings have taken everyone by surprise as off-season freight rates broke all records. There appears to be a low appetite for single-hull tankers which is driving a wedge between single- and double-hull tanker earnings. Nevertheless, the strong double-hull tanker earnings and the approaching implementation of the IMO phase-out regulation have supported newbuilding activity and prices. For the remaining months of 2008, we expect double-hull freight rates to stay at high levels but with further discounts for single-hull tonnage. For 2009, we expect that the high oil price will have dampened demand, which is why we expect declining freight rates. Whether this will only impact the single-hull tanker discount remains to be seen.
- **Container Ships:** Downward market momentum is accelerating, availability is increasing and fixture periods are reducing as shipowners start meeting overcapacity. Surprisingly, newbuilding prices remain high whereas freight rates, timecharter rates and secondhand prices are declining. Despite these factors, ship owners' appetite for newbuildings seems almost insatiable. For the future, overcapacity and declining vessel earnings seem inevitable as the US sneezes and the world economy catches a cold.
- **Dry Bulk:** Even though as we all expected freight rates to decline, longer travel distances and port congestion have once again saved the day for shipowners. Surprisingly, it seems that the market expects a shortage of future capacity. Ship prices and contracting activity are increasing accordingly. We estimate that it requires a "new China" or more precisely what amounts to an additional iron ore trade to employ the current Capesize orderbook. And then we have not even employed the remainder of the Dry Bulk orderbook! Thus, we maintain our fundamental long-term scepticism that the current buoyant Dry Bulk freight rates and ship values will continue. Nevertheless, we see some potential short-term upside from longer coal travel distances. Time will tell if longer coal travel distances will support freight rates all the way into 1H2009. ■

Ship Building

Shipyard capacity finally seems to have outpaced the demand. Have ship prices peaked? Measured in terms of required earnings per day, current price levels would seem unsustainable over 20 or 25 years. However, we do not expect significant short-term newbuilding price reductions as the current orderbook is large and delivery time still well above any critical level.

CONTRACTING PRICES

Newbuilding prices appear to be peaking. Only VLCC newbuilding prices have increased more in 2008 than during the same period last year.

Dry Bulk newbuilding prices seem to have stabilized

The average newbuilding price for a Capesize vessel has increased 1.6% during the first seven months of 2008, compared to 25% during the same period last year. The current newbuilding price is USD 27 million above the 5-year average and USD 61 million above the lows of 2002.

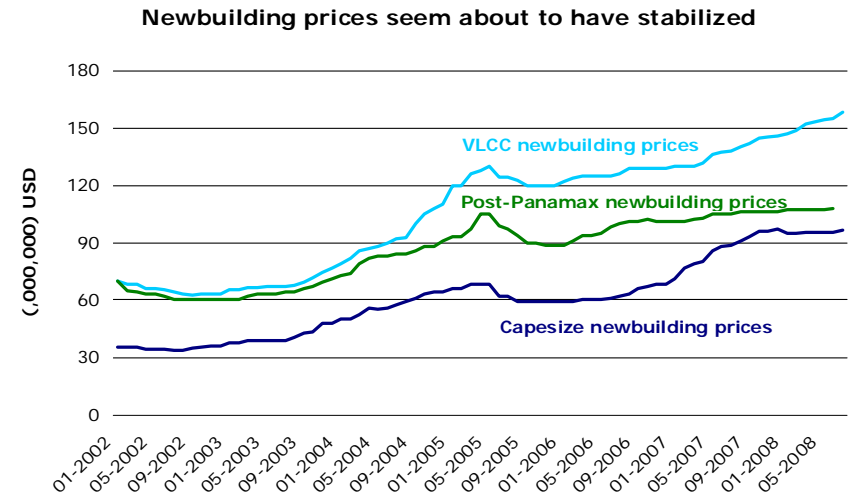
Container newbuilding prices remain firm

The newbuilding price of a Post-Panamax (6,200-6,600 teu) vessel has increased by a modest 1% during the first seven months of 2008, compared to 4% during the same period last year. The current newbuilding price is USD 9 million above the 5-year average and USD 30 million above the lows of 2002.

Tanker newbuilding prices continue to increase

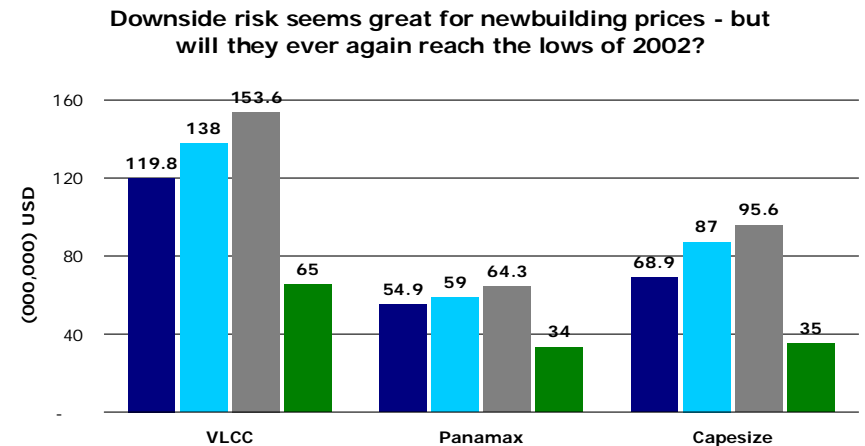
VLCC newbuilding prices have gained 7.5% in the first seven months of the year, compared to 6.2% during the same period last year. The current newbuilding price for a VLCC tanker is USD 34 million above the 5-year average and 89 million above the low level of 2002.

Figure SB.1



Sources: Clarksons, Danish Ship Finance

Figure SB.2



Sources: Clarksons, Danish Ship Finance

■ 5-year average ■ 12-months average
■ 6-months average ■ 2002 average



Little sign of the credit crisis! Contracting activity maintains momentum, especially for Dry Bulk and Tankers. In spite of this, delivery time is declining and hereby reflects the large increases in world shipyard capacity.

In our previous Shipping Market Review, six months ago, we predicted a modest contracting activity. Clearly, we were wrong. Particularly the demand for Tankers and Dry Bulk newbuildings has taken us by surprise.

85 million dwt contracted and declining delivery times

In total, almost 85 million dwt was contracted during the first seven months of 2008, compared to 121 million dwt contracted in the same period of 2007 and 75 million in 2006. Despite the large contracting activity, delivery times declined. This reflects that shipyard capacity increased more than demand, as existing yards have improved productivity and new yards have entered the market.

36 million dwt of new contracts in the Dry Bulk segment

Once again, Dry Bulk contracting exceeded market expectations with a whole 36 million dwt contracted in the first seven months of 2008 (fig. 3). Nevertheless, Dry Bulk delivery time continues to decline (fig. 4). Although one may be tempted to conclude that current Dry Bulk orders reflect demand expectations, we consider them more a product of an irrational gold rush driven by last year's high Dry Bulk freight rates.

A sudden demand for Crude Tankers keeps delivery time high

High Crude Tanker contracting activity surprised the market with almost 30 million dwt contracted during the first seven months of 2008. Crude Tanker contracting activity has never before been that high during the first half of the year (apart from 2006).

Container contracting was low during the first seven months of 2008, largely reflecting the fear of overcapacity as the world economy appeared to be heading for a period of low growth.

Figure SB.3

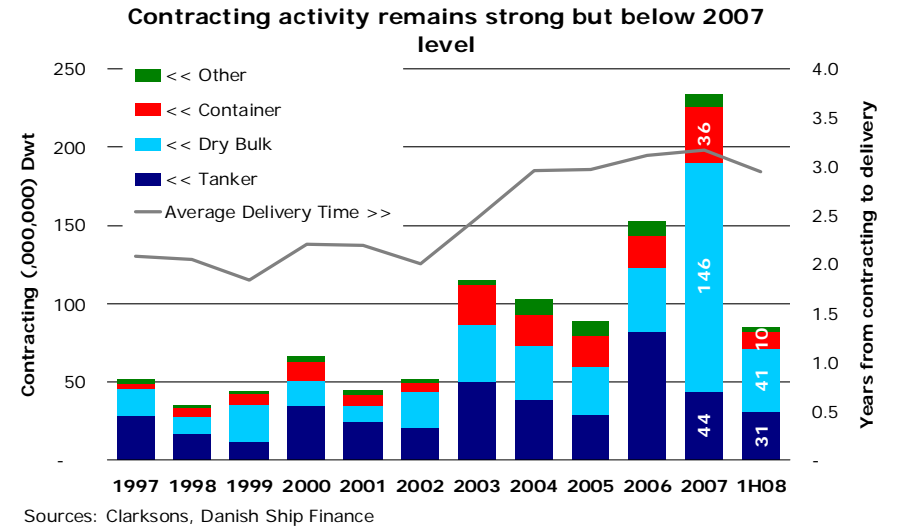
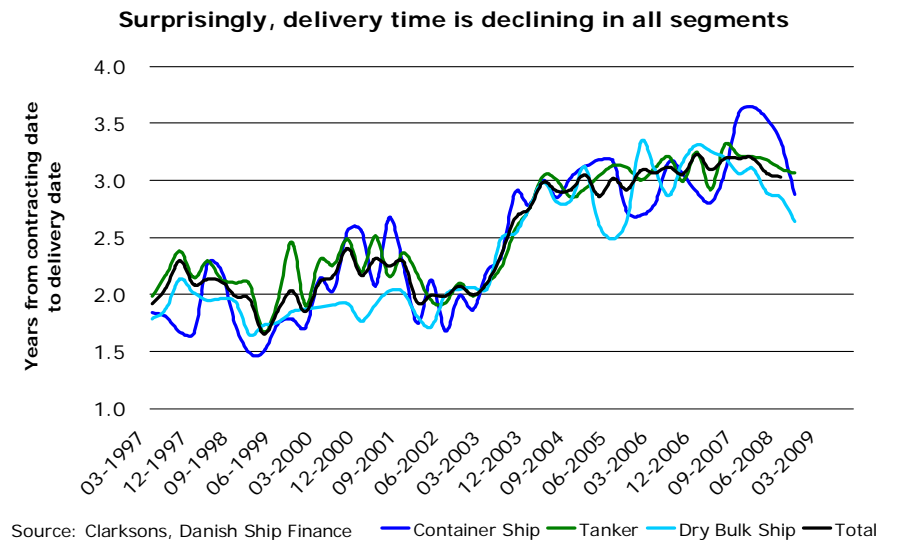


Figure SB.4



Secondhand prices continue to increase, but can earnings justify this over a 20 year perspective?

The daily earning requirements for a 5-year-old Capesize reaches USD 64,800, carrying a USD 20,000 spread down to newbuildings.

The price for a 5-year-old Capesize has increased 8% throughout the first seven months of 2008. This has caused the required earnings per day for a 5-year-old Capesize vessel to peak at USD 65,000 at the end of July 2008 (dark blue line in fig. 5). This is an increase of 6% (USD 3,800 per day) during the first seven months of 2008. The corresponding newbuilding rate reached USD 45,000 by July – an increase of a modest 1% (USD 500 per day) during the first seven months of 2008 (red line in fig. 5).

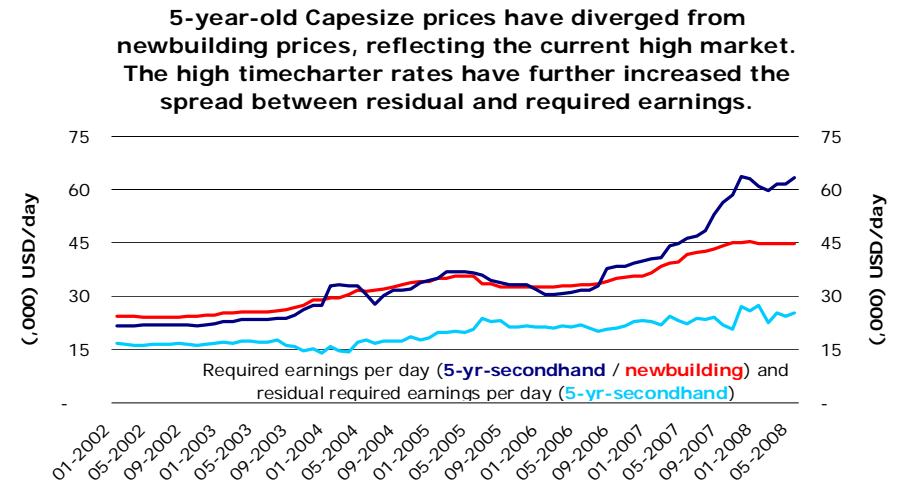
Buying a 5-year-old vessel without a charter contract is accrued with considerable risk

Not many assets can fulfil such additional daily costs over 20 years (for a 5-year-old Capesize vessel). Therefore, the question of whether higher costs in any way correlate with higher earnings (again over 20 years!) becomes highly relevant. We do not believe this to be true. Thus, we believe that current secondhand projects, without a charter contract, should be regarded in the context of marginal fleet costs rather than as an individual investment project.

Buying a 5-year-old vessel with a charter contract seems to be a lucrative investment but is not risk free

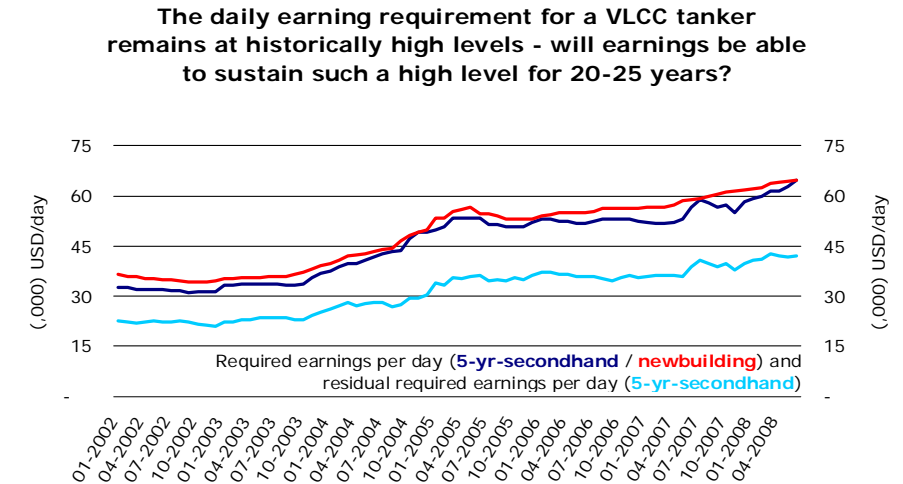
The residual required earnings (i.e. buying a 5-year-old Capesize with a 3-year timecharter contract and amortizing the debt by the value of the 3-year timecharter rate) for the remaining 17 years is a modest USD 25,000 per day (light blue line in fig. 5). The one-year timecharter rate has not fallen to such a low point since August 2003. Thus, the project seems viable, comparing the historical 1-year timecharter rate with the residual required earning for the 5-year-old Capesize vessel (assuming that history tells something about the future). However, from a banker's perspective, this is not to say that the project is risk free. The cash-flow risk is replaced by

Figure SB.5



Sources: Clarksons, Danish Ship Finance

Figure SB.6



Sources: Clarksons, Danish Ship Finance



a counterparty risk but the implicit risk remains. At the end of the day, owners still have to earn what amounts to USD 64,800 per day over 20 years to pay off the debt.

Apparently low cash-flow risk after third year

In July 2008, a 5-year-old VLCC cost around USD 165 million, compared to USD 138 million in January 2008. That is an increase of almost 20% in seven months. Measured in terms of daily earning requirements, a 5-year-old VLCC requires approximately USD 67,900 per day (dark blue line in fig. 6). This constitutes an increase of 15% in six months (USD 8,800 per day). As illustrated by the light blue line in figure 6, the residual required earnings per day have risen to USD 42,000 per day (up 3.6% or USD 1,500) during the first six months of 2008. The historical 1-year timecharter rate has not been that low since the beginning of 2004.

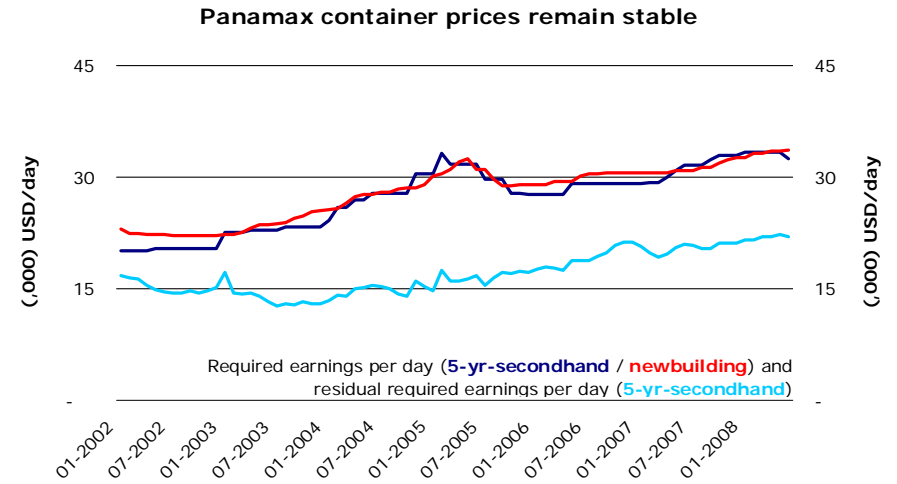
Prices on Panamax container vessels remain stable but have started to decline as the world economy loses momentum

Panamax container secondhand prices have lost approximately 4% during the first seven months of 2008. Contrary to what would be expected, required earnings per day have increased 3% during the first seven months of 2008 (fig. 7) due to the fact that the 3-year timecharter rate has lost more than the secondhand prices (-10% during the same period). Although future container earnings seem under threat, as the world economy trembles, the residual required earnings of approximately USD 22,000 per day do not seem overpriced compared to historical 1-year timecharter rates.

