

# SHIPPING MARKET REVIEW

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MARCH 2012



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## EXECUTIVE SUMMARY



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## EXECUTIVE SUMMARY

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THIS REPORT