Will world demand growth be sufficient to absorb the orderbook?

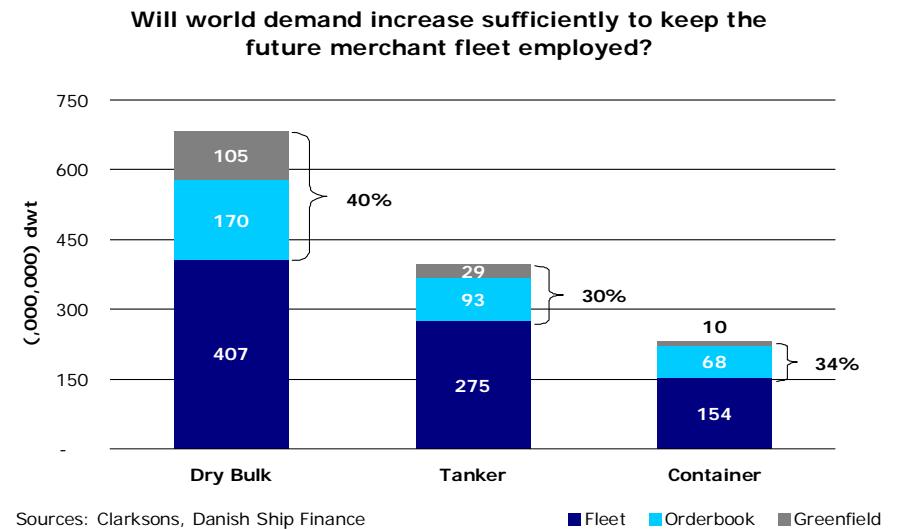
Taking the large orderbook into consideration (fig.8), it is crucial to consider whether world demand will be capable of absorbing the new capacity. Freight rates and ship values are likely to come under pressure if demand growth falls short of supply growth. If a significant supply surplus occurs, it might even be difficult to meet the residual required earnings.

Figure SB.7



Sources: Clarksons, Danish Ship Finance

Figure SB.8



Sources: Clarksons, Danish Ship Finance

Legend: ■ Fleet ■ Orderbook ■ Greenfield



We expect shipyard capacity to significantly outpace future demand. Accordingly, we expect newbuilding prices gradually to decline over the next 18 months. We continue to expect significant Greenfield cancellations.

Does shipyard capacity reflect future demand?

The record high orderbook and declining delivery time (fig. 4) indicate that shipyard capacity has increased significantly. If shipyard utilization is to remain high, a high level of contracting activity will be required in the years to come. Alternatively, shipyard capacity may have to adjust to a lower demand.

Newbuilding prices are determined by berth cover

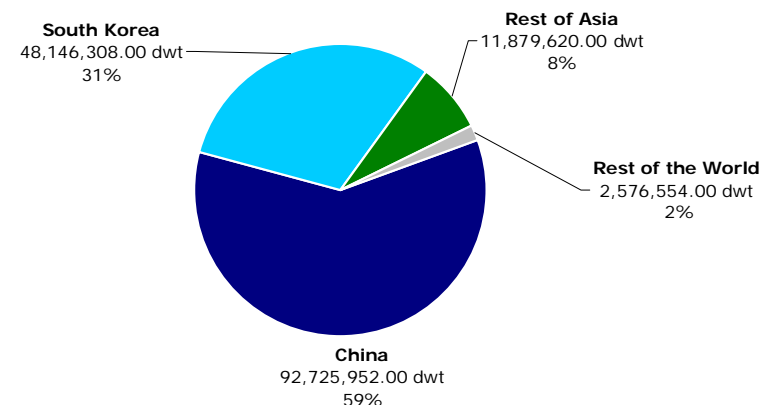
In a “willing seller/willing buyer” scenario, newbuilding prices should be determined as a function of component costs and the net present value of the ships’ future earnings. However, in times where shipyard capacity is unable to meet the demand (i.e. where contracting activity exceeds delivery), component costs only set the floor for newbuilding prices. In these cases, newbuilding prices are likely to increase more than input costs dictate. Accordingly, we argue that newbuilding prices are in particular determined by berth cover (shipyard utilization).

Greenfield shipyards expected to build 27% of the world’s orderbook

Until now, we have omitted to distinguish between experienced and Greenfield shipyards. Clearly, this is an issue of great importance as berth cover may be significantly lower for Greenfield shipyards, which are more prone to cancellations. If the market believes that the current orderbook is too large to be absorbed by demand, it is likely that many speculative orders will be cancelled. Insufficient refundment guarantees and delivery delays may be the most likely explanations to order cancellations. Greenfield shipyards are more exposed to these risks than more experienced shipyards. Figure 9, 10 and 11 summarize the extent of the Greenfield story.

Figure SB.9

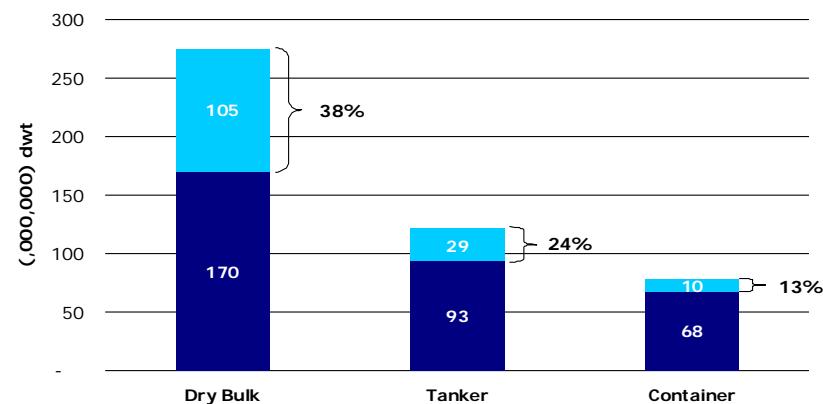
27 % of all newbuildings are due to be built at Greenfield shipyards



Sources: Clarksons, Danish Ship Finance

Figure SB.10

38% of the Dry Bulk newbuilding program is to be built at Greenfield shipyards



Sources: Clarksons, Danish Ship Finance

■ Orderbook ■ Greenfield



Newbuilding prices decline in tandem with berth cover

According to Howe Robinson, newbuilding prices will start to weaken when delivery time falls below 2.8 years. In the case of significant order cancellations, Greenfield shipyards will quickly reach this critical point, thus supporting our expectation of a significant difference between Greenfield newbuilding prices and newbuilding prices from experienced yards.

Figure 12 summarizes the impact of (Greenfield) shipyard capacity expansions on national delivery times. The heavy Dry Bulk contracting activity has not increased delivery time for South Korean and Chinese shipyards as capacity expansions have matched increased demand whereas Japanese delivery time and the orderbook have continued to increase.

In terms of newbuilding prices, this indicates that we will most likely see discounts on Chinese and South Korean built Dry Bulk vessels long before the Japanese shipyards follow suit.

So far, we have not been able to identify any significant cancellation activity. However, we continue to keep a watchful eye on Clarksons world orderbook database.

Further resale activity ahead

Resale of newbuilding contracts adds a third factor to the forecasting of newbuilding prices. We have seen elevated resale activity in the Container segment (figure CS.9), whereas the resale activity in the Dry Bulk and Crude Tanker segments has been modest. We expect significant further resale activity in the years to come – but at significantly lower prices!

Secondhand prices are expected to decline

For quite some time we have argued that secondhand prices should decline. Things turned out otherwise. Nevertheless, we maintain our long-term position and continue to argue that prices have to come down at some point. Basically, we expect fleet capacity to outpace demand as the current orderbook is delivered. We do not see any supporting evidence for secondhand values in such a scenario. Only significant order cancellations may temporarily support currently high secondhand prices. ■

Figure SB.11

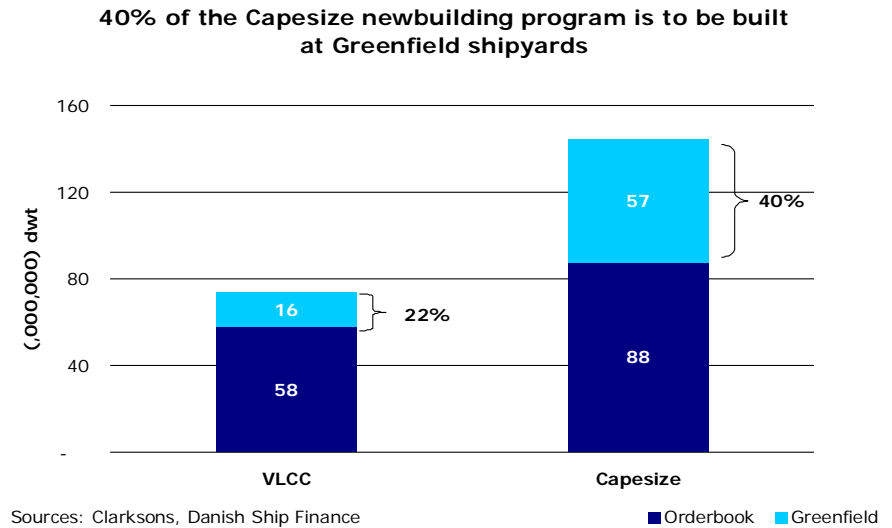
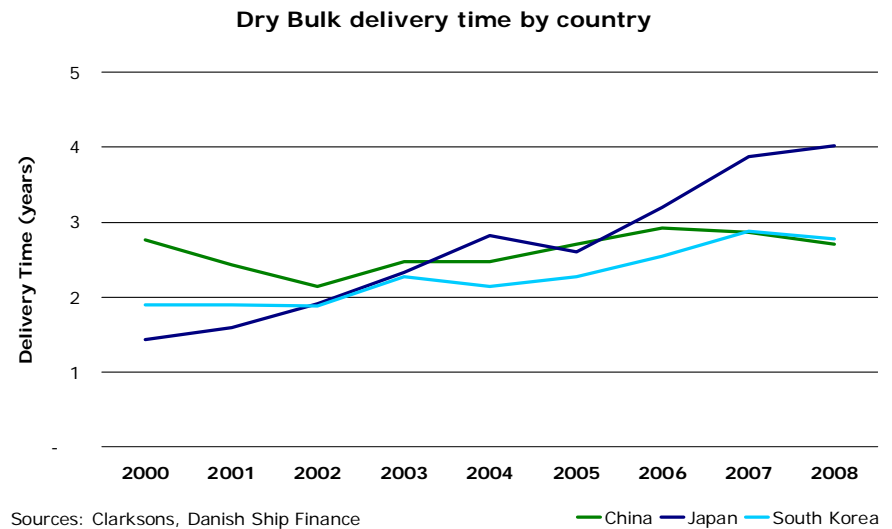


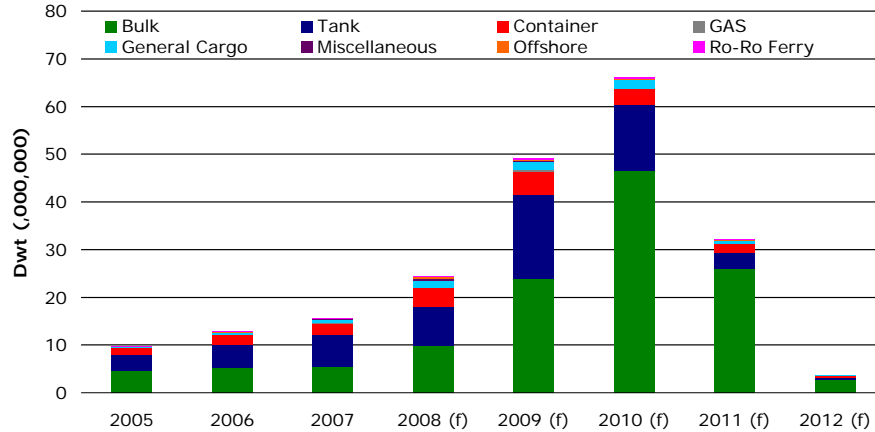
Figure SB.12



Fleet & Orderbook as per July 08 by Region of Build and Year of Delivery

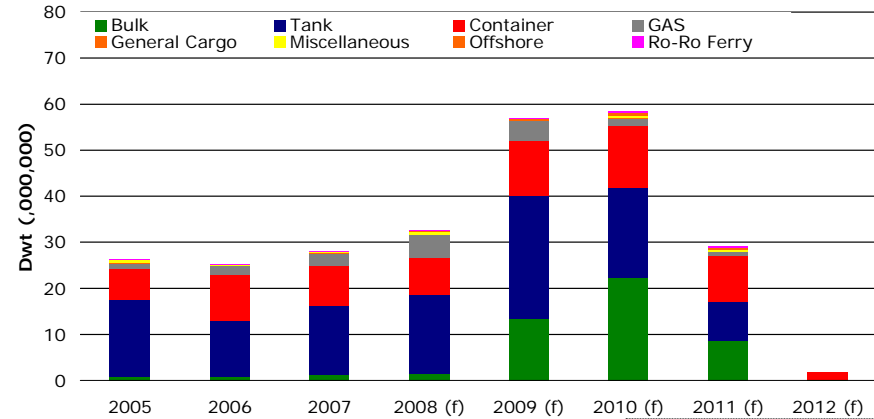
(Excludes allowances for possible slippage from scheduled delivery dates)

China



Sources: Clarksons, Danish Ship Finance

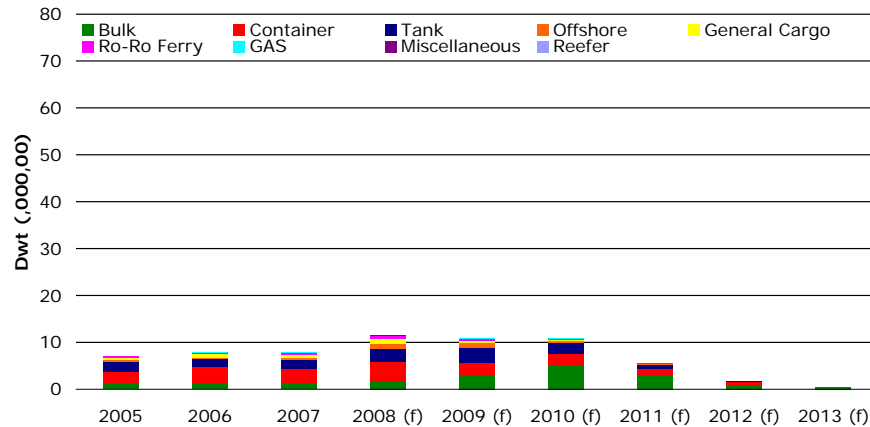
South Korea



Sources: Clarksons, Danish Ship Finance

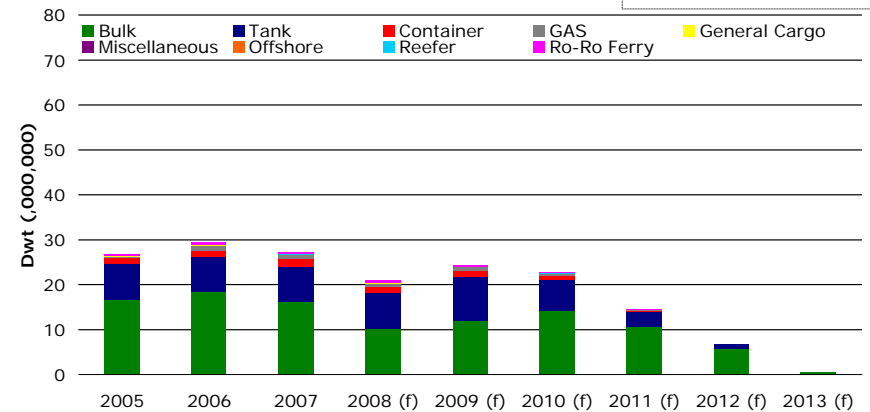
The Japanese orderbook may appear smaller than it actually is, as Japanese yards have a tendency not to register their orders until shortly before the actual ship building takes place.

Rest of World



Sources: Clarksons, Danish Ship Finance

Japan



Sources: Clarksons, Danish Ship Finance



Crude Tanker

Apparently, low tonnage availability has fuelled off-season double-hull freight rates in second quarter 2008. The reluctance to trade single-hull tankers has driven a wedge between single- and double-hull tanker earnings. The strong earnings have supported newbuilding activity and secondhand values. For the remaining months of 2008, we expect double-hull freight rates to stay at high levels but with further discounts for single-hull tonnage.

FREIGHT RATES

Increased spreads indicate insufficient availability

Crude tanker freight rates have taken us by surprise! VLCC freight rates have particularly surged, to above any level we had expected (fig. 1).

The freight rate spreads between the different segments have widened significantly. For the first six months, the average spread between a Suezmax and an Aframax tanker was approximately USD 24,000 per day (80% above the 5-year average), whereas the spread between a VLCC and a Suezmax tanker was a huge USD 38,000 per day (180% above the 5-year average).

Off-season freight rates exceed all previous levels

VLCC freight rates have on average gained 38,000 USD/day from first to second quarter 2008 (from peak-season to off-season). Compared to the same period last year, second-quarter VLCC freight rates have surged 155% (yoy), closing on average at 130,000 USD/day.

Thus, in the context of seasonal trends, the current VLCC freight rates are especially extraordinary. As illustrated by the light blue line in figure 2, current off-season freight rates are significantly above any previous average-levels.

Figure T1

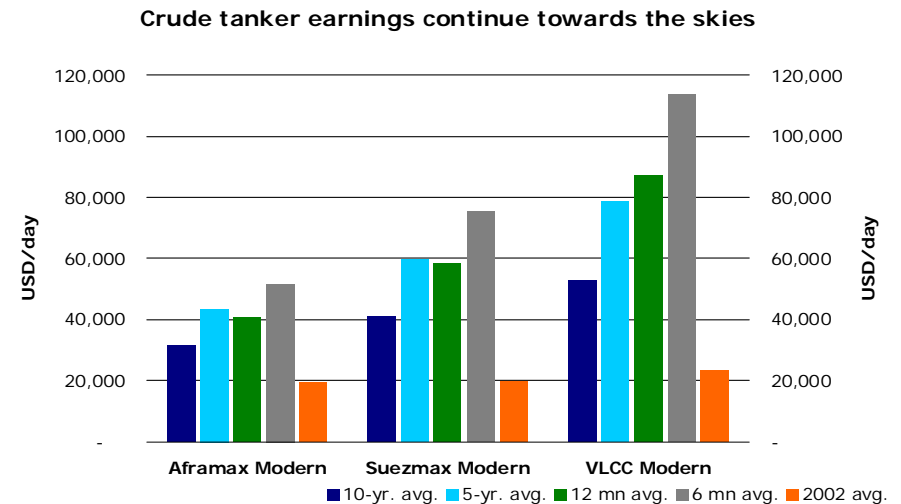
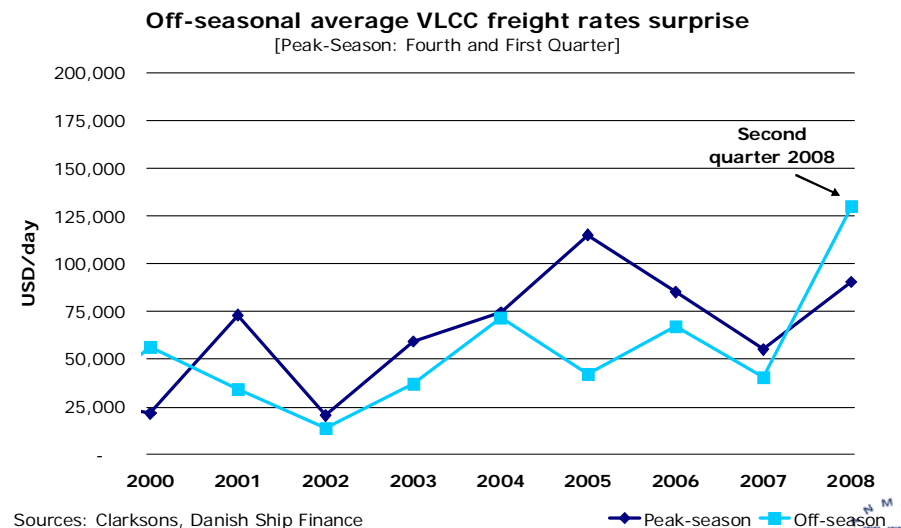


Figure T2



Increased oil production and longer travel distances have driven crude tanker demand. An apparent reluctance to charter single-hull tankers has driven a wedge between single- and double-hull tanker earnings. This might explain part of the lower average charter activity, which currently is at a five-year low.

Validating our previous forecast from the latest Shipping Market Review, OPEC decided to raise output. OPEC increased supply by 5.8% compared to same period last year. However, in total, world production increased merely 2% compared to the same period last year as North Sea and Mexican production dropped 7.8% and 10%, respectively.

Longer travel distances drive tanker demand

The bulk of the extra Middle East Gulf oil has gone to meet rising demand from Asian refiners in Asia-Pacific. The effect of changed oil trade patterns on tanker fleet availability was considerable as shorter hauls were replaced by longer hauls. Thus, tanker demand measured in nautical miles effectively increased more than the 2% increase in world oil supply growth, compounding to lower availability.

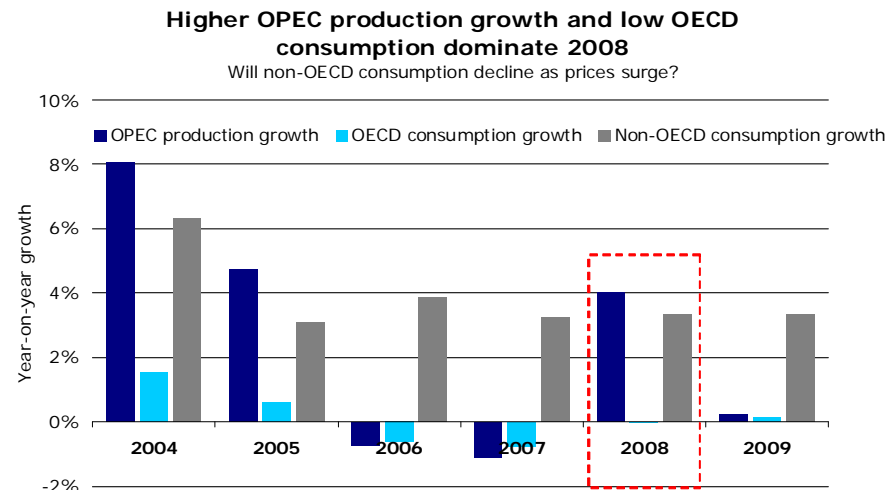
Tanker phase-out equals newbuildings

On the supply side, we have seen a stable VLCC tanker fleet during the first six months of 2008. Although 9.5 million dwt of newbuildings entered the market, 7.5 million dwt was converted to VLOCs and 1.8 million dwt was scrapped, leaving the VLCC fleet virtually unchanged.

69 VLCCs due in the Gulf in 4 weeks

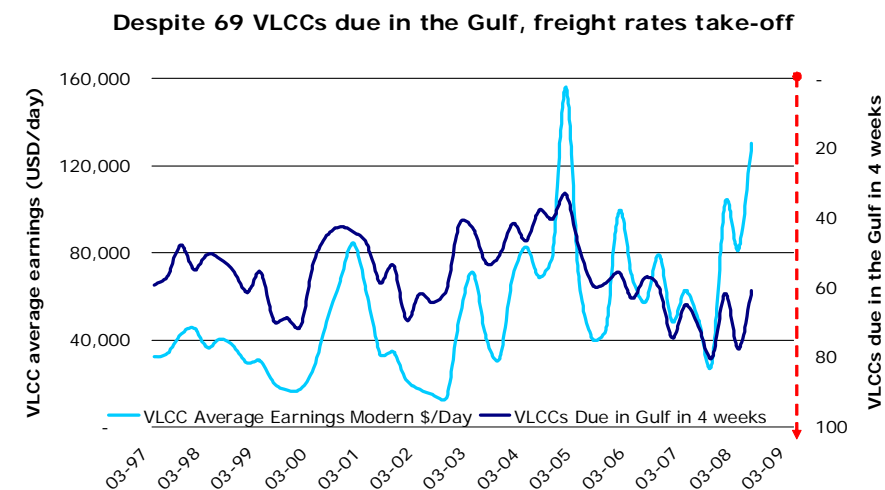
Consequently, at the aggregate level, the supply-demand balance seems to be in favour of higher freight rates. Nevertheless, 69 VLCCs have on average been idle in the Gulf from the beginning of the year (fig. 4). To us, this seems contradictory. How can 69 vessels be idle at the same time as freight rates are increasing?

Figure T3



Sources: EIA, Reuters EcoWin, Danish Ship Finance

Figure T4



Sources: Clarksons, Danish Ship Finance



Reluctance to fix single-hull tankers is the answer

In the aftermath of the Hebei Spirit oil spill in December 2007, Asian refiners have been reluctant to charter single-hull tankers. A general reluctance towards single-hull tankers significantly reduces the fleet's cargo-carrying capacity. According to Clarksons, the current VLCC world fleet amounts to 498 vessels, of which approximately 120 are single-hull. Thus, if for some reason, single-hull tankers are no longer in demand, it is equivalent to a fleet reduction of 28% (measured in dwt).

In this context, it might be that the 69 idle VLCCs due in the Gulf in four weeks are to be regarded as a modest number. Hence, 69 idle VLCCs might fit very well into the rising freight rate framework if they are single-hull. This might explain the apparent disconnection between availability and freight rates (fig. 4).

Single-hull tankers trade on significant discounts

The low appetite for single-hull tankers has been reflected in timecharter rates. Single-hull tankers are currently trading at a significant discount to double-hull tankers. Fixing a single-hull tanker for one year is 30% less the price than a double-hull. For a three-year charter the discount is even bigger, approximately 40% off the price.

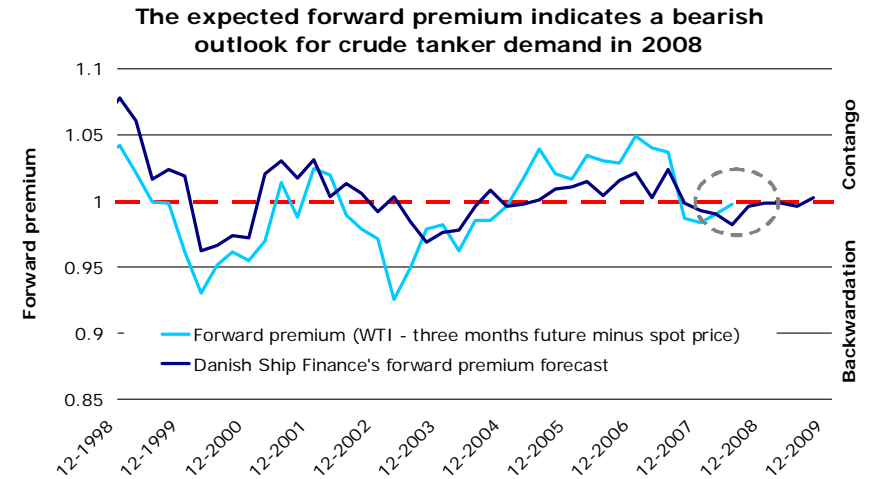
Increased use of floating storage reduces availability further

Adding further to the low availability, Iran has used 30 VLCCs as floating crude oil storage during the first quarters of this year. With a forward premium in backwardation (i.e. the spot price above the future price – a situation traditionally associated with stock withdrawals), the rationale behind these positions is not straightforward (fig. 5). Generally speaking, floating storage at sea was 50% up in 1Q2008, compared to the same period last year, according to IEA.

Record low off-season fixture activity

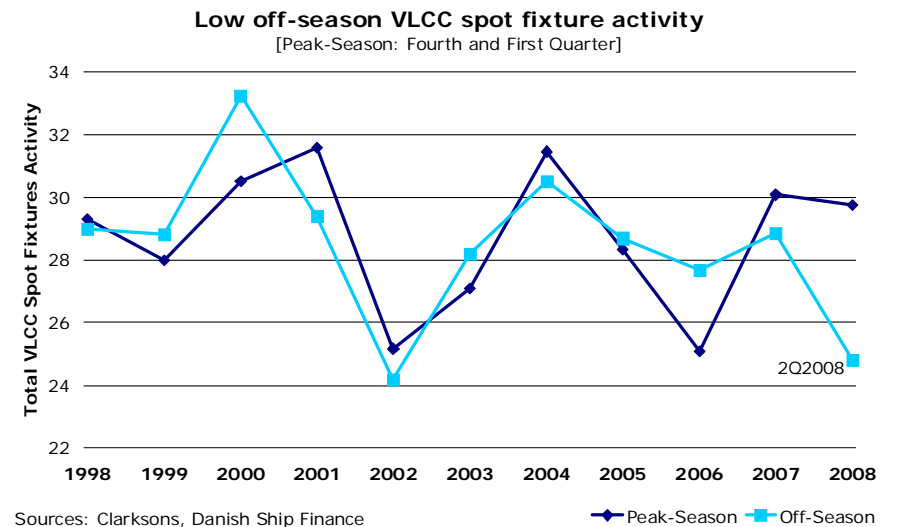
The provisional fixture activity for the off-season (2+3Q) indicates an almost record low fixture activity (fig. 6). The explanation for this might be that it simply reflects the low availability of double-hull tankers. This might be correct, but why then do peak-season fixtures remain at a high level?

Figure T5



Sources: EIA, Reuters EcoWin, Danish Ship Finance

Figure T6



Sources: Clarksons, Danish Ship Finance

Longer travel distances and single-hull tanker aversion have driven freight rates

In conclusion, from a supply-demand point of view, we see two factors driving the current high freight rates: 1) reluctance to fix single-hull tankers (effectively reducing fleet availability); 2) longer travel distances due to lower production in the North Sea and Mexico that have been replaced by OPEC production.

CONTRACTING & SHIP VALUES

Contracting activity during first half of 2008 indicates that tanker owners do not share our view that global oil demand will be lower in 2009 and 2010.

Contracting activity exceeded all previous records in 2Q2008

Crude tanker contracting activity in 1H2008 amounted to 26.6 million dwt or slightly more than the aggregated appetite for crude tankers in 2007. Especially in the second quarter, ship owners' appetite for VLCCs was huge. A record-breaking 15 million dwt of VLCCs was contracted during the second quarter of 2008. Whether this is a large amount or not depends on the assumptions for the single-hull phase-out theme. The current single-hull fleet amounts to 32 million dwt, whereas the pre-year-end-2010 VLCC orderbook stands at 47 million dwt, or 154 vessels.

VLCC newbuilding prices are up 7%

The average VLCC newbuilding price has risen 7% (USD 10.5 million) in the first seven months of 2008. In a 5-year perspective, 2008 prices are 28% (USD 33 million) above the 5-year average.

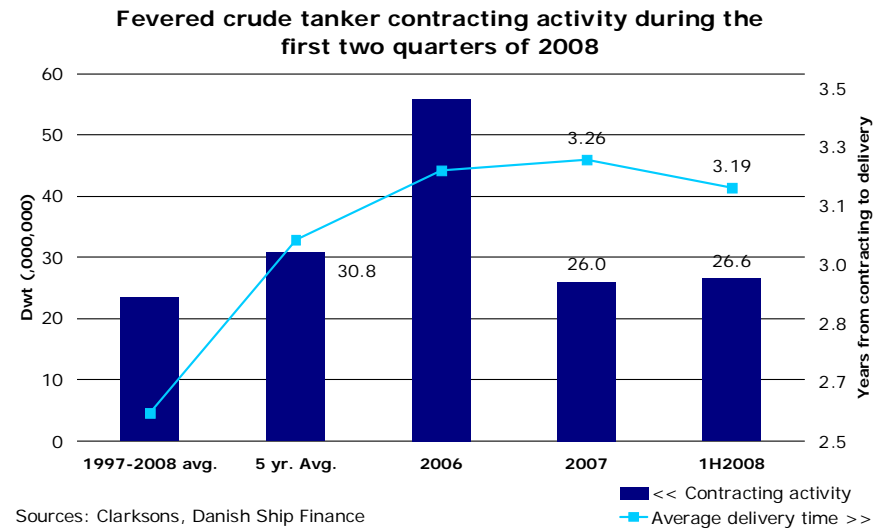
VLCC secondhand prices are up 20%

The average secondhand price for a 5-year-old VLCC has climbed 20% (USD 27 million) in the first seven months of 2008. In a five-year perspective, 2008 prices are 34% (USD 37.5 million) above the 5-year average.

The lows of 2002 might be a past long gone

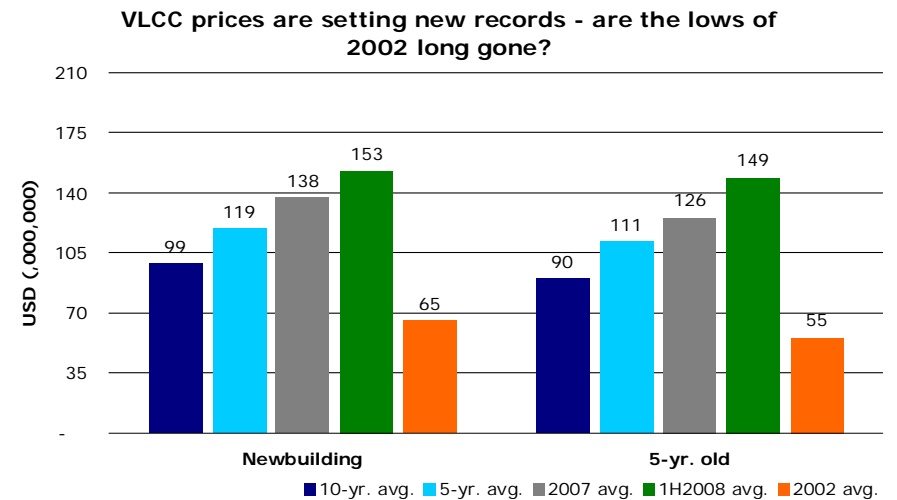
The apparent market reluctance to trade single-hull tankers raises the question of whether we have seen a structural shift in market fundamentals that requires a different pricing structure. We are a bit puzzled. On the one hand, we do subscribe to the argument that

Figure T7



Sources: Clarksons, Danish Ship Finance

Figure T8



Sources: Clarksons, Danish Ship Finance



increased global trade and increased commodity prices (incl. steel), are the tide that lifts all boats. On the other hand, if all of a sudden, (oil) price elasticity returns and global (oil) demand falls significantly a race towards 2002 tanker demand (and prices) might not seem that unrealistic.

OUTLOOK

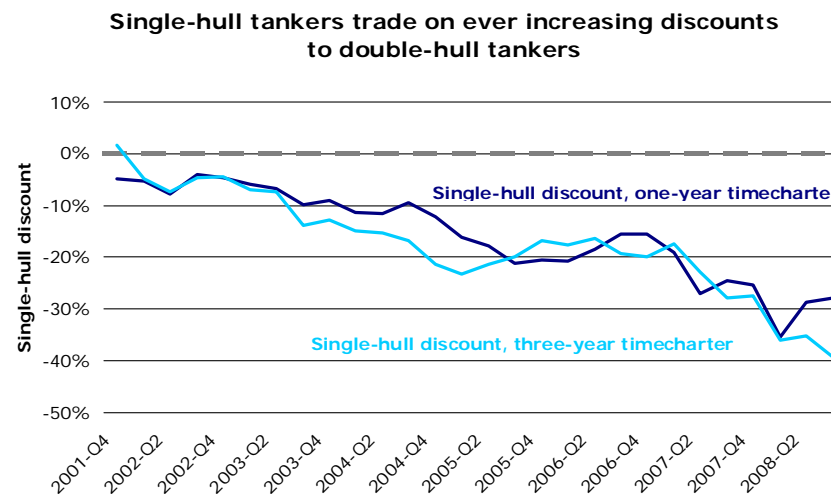
Significantly increased oil production in both OPEC and non-OPEC, inventory build-up in the OECD and increased refinery capacity in Asia are expected to drive tanker demand in 2H2008 and 2009. Whether the high oil price and the recessionary tendencies around the world will hurt demand remains an open question. For the remaining of 2008 we expect healthy earnings but are concerned for 2009 levels.

In our previous Shipping Market Review six months ago, we made six predictions for the tanker market. Of our six predictions, the first four seem to hold water (increased OPEC output for 2008, low inventory build-up, moderate fleet growth and low scrapping activity) whereas the two last predictions (no single-hull phase-out activity (conversions) and decreasing VLCC freight rates) remained unfulfilled. Before turning to our expectations for the remainder of 2008 and 2009, we will elaborate a bit on our misjudgements.

Our freight rate forecast was based on a general assumption that the direction of near-term freight rates was simply a question of oil demand. We failed to appreciate the importance of the distinction between single- and double-hull tanker earnings.

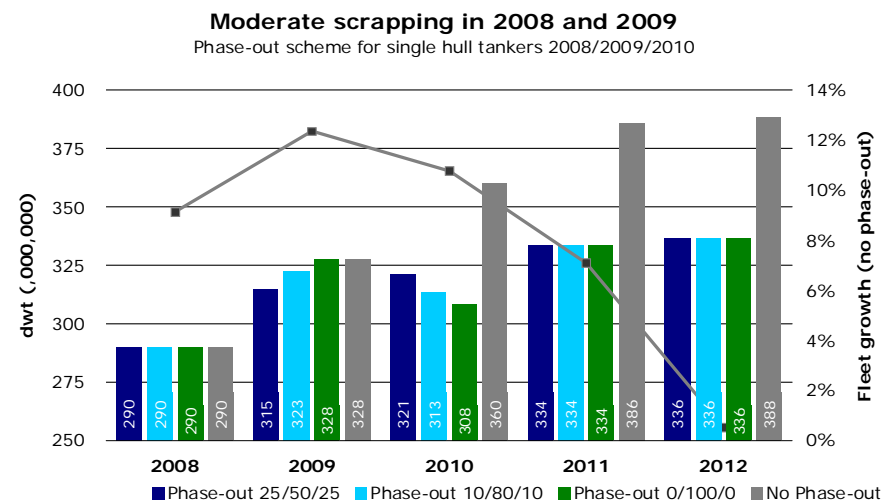
As discussed in *Supply-Demand*, single-hull tankers are trading on increasing discounts to double-hull tankers (fig. 9). Conversion of single-hull tankers into VLCCs is becoming increasingly attractive as the discount widens and Capesize freight rates remain at very high levels. But do current levels justify a conversion process? As long as the three-year timecharter rates are USD 60-70,000 per day higher for a Capesize vessel than for a single-hull VLCC, conversion would seem economically viable.

Figure T9



Sources: Clarksons, Danish Ship Finance

Figure T10



Sources: Clarksons, Danish Ship Finance



Limited yard availability lowers VLCC conversion potential

The attractiveness of tanker conversion profitability is, however, highly dependent on time to market, given the massive Dry Bulk orderbook. For the time ahead, we do not expect to see significant additional conversion activity, as qualified yard availability appears low.

This largely reduces our single-hull issue to a question of phase-out planning prior to 2010. To simplify this puzzle, we have made some general assumptions about single-hull newbuilding prices based on a 10-year average from 1983 to 1992. We assume that the average single-hull tanker has had a newbuilding price of approximately USD 63 million and a break-even daily earning requirement around USD 30,000-35,000.

We expect single-hull tankers to be phased-out when the one-year single-hull timecharter rate is below the marginal cost of operating the vessel. Thus, our base case scenario is a gradually accelerating phase-out of single-hull tankers until 2010.

Figure 10 summarizes different phase-out scenarios. We expect the eventual outcome to turn somewhat between the first two scenarios. Now we turn to the demand situation.

Resilient demand as inventory levels are expected to rise

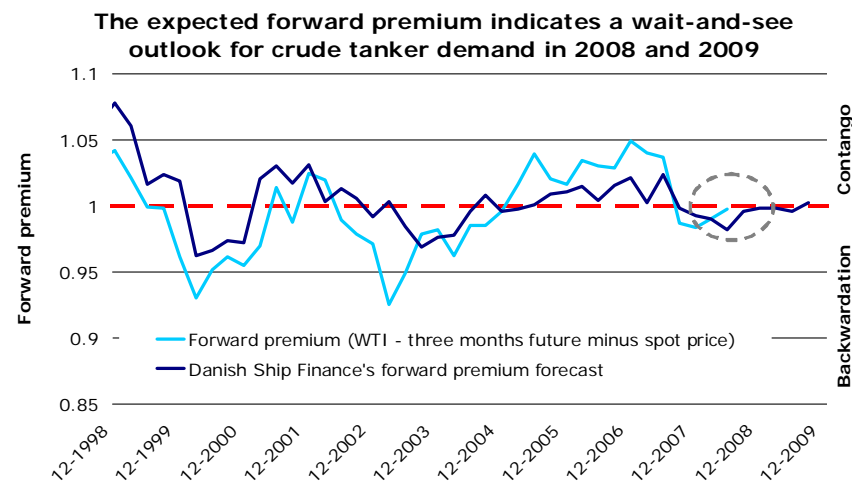
With a future price slightly above the spot price, the forward premium is entering the territory of contango, where inventory build-up is favourable (fig. 11).

With low inventories in US and OECD in general, we expect some degree of inventory build-up in the last part of 2008 and in 2009. Refinery expansion will add considerably to tonne-mile demand.

Refinery expansion in Asia during 4Q2008 and 2009

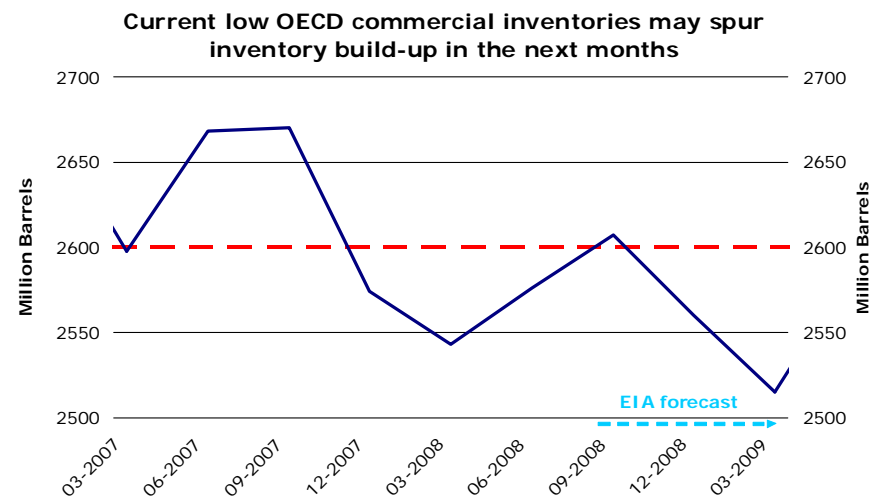
New refinery capacity in Asia is expected on stream in late 2008 and 2009. In India, the Reliance Petroleum Ltd Jamnagar Refinery project is expected to be completed by the end of 2008. The refinery will be the world's sixth largest, with a total processing capacity of 1.24 million barrels per day. In China, Sinopec's Fujian refinery and CNOOC's Huizhou refinery are expected to be running year-end 2008, with a capacity of 240,000 barrels

Figure T11



Sources: EIA, Reuters EcoWin, Danish Ship Finance

Figure T12



Sources: Reuters EcoWin, Danish Ship Finance



per day, respectively. By the end of 2009, China is expected to have increased the overall refinery capacity by approximately 1.4 million barrels per day.

Figure T13

Accordingly, India and China are expected to increase their crude oil imports from the Middle East and elsewhere significantly.

Increased oil supply is expected but at lower tonne-miles

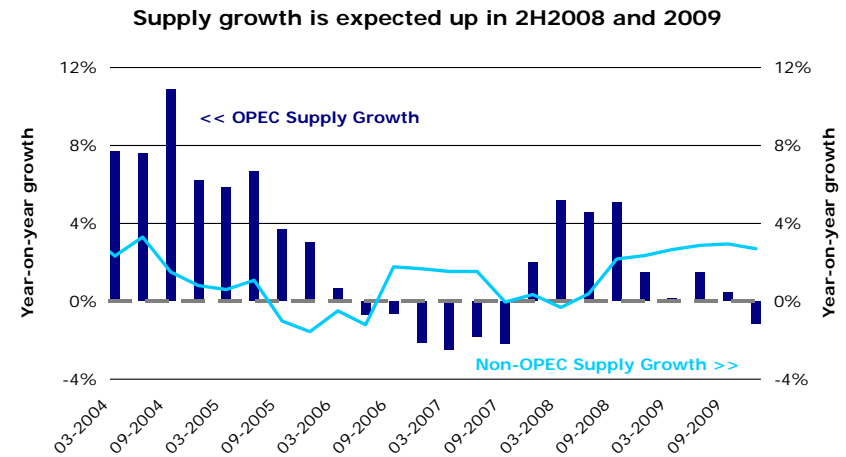
Both OPEC and non-OPEC supply are expected to grow in the next 12-18 months.

Non-OPEC production is expected to increase as new production comes on stream in Brazil, Canada, FSU (Azerbaijan) and in the U.S. Gulf of Mexico. North Sea and Mexican production is still expected to be at current levels.

In sum, the production growth increases the volume of short-haul crude available for use and is therefore lowering effective crude tanker demand.

Oil market is oblivious to recessionary tendencies

Global oil demand – until very recently – has seemed oblivious to the recessionary tendencies in the US, a looming recession in many EU countries and significant oil price increases in non-OECD countries (especially in Asia). The central question is how oil demand will be impacted by high oil prices and declining GDP growth. Some observers argue that the current oil price increases are harmless to the global economy. We do not believe so. Our key concern is that the high oil price will dampen demand. We focus on the fact that real oil prices have increased faster than global economic growth. Thus, the oil burden has increased significantly during the last 10 years. We argue that the high oil price will have a damaging and long-lasting effect on the global economy in general and on the US in particular. Accordingly, we question the EIA’s oil demand forecast and are concerned about crude tanker demand from second half 2009.



Sources: EIA, Danish Ship Finance

Robust VLCC freight rates for the remaining of 2008

For the remaining of 2008, we forecast relatively high VLCC timecharter rates around USD 80-85,000 per day as we assume that a further widening of the spread between single- and double-haul tankers may save the day for double-hull earnings despite the expected fleet growth. For the second half of 2008, 5.5 million dwt is expected to enter the market (6.1 million dwt entered the VLCC fleet during the first half of 2008).

However, we do not expect single-hull rates to decline to levels where scrapping will occur. Thus, we expect a moderate number of single-hull tankers phase-outs in late 2008 and in the beginning of 2009.

Lower freight rates for 2009

Regarding freight rates in 2009, we expect lower demand growth in key markets to burden oil demand and hence freight rates. Whether single-hull phase-outs will be sufficient to support double-hull tankers at high levels remains an open question. ■



Container Ship

Freight rates continue to decline as supply outpaces demand. Secondhand prices are declining accordingly but newbuilding prices remain high. Still, ship owners' appetite for newbuildings seems almost insatiable. Future demand is expected far from adequate to absorb the entry of new vessels. Accordingly, we expect freight rates to decline by more than 10% in 2009.

FREIGHT RATES

Adjusted for bunker costs, weighted average head-haul freight rates have reached a 5-year low.

In our previous Shipping Market Review, we forecasted that weighted average head-haul freight rates (excluding fuel costs) would decline 8% over 2008. So far, the weighted average head-haul freight rates have declined 4% (excluding fuel costs).

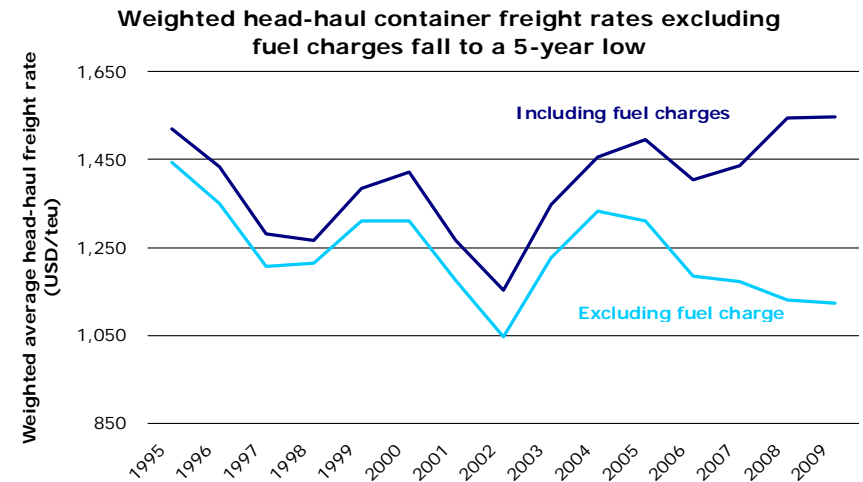
Nominal freight rates (including fuel charges) from Asia to Europe rose 9% in the first half of 2008 compared to 2007 and are now approximately 17% above the 5-year average level.

Nominal freight rates from Asia to North America have risen by a modest 1.5% during the first seven months of 2008 (but this should be seen in perspective to the negative trend in 2007 (-7%) and 2006 (-10%)). The freight rates are on average 8% below the 5-year average.

Nominal freight rates include fuel costs. The 380 CST bunker price (Rotterdam) increased by 52% during the first seven months of 2008. Thus, by adjusting nominal freight rates for bunker costs, the nominal increases turn into a 5-year low.

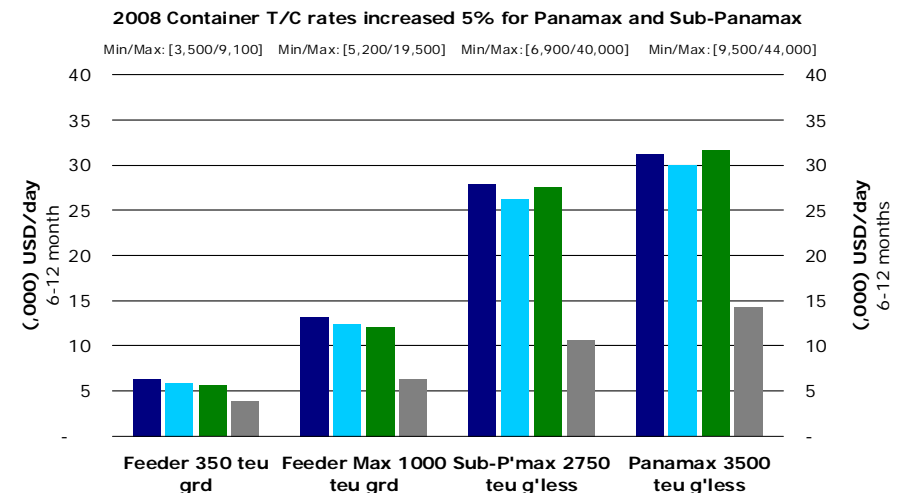
Timecharter rates increased 5% for Sub-Panamax and Panamax from 2007 to 2008. Only Panamax timecharter rates are above the 5-year average. The smaller ships (Feeder and Feeder Max) decreased 3% (fig. 2).

Figure CS.1



Sources: Drewry, Danish Ship Finance

Figure CS.2

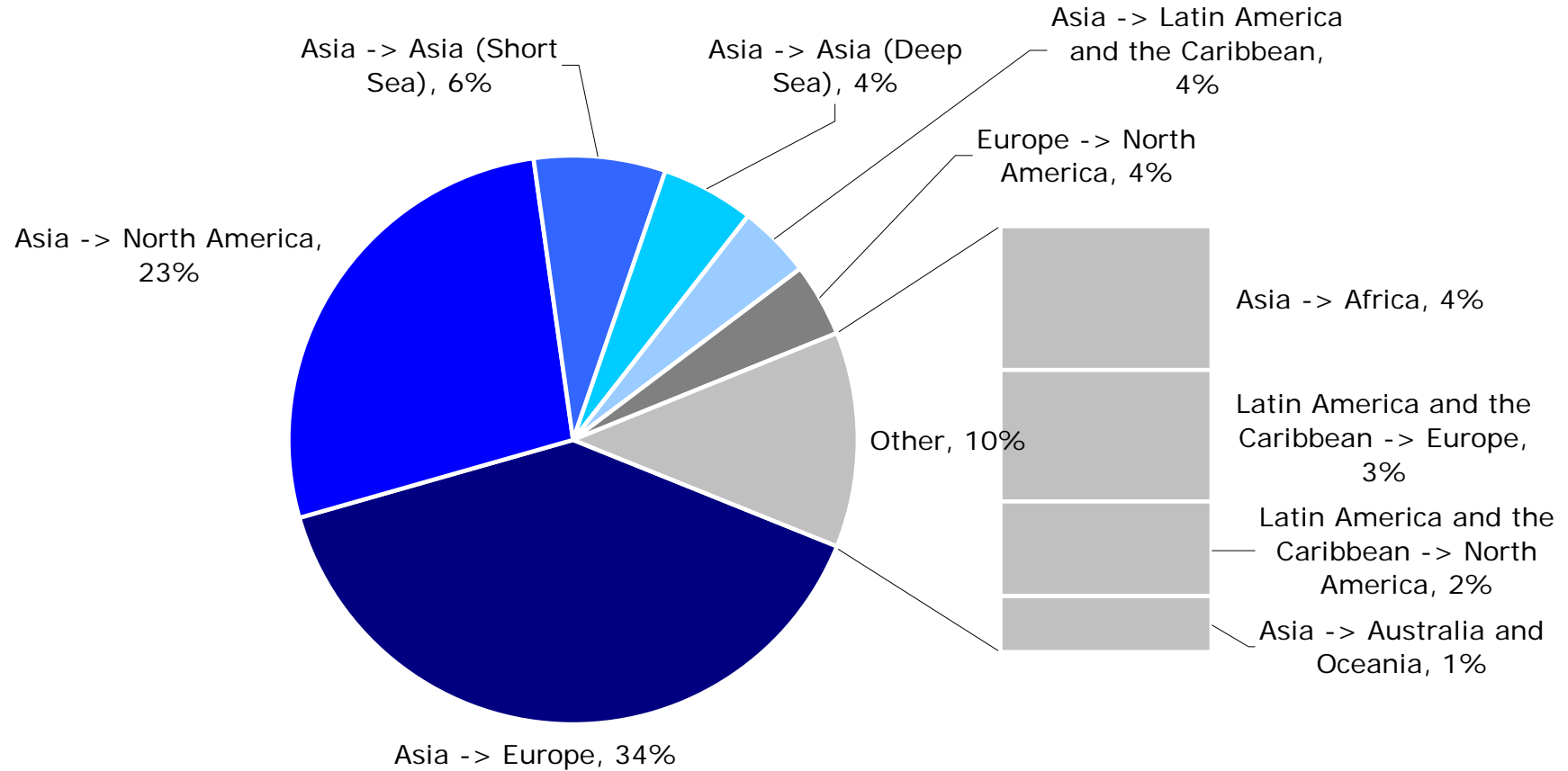


Sources: Clarksons, Danish Ship Finance

■ 5-year avg. ■ 2007 avg. ■ 1H2008 ■ 2002 avg.

Figure CS.3

Top 10 Head-Haul Container Routes 2007 (measured by teu-nautical miles)



Sources: Global Insight, Danish Ship Finance



Downward market momentum is accelerating, availability is increasing and period charters are reducing as shipowners start meeting overcapacity.

890,000 teu enters the market

During the first seven months of 2008, 248 vessels or 890,000 teu entered the market. This is an unprecedented inflow of capacity. Post-Panamax vessels above 8,000 teu account for almost 50% of the new tonnage. These vessels are all set to enter the Asia-Europe trade.

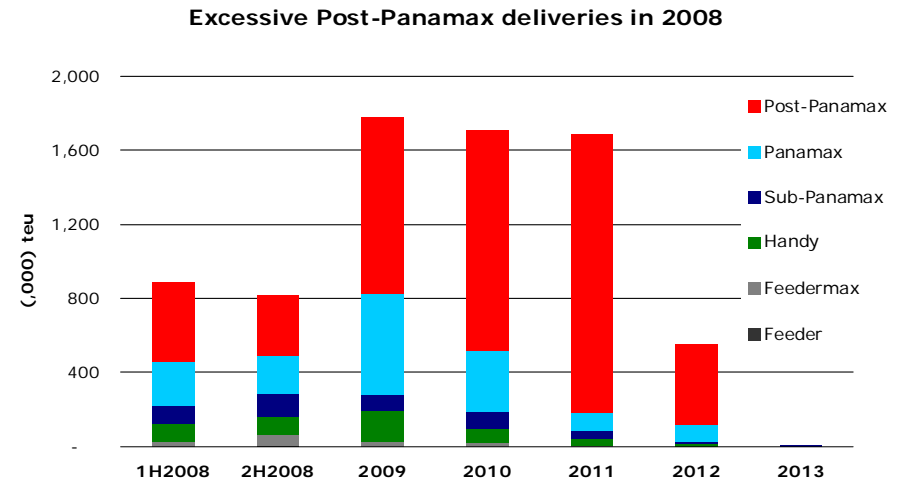
Availability increases and fixture periods shorten

Declining freight rates indicate a mismatch between supply and demand. Insufficient demand has cascaded throughout all segments as shipowners have struggled to find employment for their newly-delivered Post-Panamax vessels. Thus, we have seen a significant increase in availability for all segments. The average length of spot fixtures declined accordingly. According to Howe Robinson (Containership 2nd Quarter Review 2008), the average spot fixture fell from 410 to 300 days in the second quarter of 2008. Here is why.

North American imports down 6%

The preliminary data for North American imports suggests that North American imports are adjusting to lower private consumption. Accordingly, the North American import forecast has been reversed from +5% six months ago to -6% for the full-year 2008 (fig. 6). The weakening of the USD against the RMB (5% down since the start of 2008) may play a (minor) role in the lower North American imports from Asia, as this has made the Chinese products 5% more expensive for the US consumer. Still, lower North American private consumption is by far the most important reason for the lower import figure.

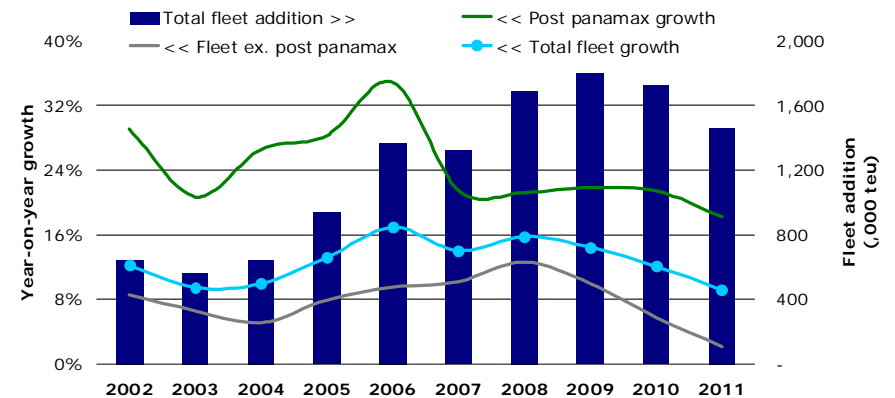
Figure CS.4



Sources: Clarksons, Danish Ship Finance

Figure CS.5

The container fleet is set to grow by 15% in 2008 equivalent to more than 1.7 million teu entering service



Sources: Clarksons, Danish Ship Finance



Intra-Asian trade growth declines

In line with our predictions in our previous Shipping Market Review, the Intra-Asian trade growth forecast for the full-year 2008 has fallen 2 percentage points to 6% (fig. 6). Six months ago, several industry analysts argued that Intra-Asian trade would remain high, despite lower North American and European imports. We did not subscribe to this “de-coupled” argument and forecasted significantly lower Intra-Asian trade growth. We maintain our long-term scepticism regarding Intra-Asian trade growth and therefore hold on to an even lower forecast for the full-year 2008.

Robust European import growth of 10%

Despite the recessionary tendencies in several European countries, aggregate European imports from Asia stay at high levels. Thus, the forecast from six months back remains unchanged with a European import growth from Asia of 10% for the full-year 2008.

Aggregate head-haul demand expected to grow 4% in 2008

In line with our forecast in the previous Shipping Market Review, 2008 head-haul demand growth is expected below the 2007-level. Head-haul growth for 2008 is estimated to average 4%. With an effective supply growth for the full-year 2008 of 11.5%, we expect a supply surplus of 7.5% (fig. 7).

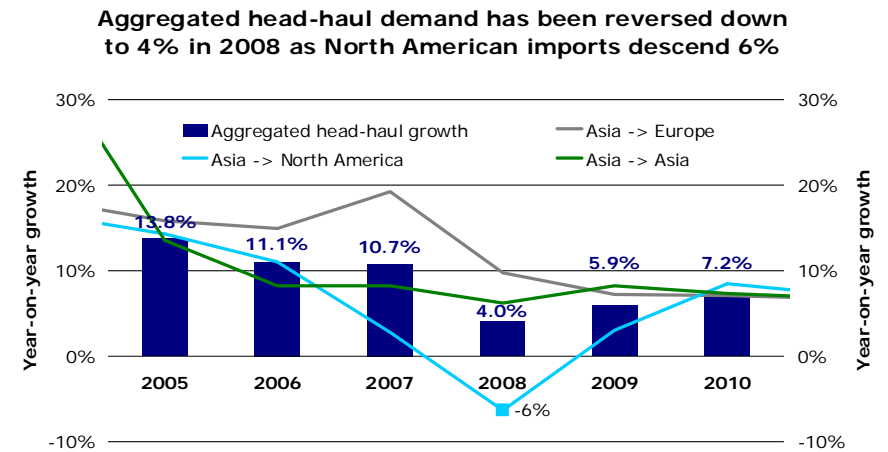
Asia to Europe is oversupplied by as much as 600,000 teu

Combining the supply-growth figure and demand-growth figure, we have a situation of excessive overcapacity. The routes from Asia to Europe are the ones mostly exposed to overcapacity as the new Post-Panamax vessels enter these regions. Howe Robinson (Containership 2nd Quarter Review 2008) estimates that Asia to Europe was oversupplied by as much as 600,000 teu in the first six months of 2008.

Slow steaming is not expected to reduce oversupply

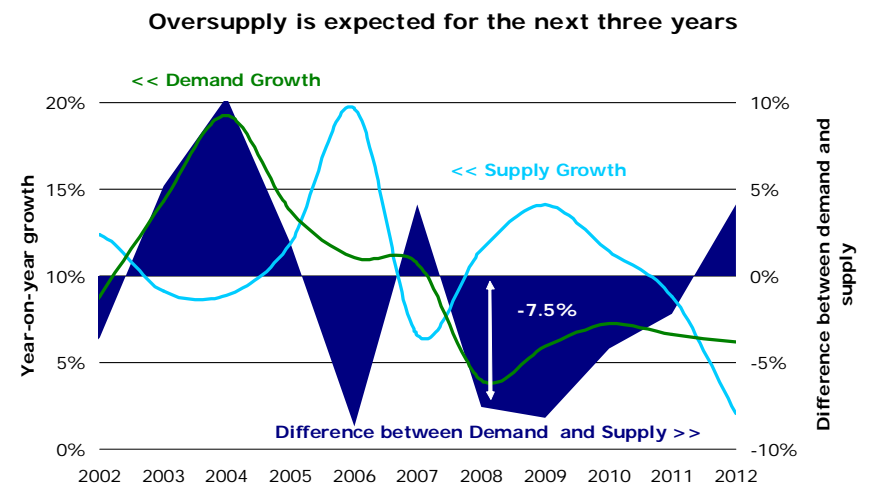
As discussed in our previous Shipping Market Review, 22 additional large vessels were employed by lowering speed on the routes from Asia to Europe. We have not seen further slow steaming in the last six months and do not expect to do so. Owners are concerned that further speed reductions will cause lasting engine damages and that it will not provide the expected savings in bunker costs as bunkers will not be burned as efficiently.

Figure CS.6



Sources: Global Insight, Danish Ship Finance

Figure CS.7



Sources: Clarksons, Global Insight, Danish Ship Finance

Despite the high orderbook/fleet ratio and waning demand expectations contracting activity remained strong. Secondhand prices start to decline, whereas newbuilding prices continue to increase.

835,000 teu were contracted during the first six months of 2008. From a fleet maintenance point of view, this constitutes a high contracting level as the average age of the contracted segments is relatively low and the scrapping potential moderate.

However, in a 5-year perspective, contracting activity for the first half of 2008 is 18% below average, but in a 10-year perspective, this is 26% above average.

Taking into account both an orderbook/fleet ratio of 56% and declining freight rates four years in a row, we regard the current contracting activity as surprisingly high.

Required earnings per day for a 5-year-old Panamax stands at USD 32,000 per day over 20 years

Generally speaking, secondhand prices have started to decline as earnings are under pressure from excessive supply. Nevertheless, secondhand prices are still very high. Measured in daily earning requirement, a 5-year-old Panamax requires USD 32,000 over 20 years or 10% more than the current one-year timecharter rate of USD 29,500. Thus, current secondhand prices seem unsustainable.

Record re-sale activity during the first half of 2008

Newbuilding prices have risen 5% during the first seven months of 2008. This has facilitated 83,000 teu of newbuilding contracts (re-sale) having been sold during the first half of 2008. This is significantly more than we have seen in the previous periods and might reflect that some owners believe that newbuilding prices are about to peak. Sales of secondhand tonnage have been moderate and below average.

Figure CS.8

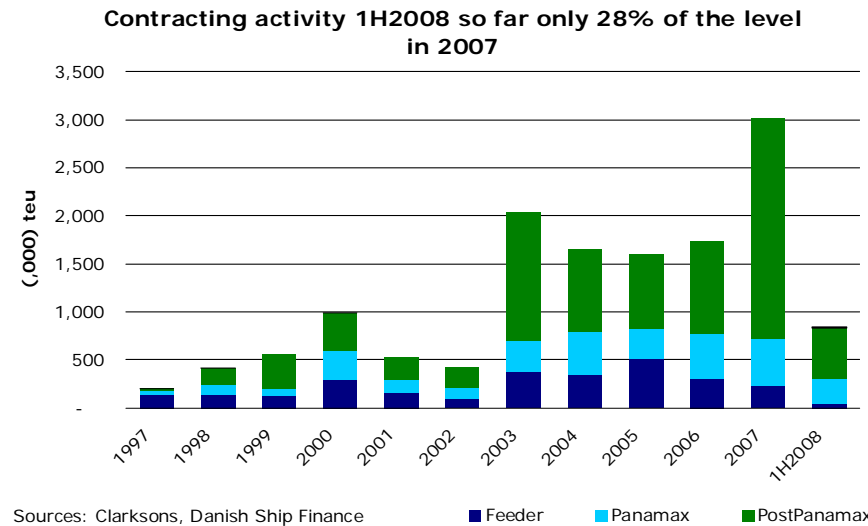
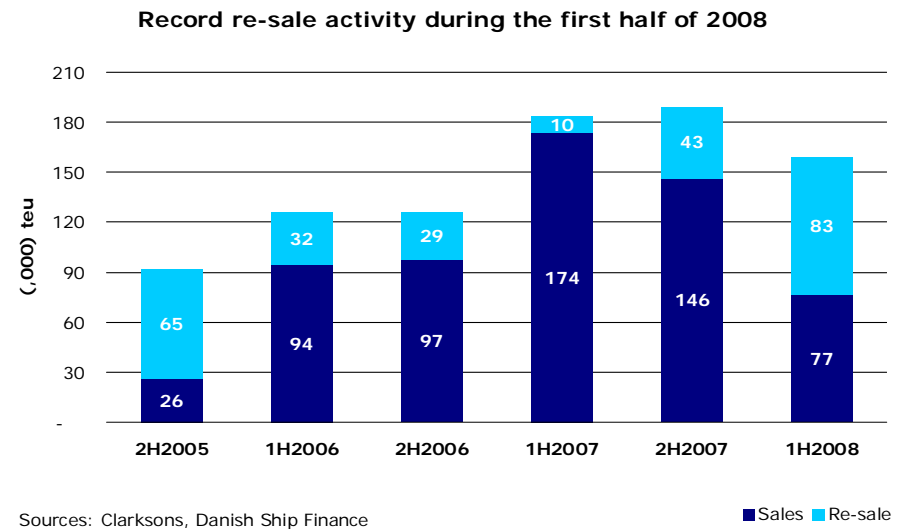


Figure CS.9



Overcapacity and declining vessel earnings seem inevitable as the US sneezes and the world economy catches a cold.

The Container fleet expected to grow 11.5% in 2008

New capacity of approximately 820,000 teu is set to enter the container fleet during the second half of 2008. This is an increase of 7% in just six months. The full-year 2008 fleet growth is estimated to be at approximately 16%. Adjusted for potential scrapping, effective fleet growth for the full-year 2008 averages about 11.5% (fig. 5 & 10).

Supply surplus of up to 12% in 2008

As discussed in the Supply-Demand section, aggregate head-haul demand is set to grow 4% in 2008. The critical issue concerning 2008 head-haul demand growth is that it is more or less dependent on increased European imports as the decline in North American imports is offsetting the growth in import from the remaining top-10 head-haul regions. No surprises there. As illustrated by figure 3, top-10 head-haul demand can be divided in six major import regions where European and North American imports account for the lion's share. The weakening USD has stimulated US exports in 2008, however, this has had a limited effect on aggregate head-haul demand as it is focused on the backhaul trade.

However, with current demand expectations, the container market seems oversupplied by a margin of 7.5% to 12%, depending on the 2008 scrapping scenario employed (fig. 7).

9.6% of the combined container fleet older than 19 years

We use a highly conservative scrapping scenario when calculating effective supply growth, as we assume that vessels are not scrapped before the age of 35. If, however, rates plummet, it seems likely that vessels significantly younger than 35 will be scrapped. Currently, 9.6% of the fleet is older than 19 years. As illustrated by figure 10, the biggest scrapping potential is among the smaller segments, whereas there is virtually no scrapping potential in the Post-Panamax segment. The average age of the aggregate fleet is approximately 11 years.

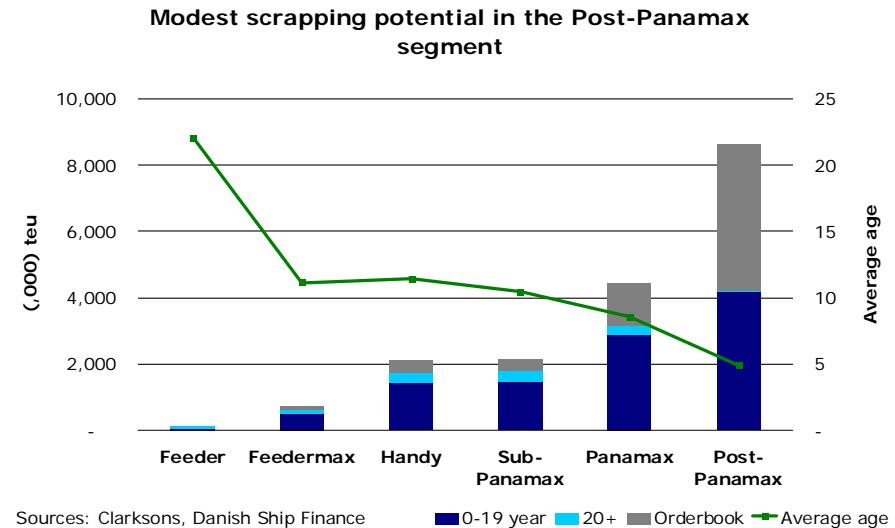
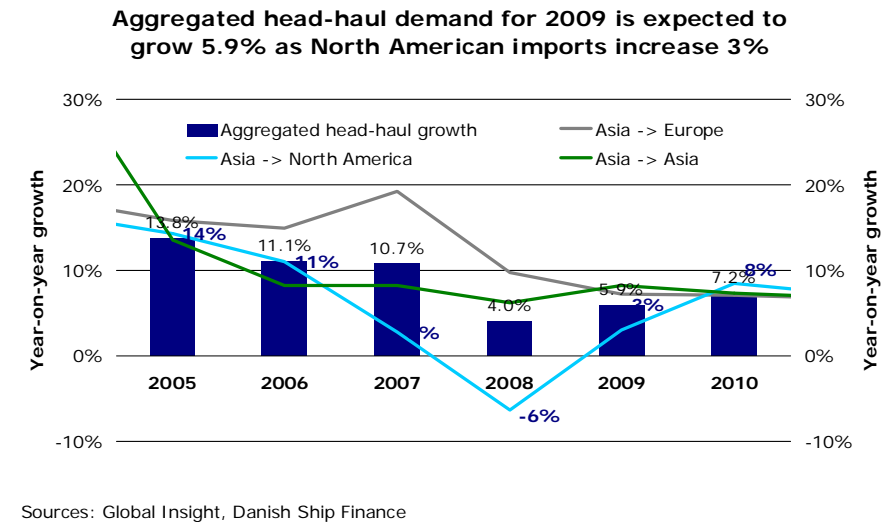


Figure CS.11



Additional tonnage of 1.8 million teu enters the fleet in 2009

In 2009, more tonnage is scheduled to enter service than the combined deliveries in the – until then – record years of 2004 and 2005. The aggregate container fleet is expected to increase 14%, with more than half of the growth generated by the Post-Panamax segment (fig. 5).

For 2009 aggregate head-haul demand is up 6%

Despite lower expectations for European imports growth (from 9.7% in 2008 to 7.1% in 2009), Global Insight expects aggregate head-haul demand growth to rise 6% in 2009 (fig. 11). The growth is mainly expected to be driven by a recovery in North American imports and sustained momentum in Intra-Asian, African and Latin American trade. Several issues are to be considered here.

European imports expected to lose momentum in 2009

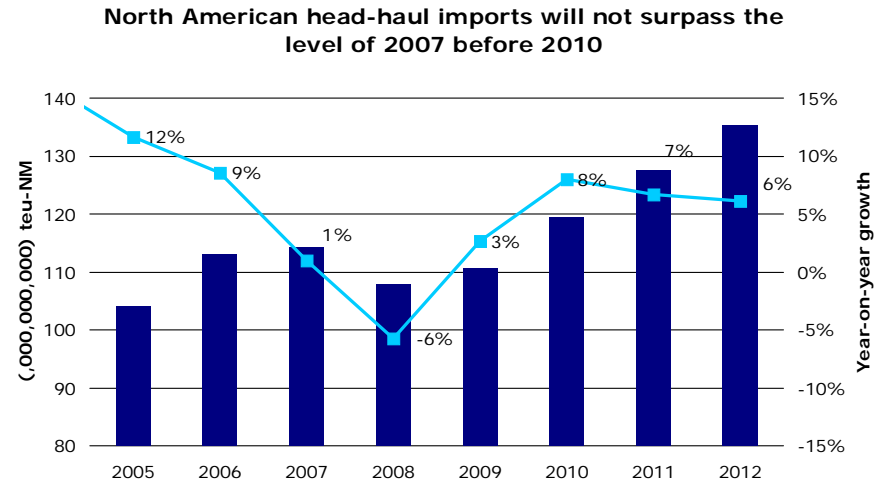
The expectation that the largest head-haul route (Asia to Europe) will lose some momentum in 2009 is not in itself something to sound the alarm bells. But, with several EU-countries on the brink of a recession and with Germany, the European growth locomotive, spluttering, we might have to start paying serious attention to European imports growth expectations.

Growth in North American imports in 2009 insufficient to absorb any new-entering tonnage as volumes are still expected below 2007-levels

Before making any reservations about the likelihood of the predicted 3% growth in 2009 in North American demand, let us start by noting that it is far from sufficient to absorb the new tonnage entering the container market (fig. 7). As illustrated by figure 12, the 2008 decline in North American demand has reduced container imports so much that the 2007-levels are not expected to be re-established until 2010.

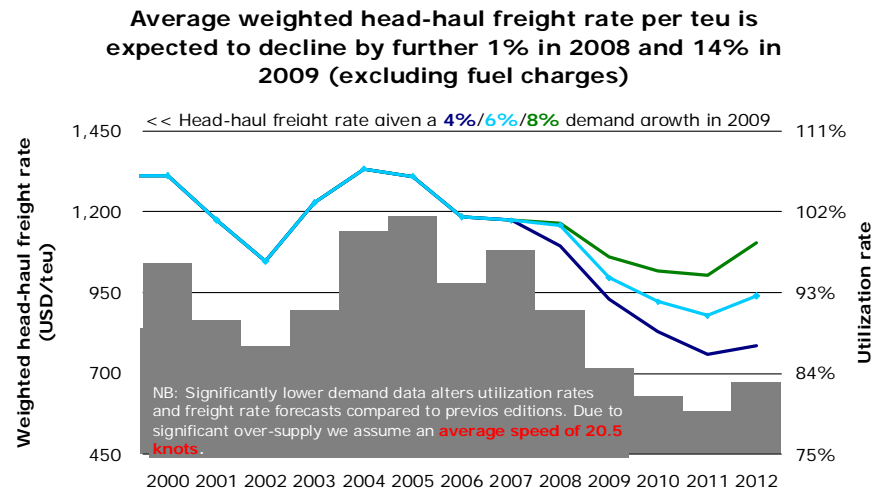
However, we do not see much supporting evidence for a US import recovery in 2009. The US economy is highly dependent on the US consumer, and the consumer is the very source of the problem. US consumers have overspent for years (i.e. Mortgage Equity Withdrawals) and have taken comfort in asset-based savings rather than income-based savings. Therefore, the US recession is

Figure CS.12



Sources: Global Insight, Danish Ship Finance

Figure CS.13



Sources: Clarksons, Global Insight, Danish Ship Finance



technically a consumer-driven recession in contrast to an investment-driven recession.

Currently there are few, if any, signs that indicate an end to the US recession. The US consumer still struggles with declining house prices, equity busts, credit contractions, rising unemployment, high energy prices (oil) and rising inflation. Thus, we find it hard to identify any short-term factors that could launch an economic recovery. Proponents of the 2009 US recovery argued that it is as much a question of factors no longer suppressing the economy, as it is a question of growth drivers. It might be true that some relief may be found in the absence of falling housing prices, for example, but at the end of the day, the only true driver of economic growth is consumption, and before US consumers can increase their consumption, they need to pay off their debt (and start to save!). Furthermore, the risk of a second round effect from surging commodity prices and the continuing stress in financial markets are likely to test the US economy in 2009.

It is ultimately consumption rather than investment or output that is a true measure of economic power

Some analysts have argued that China may step up and take a front seat supporting Intra-Asian or even world demand in tandem with Europe and North America. We do not expect this to happen in the next couple of years. It is ultimately consumption rather than investment or output that is a true measure of economic power.

The Chinese economy is driven by a mixture of investment and exports. This has been a highly successful recipe as the Chinese GDP growth has outpaced most pundit's expectations over the last 5-10 years. Unfortunately, domestic demand (consumption) lags behind and represents a modest contributor to economic growth. Today, less than 8% of the population (approximately 100 million people) earn enough to contribute positively to the economic growth. Thus the Chinese economy is, like so many other emerging market economies, dependent on the European and in particular the

US consumers to purchase their output. However, we continue to keep a watchful eye on Intra-Asian trade.

Freight rates are expected to decline by more than 10% in 2009

Now, let us consider the weighted head-haul freight rate forecast. As discussed in the Supply-Demand section we do not expect further speed reductions, which explains why we only present a freight rate forecast based on a Post-Panamax average speed of 20.5 knots. Further, we model the weighted freight rate (excluding fuel costs) when making the freight rate forecast.

As illustrated by figure 13, we expect modest freight rate declines in the remainder of 2008, but expect the average weighted freight rate in 2009 to decline as much as 14%, given a 6% head-haul demand growth.

If all scheduled capacity is to be absorbed, aggregate demand will have to increase by 12%. This will require, for example, an 18% growth in the Asia to Europe trade and approximately 16% growth in the three Asian trades: Asia to Latin America, Asia to Africa and Intra-Asia. This seems to be unfeasible in the current economic environment.

Thus, if the Supply-Demand balance determines the outcome, we expect a downward trend in vessel earnings as a consequence of the significant overcapacity. Further, we expect a modest contracting activity in 2009 and beyond. ■

Dry Bulk

Longer travel distances and port congestion have once again saved the day for shipowners. Surprisingly, it seems that market sentiments expect a shortage of future capacity. Ship prices and contracting activity are increasing accordingly. To employ the current Capesize orderbook a "new China" will have to emerge. Thus, we maintain our fundamental long-term scepticism that the current buoyant Dry Bulk freight rates and ship values will continue. Nevertheless, we see some potential short-term upside from longer coal travel distances. Time will tell if longer coal travel distances will support freight rates all the way into 1H2009.

FREIGHT RATES

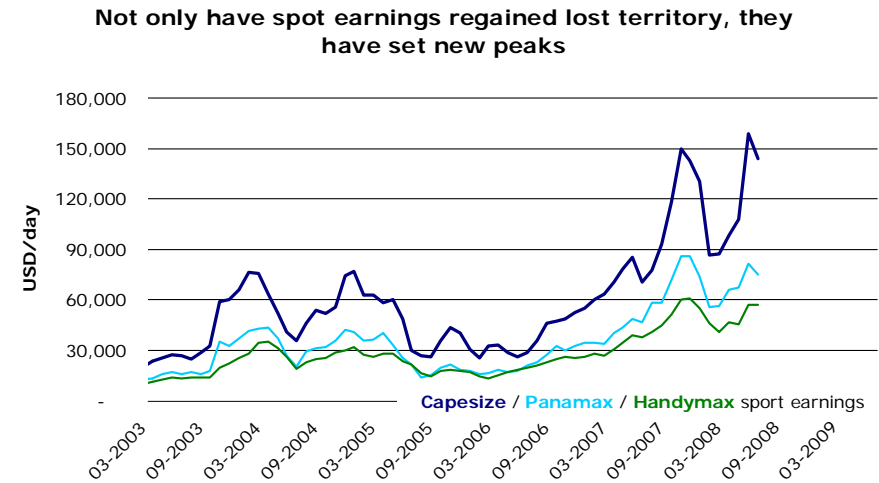
Dry Bulk spot earnings were tumbling during first quarter 2008 but regained lost territory during second quarter.

Capesize spot rates dropped almost 40% in the first weeks of January 2008 (from USD 136,093 per day to USD 82,072 per day). Rates regained some strength from February to June and closed the second quarter at about the same level as they closed 2007. Compared to 2007, average Capesize spot earnings closed first half 2008 20% above the 2007-average. In a historical context, current Capesize freight rates are high – approximately 82% above the five-year average and 200% above the ten-year average.

Panamax spot rates showed similar tendencies. On average, 1st half 2008 closed 18% above the same period last year. In a historical context, Panamax spot rates are 80% above the five-year average and 189% above the ten-year average.

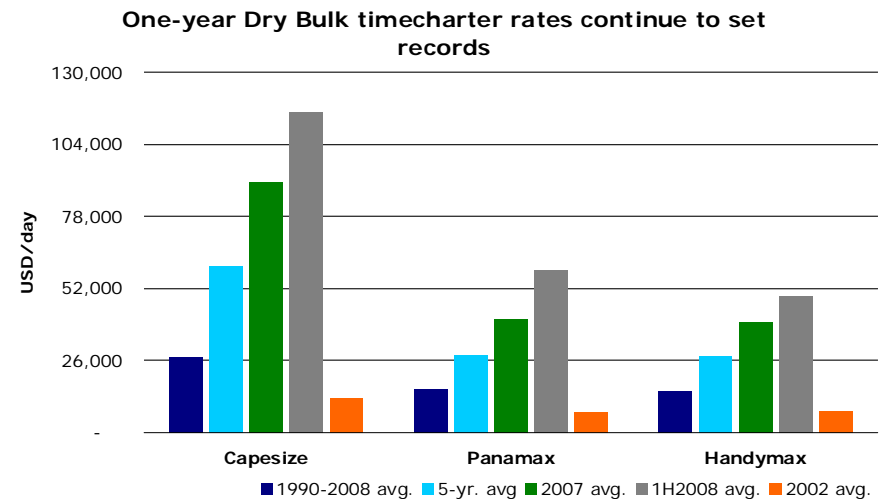
Handymax spot rates followed suit but at slightly lower growth rates. First half 2008 closed 15% above last year's average, 70% above the five-year and 161% above the ten-year average.

Figure DB.1



Sources: Clarksons, Danish Ship Finance

Figure DB.2



Sources: Clarksons, Danish Ship Finance

It is once again all about old King Coal. Longer travel distances and low fleet growth have kept the freight market tight and (Capesize) freight rates firm.

The Dry Bulk fleet grew 3% in 1H2008

During the first six months of 2008, the Dry Bulk fleet grew approximately 3%, as 11.3 million dwt entered service. Unsurprisingly, no vessels were scrapped during this period.

Fleet availability increases as port congestion declines

In line with our forecast in the previous Shipping Market Review, port congestion continued to decline throughout first half 2008. Lower port congestion has significantly reduced the percentage of the combined Capesize and Panamax fleet that is idle due to port congestion (from approximately 9% in 2007 to 5% in 2008). In effect, this has increased fleet availability (supply).

The Dry Bulk hype seems to continue despite increased fleet availability

Fundamental economic theory dictates an inverse relationship between supply and prices. Thus, when supply increases we would expect freight rates (and ship values) to decline. Even though freight rates have skyrocketed, vessels are being chartered at ever longer periods (fig. 4), sales volumes are low (fig. 5) and secondhand prices continue to rise (fig. 8). Is the underlying demand really that strong?

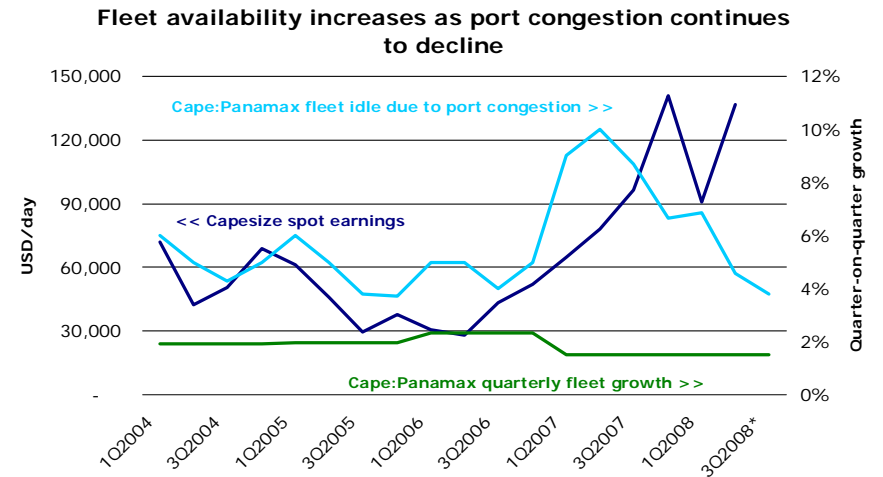
Low sale volumes due to few willing sellers

Owners seem to expect so. Taken together, the low transaction volume and longer charter periods indicate that owners anticipate a supply shortage and hence that future values will be higher than current ship prices. Despite seeing some supporting evidence, we regard it temporary. Here is why.

Infrastructural bottlenecks and adverse weather conditions have kept the supply-demand balance tight

The Capesize supply-demand balance has remained tight during the first half of 2008 as several major coal exporters have struggled to

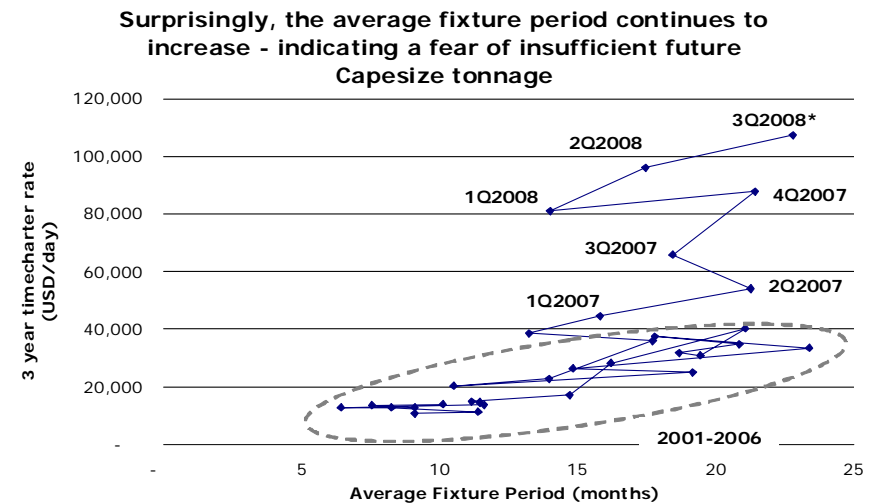
Figure DB.3



Sources: SSY, Clarksons, Danish Ship Finance

* Preliminary date (July)

Figure DB.4



Sources: Clarksons, Danish Ship Finance

* Preliminary data



deliver due to more or less temporary circumstances. This has driven longer travel distances and hence freight rates.

Longer coal travel distances as Australia, China and South Africa struggles to meet the strong thermal coal demand

Thermal coal supply has been relatively tight during the first half of 2008 as major suppliers such as Australia, China and South Africa have had limited export growth. This implies that coal has been transported longer distances from producers to end-users with a direct positive impact on Capesize demand and freight rates.

The difference between Chinese domestic coal prices and the international prices plays a significant role with respect to Chinese coal supplies. The Chinese government has capped domestic prices below international prices in order to shelter the Chinese power sector (which cannot transfer increased coal prices to end-users). This has successfully limited both the attractiveness of coal imports and Chinese coal exports.

Asian demand for coking coal is traditionally sourced from Australia (the world's largest exporter of coking coal). In the first months of this year, however, Australian coking coal mining was significantly hampered by heavy rain and flooding in Queensland. Shortfalls in demand were therefore sourced from either the US, Canada or Russia.

In sum, coal traditionally sourced out of China and Australia now has to be supplied from longer travel distances. The longer travel distances might be the single most important factor driving Capesize demand (and freight rates) in the first half of 2008.

Iron ore demand growth stronger than expected due to increased Chinese steel production (and exports)

Chinese monthly iron ore imports peaked in April at almost 43 million tonnes. As illustrated by figure 6, Chinese iron ore stocks at major ports have climbed to record levels. This has caused the Chinese authorities to order ports to implement a clearance plan. Iron ore inventories have to come down in order to reduce berthing delays and release the pressure on port operations and railway transportation.

Figure DB.5

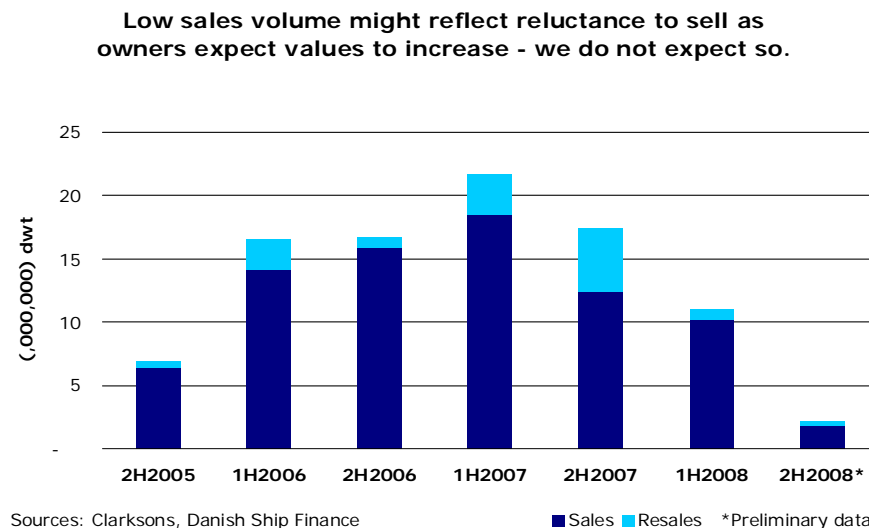
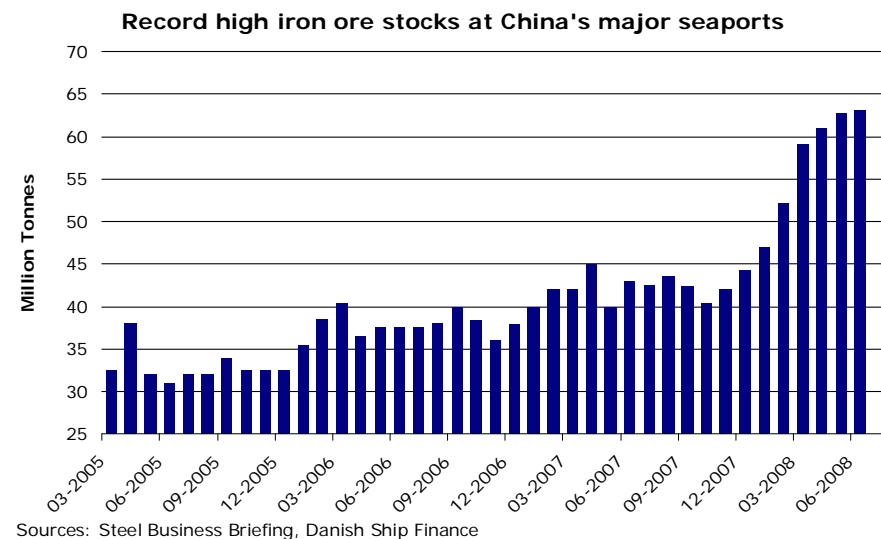


Figure DB.6



Contracting activity outpaces our expectations

In the first six months of 2008, 49.8 million dwt has been contracted (29.8 million dwt in the Capesize segment). That is the highest full-year contracting activity (apart from 2007) the Dry Bulk segment has ever seen. We did not expect that. Are there some demand issues we have overlooked?

Newbuilding prices gain 2% in 1H2008

The Capesize newbuilding price increased by 1.6% during the first seven months of 2008 (compared to a 31% increase in the same period last year). On average, Dry Bulk delivery time has declined 14% (from approximately 3 years to 2.6 years). The decline has been driven by lower South Korean and Japanese delivery time. Combined, this reflects the first sign of lower shipyard berth utilization.

Steel prices increase 70% during 1H2008

According to Clarksons, the price of Japanese steel plates increased 70% during the first six months of 2008 (compared to 8% same period last year). Expressed in terms of shipyard profit margins, an average newbuilding price increase of 2% might seem inadequate when input costs increase by 70%. If this trend continues, it might only be a question of time before shipyard capacity adjusts to demand.

Secondhand prices gained on average 5% in 1H2008

The price of a five-year-old Capesize rose 3% during the first six months of the year (compared to 31% same period last year). Small Handysize vessels maintained some of last year's momentum and surprisingly gained 23% in the first six months of the year (compared to 31% in the same period last year).

Secondhand prices excessive

We continue our scrutiny of Dry Bulk secondhand prices. Measured in terms of required earnings per day and benchmarked against historical 3-year timecharter rates, prices seem very high. With a

Figure DB.7

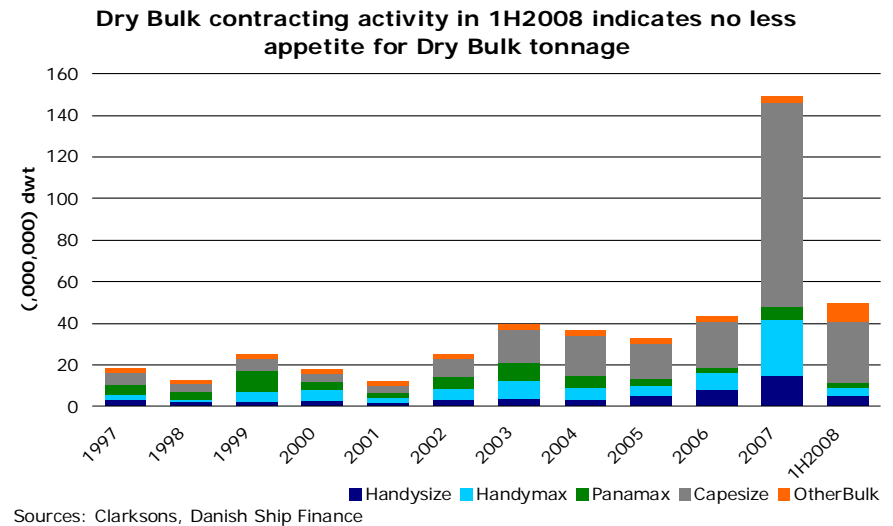
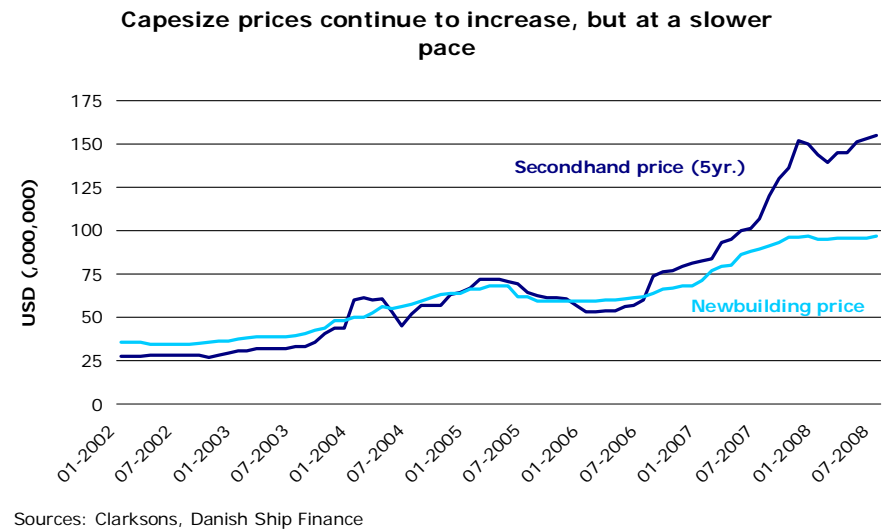


Figure DB.8



secondhand price about USD 150 million, a five-year-old Capesize vessel requires on average daily earnings above USD 64,000. Only 32% of the monthly three-year timecharter rates are above this level, whereas 68% are below (January 2001 to July 2008). As discussed in Ship Building, we do, of course, recognise that if the vessel is chartered out for three years and the debt depreciated accordingly, the residual required earnings for the remaining lifespan is significantly reduced to USD 25,000. Thus, assuming that history tells anything about the future, the project seems viable, if we are comparing the historical 1-year timecharter rate with the residual required earning for the 5-year-old Capesize vessel. The question is of course whether historical 1-year timecharter rates tell us anything about future rates, given the current high orderbook.

Nonetheless, we are not entirely convinced by this argument. Somehow, someone has to pay what equates USD 64,000 per day over 20 years. In the charter scenario, the cash-flow risk is replaced by a counterparty risk, but the risk is not eliminated!

OUTLOOK

To employ the current Capesize orderbook, a “new China” will have to emerge. Thus, we maintain our fundamental long-term scepticism that the current buoyant Dry Bulk freight rates and ship values will continue. Nevertheless, we see some potential short-term upside from longer coal travel distances. Time will tell whether they will support freight rates all the way into 1H2009.

Entering the second half of 2008, market sentiments point in the direction of a tighter market. As discussed in *Supply-Demand*, current sale volumes are low and vessels are being chartered for longer periods and at higher prices. In total, it indicates a market that fears insufficient access to future tonnage.

Current orderbook indicates a 67% fleet growth by 2013

Compared to the current orderbook, the market sentiment seems surprisingly bullish. The current orderbook stands at a total of 270 million dwt, or the equivalent to a fleet growth of 67% by 2013

Figure DB.9

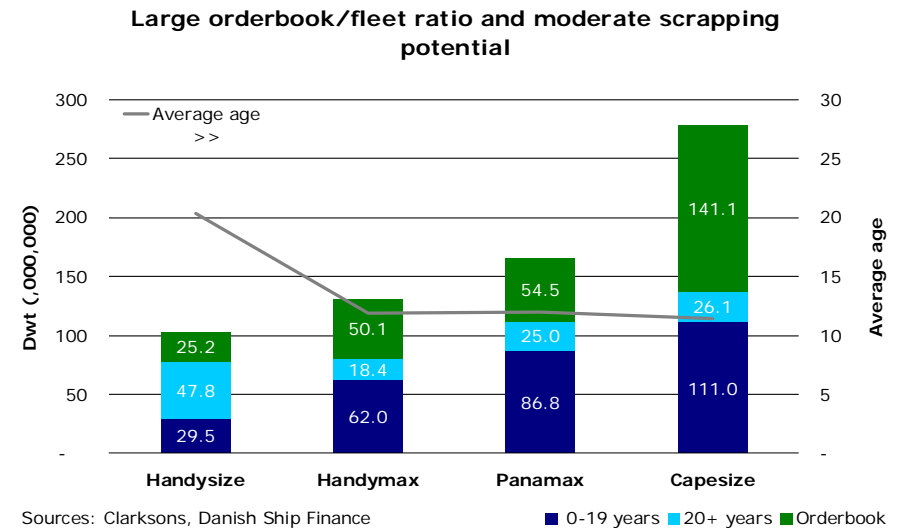
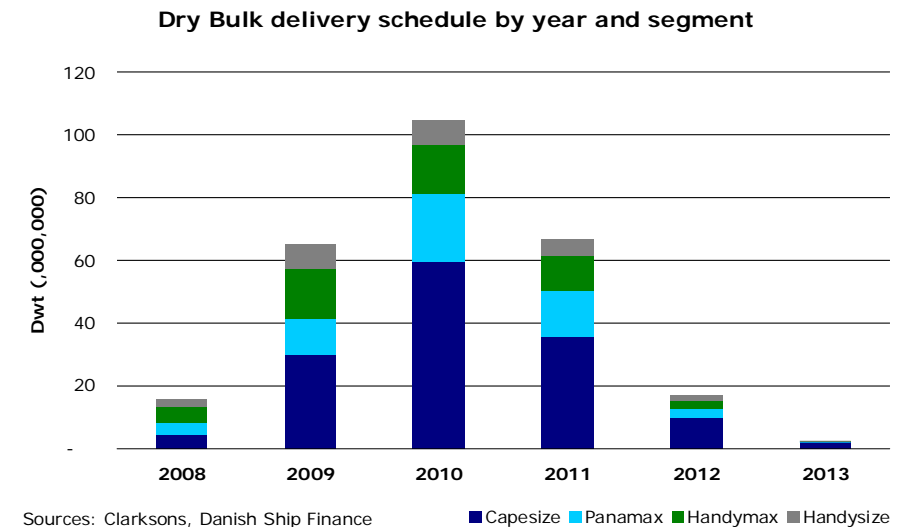


Figure DB.10



(assuming no scrapping). The Capesize orderbook is even larger than the current Capesize fleet (fig. 9).

The delivery schedule of the orderbook is illustrated in figure 10. As can be seen, the greater part of the orderbook is expected to be delivered by 2010. Whether a colossal 104 million dwt enters the market or not in 2010 depends on several issues (for a detailed discussion, see *Ship Building*).

Overcapacity looms

30% of the current Dry Bulk fleet is more than 19 years old. In the Handysize segment, the proportion is even higher – reaching 62% (figure 9). If we assume that the entire orderbook is to be delivered and all vessels older than 19 years have been scrapped, the world's Dry Bulk fleet in 2013 is expected to be 37% larger than today's fleet. Therefore, tonnage supply seems plentiful.

The Dry Bulk market needs an “additional China”

According to Clarksons, an average Capesize vessel carries 7.5 tonnes of cargo a year per dwt. The current Capesize orderbook stands at 141 million dwt. This is equivalent to saying that additional demand of 900-1,000 million tonnes of cargo is required (over the next 3-4 years) in order to keep utilization (and rates!) at high levels. The 7.5 tonnes of cargo a year is carried in a period of significant port congestion – one can only speculate about what happens to this number if port congestion diminishes.

To put the required 900-1,000 million of additional cargo into perspective, we compare it to current trade flows. SSY forecasts the seaborne coal (iron ore) exports in 2008 to average 850 (900) million tonnes. Thus, we need another iron ore or coal trade in order to employ the Capesize orderbook. And then we have not even employed the remainder of the Dry Bulk orderbook! Not even China can claim to have added that much demand to the world market.

In the above, we have omitted to take into consideration whether world iron ore, coal and grain production can

reasonably be expected to increase that much, neither have we included end-user demand in the equation.

Short-term raw material supply seems adequate

Last year's insatiable appetite for raw materials has fuelled heavy investments in raw material production all over the world.

Australian iron ore exports are expected to increase by 23% in 2008 and 15% in 2009. Brazilian iron ore exports are set to grow 14% in 2008 and 13% in 2009. China's iron ore production increased 20% in 2007, and is expected to increase a further 13% in 2008 and 9% in 2009.

Australian coking coal exports are expected to decline slightly in 2008, but to increase by 10% in 2009. Australian thermal coal production is expected to increase by 5% in 2009 as a number of new mines are scheduled to commence operation.

Strong end-user demand in the next 12-18 months?

As we are about to commemorate the one-year anniversary of the credit crisis, it might seem surprising that Asia is still booming, particularly as many Asian economies are export driven and hence heavily dependent on North American and European demand. Nonetheless, the 2009 Asian GDP growth forecast is robust. Traditionally, demand for Dry Bulk commodities correlates with economic growth. Accordingly, if Asian GDP growth remains firm, demand of, for example, iron ore and coal is expected to remain robust for at least the next 12 months. We do, however, see some potential obstacles to this scenario as we expect the Asian economies to lower their GDP forecasts for 2009 in the next 6 months. Nevertheless, there might still be a potential upside for Capesize vessels.

Lower Vietnamese coal exports to China increase Capesize tonne miles demand

China has traditionally imported 30% of its coal from Vietnam. Vietnam's exports to China fell 15% during the first half of 2008. From June 1, Vinacomin (Vietnam's top coal producer) stopped the cross-border sales of coal via Van Gia port in the

northern province of Quang Ninh and since allows only its subsidiary Coalimex-TKV to export coal to China.

If Chinese coal imports have to be sourced for example from Indonesia, the travel distance will double. If Australia delivers the coal, the travel distance will more than triple. Thus, the Vietnamese decision to stop coal exports to China might potentially be the single most important factor (besides perhaps port congestion) supporting Capesize freight rates in the next 6-12 months.

Further restriction on China's coal exports may lead to increased Capesize travel distances

China's coal imports will moreover depend on the last batch of domestic coal export licences (due in September 2008). Market consensus expects the government to cut back on the number of available licences in order to keep power generation costs down.

Long-term Dry Bulk demand growth likely to dwindle as China's financial risk increases

China is without comparison the single most important growth engine for Asia and for the Dry Bulk demand. Accordingly, China's attitude towards lower export volumes is crucial for the region's long-term growth. It is thus essential to analyse the components of Chinese economic growth and not just put confidence in a high Chinese GDP figure.

IMF forecasts high Chinese GDP growth for 2H2008 and 2009

Even though we do subscribe to the high economic growth scenario, we need to stress the fact that not only has the risk increased, the dynamics of growth are also changing (from export-driven to being driven by expansive fiscal policy). In consequence, we argue that the sustainability of the high Chinese growth is challenged and that the fondness of fixed asset investment is fading.

Therefore, the combination of an increasing non-performing loan ratio (for a discussion of the Chinese non-performing loan

problem, see Outlook from our 2nd half 2007 Shipping Market Review), increasing external debt (short-term debt increased by 5% during 1Q2008), lower export volumes and increased public investments in social security makes increased – long-term – Chinese Dry Bulk demand less likely than a year ago.

Accordingly, we do not expect Asian end-user demand to ignore price elasticity and lower economic growth. We argue that the high prices will hurt long-term demand as economic growth is waning and thus we do not see the long-term Dry Bulk upside. The current large orderbook – if delivered – will certainly test the stability of Dry Bulk ship prices if the world economy fails to add "another China" to the Dry Bulk demand. ■

Glossary

<i>Aframax:</i>	Crude oil tanker or product tanker too large to pass through the Panama Canal and below 120,000 dwt.	<i>Cgt:</i>	Compensated Gross Tonnage. International unit of measure that facilitates a comparison of different shipyards' production regardless of the types of vessel produced.
<i>AHTS:</i>	Anchor Handling Tug Supply. Offshore vessel used for jobs such as the relocation of oil rigs and anchors of the oil rigs.	<i>Clarkson:</i>	British ship brokering and research company. www.clarksons.net
<i>ARM:</i>	Adjustable Rate Mortgage. Mortgage loan with a variable interest rate that is being adjusted on a regular basis.	<i>Clean products:</i>	Refers to light, refined oil products such as jet fuel, gasoline and naphtha.
<i>Back-haul:</i>	The leg of the trade route that has the lowest container volumes is often called 'back-haul, whereas the return leg is often referred to as 'head-haul'.	<i>CoA:</i>	Contract of Affreightment. Contract between shipping company and shipper concerning the freight of a predetermined volume of goods within a given period of time and/or at given intervals.
<i>Barrel:</i>	A volumetric unit measure for crude oil and petroleum products equivalent to 42 U.S. gallons, or approximately 159 litres.	<i>CSR:</i>	Common Structural Rules. A common set of construction rules agreed by the leading international classification societies to be applied to all new construction contracts from April 1, 2006 between shipyards and shipowners for tankers of 150 m or more in length and bulk carriers of 90 m or more in length. The CSR require the ships to be built at a higher set of standards thus enabling the ships to trade for longer.
<i>BHP:</i>	Break Horse Power. The amount of engine horsepower.	<i>Dirty products:</i>	Refers to heavy oils such as crude oil or refined oil products such as fuel oil, diesel oil or bunker oil.
<i>Brent:</i>	Term used for crude oil from the North Sea. Brent oil is traded at the International Petroleum Exchange in London, and the price of Brent is used as a benchmark for several other types of European oil.	<i>Drewry:</i>	Drewry Shipping Consultants Ltd. British shipping and transport research company. www.drewry.co.uk
<i>Bulk vessel:</i>	Description of vessels transporting large cargo quantities, including coal, iron ore, steel, corn, gravel, oil, gas, etc.	<i>Dwt:</i>	Dead Weight Tons. Indication of a vessel's cargo carrying capacity (including bunkers, ballast, water and food supplies, crew and passengers).
<i>Bunker:</i>	Fuel for vessels.	<i>Dynamic Positioning:</i>	Special instruments on board that in conjunction with bow thrusters and main propellers enable the ship to position itself
<i>Call on OPEC:</i>	Defined as total global petroleum demand minus non-OPEC supply minus OPEC natural gas liquid supply.		
<i>Capesize:</i>	Dry bulk carrier of more than approximately 80,000 dwt; too large to pass through the Panama Canal.		
<i>Cbm:</i>	Cubic Meter.		
<i>Ceu:</i>	Car equivalent unit. Unit of measure indicating the car carrying capacity of a vessel.		

	in a fixed position in relation to the seabed.		
<i>EIA:</i>	Energy Information Administration. A subsidiary of the US Department of Energy. www.eia.doe.gov	<i>Imarex:</i>	International Maritime Exchange. www.imarex.com
<i>E&P:</i>	Exploration and Production.	<i>IMO:</i>	International Maritime Organization. An organisation under the UN.
<i>Fearnleys:</i>	Norwegian ship brokering and research company. www.fearnleys.no	<i>IMO I-III:</i>	Quality grades for tankers for the permission to transport different chemical and oil products. IMO I are the most hazardous products, IMO III the least hazardous.
<i>Feeder:</i>	Small container carrier.	<i>Chemical tanker:</i>	Tanker with coated or stainless steel tanks (IMO I-III).
<i>FPSO:</i>	Floating Production Storage Offloading unit. Vessel used in the offshore industry to process and store oil from an underwater (sub-sea) installation.	<i>LOOP:</i>	Louisiana Offshore Oil Port. A deepwater port in the Gulf of Mexico off the coast of Louisiana. LOOP provides tanker offloading and temporary storage services for crude oil transported on some of the largest tankers in the world of which some are too large for U.S. inland ports.
<i>Geared:</i>	Indicates that a vessel is equipped with a crane or other lifting device.	<i>LPG vessels:</i>	Liquefied Petroleum Gas. Vessels used to transport ammonia and liquid gases (ethane, ethylene, propane, propylene, butane, butylenes, isobutene and isobutylene). The gases are transported under pressure and/or refrigerated.
<i>Gearless:</i>	Indicates that a vessel is not equipped with a crane or other lifting device.	<i>LR1, product tanker:</i>	Long Range 1. Product tanker with the maximum dimensions for passing through the Panama Canal (width of 32.21 metres and length of 289.5 metres) of approximately 50,000—80,000 dwt.
<i>Global Insight:</i>	American economic consulting company. www.globalinsight.com	<i>LR2, product tanker:</i>	Long Range 2. Product tanker too large to pass through the Panama Canal and larger than approximately 80,000 dwt.
<i>Gt:</i>	Gross Tons. Unit of 100 cubic feet or 2.831 cubic meters, used in arriving at the calculation of gross tonnage.	<i>Medium, tanker (MR):</i>	Medium Range. Product tanker of between 25,000 and 50,000 dwt.
<i>Handy, tank:</i>	Crude oil tanker, product tanker or chemical tanker of between 10,000 and 25,000 dwt.	<i>MEW:</i>	Mortgage Equity Withdraw. Defined as equity extracted from existing homes via cash-out refinancing, home equity borrowing, and/or housing turnover.
<i>Handymax, dry cargo:</i>	Dry bulk carrier of between approximately 40,000 and 60,000 dwt.		
<i>Handysize, dry cargo:</i>	Dry bulk carrier of between approximately 10,000 and 40,000 dwt.		
<i>Head-haul:</i>	The leg of the trade route that has the highest container volumes is often called 'head-haul, whereas the return leg is often referred to as 'back-haul'. On routes where there is a great trading volume mismatch between head-haul and back-haul, the head-haul demand will most often determine the freight rate level.		
<i>IEA:</i>	International Energy Agency. A subsidiary of the OECD. www.iea.org		

<i>Multi-Purpose:</i>	Dry bulk carrier with multiple applications, mainly as a feeder vessel or for special cargo.	<i>TCE:</i>	Canal (approximately 120,000—200,000 dwt.).
<i>Nautical Mile:</i>	Distance unit measure of 1,582 meters, or 6,076.12 ft.	<i>Teu:</i>	Time Charter Equivalent.
<i>Offshore vessel:</i>	Vessel serving the offshore oil industry.		Twenty Feet Equivalent Unit. Container with a length of 20 feet (about 6 metres) which forms the basis of describing the capacity of a container vessel.
<i>OPEC:</i>	Organisation of Petroleum Exporting Countries.	<i>Teu-knots:</i>	Unit of measure that takes account of the speed of the ships when estimating the actual supply of ships within a segment.
<i>Panamax, container:</i>	Container carrier with the maximum dimensions for passing through the Panama Canal (width of 32.21 metres, length of 291 metres) of approximately 3,000—5,000 teu.	<i>Teu-nautical mile:</i>	Unit of measure indicating the volume of cargo, measured in teu, and how far it has been transported, measured in nautical miles.
<i>Panamax, tanker:</i>	Crude oil tanker or product tanker with the maximum dimensions for passing through the Panama Canal (width of 32.21 metres and length of 289.5 metres) of approximately 50,000—80,000 dwt.	<i>Ton-nautical mile:</i>	Unit of measure indicating the volume of cargo, measured in ton, and how far it has been transported, measured in nautical miles.
<i>Panamax, dry cargo:</i>	Dry bulk vessel with the maximum dimensions for passing through the Panama Canal (width of 32.21 metres and length of 289.5 metres) of approximately 60,000—80,000 dwt.	<i>Tonnage:</i>	Synonymous with “vessel”.
<i>PCC:</i>	Pure Car Carrier. Car carrier built exclusively to transport passenger cars.	<i>ULCC:</i>	Ultra Large Crude Carrier. Crude oil tanker above 320,000 dwt.
<i>Post-Panamax:</i>	Container vessel of approximately 4,000+ teu that is too large to pass through the Panama Canal.	<i>VLCC:</i>	Very Large Crude Carrier. Crude oil tanker of between approximately 200,000 and 320,000 dwt.
<i>Product tanker:</i>	Tanker vessel with coated tanks used to transport refined oil products.	<i>VLGC:</i>	Very Large Gas Carrier. LPG ship with capacity above 60,000 cbm.
<i>PSV:</i>	Platform Supply Vessel. Offshore vessel serving the offshore oil installations.	<i>WTI:</i>	West Texas Intermediate. Oil price benchmark in the USA.
<i>Ro-Ro:</i>	Roll On – Roll Off. Common description of vessels on which the cargo is rolled on board and ashore.		
<i>SSY:</i>	Simpson Spence & Young, British ship brokering and research company. www.ssy.co.uk		
<i>Suezmax:</i>	Crude oil tanker with the maximum dimensions for passing through the Suez		

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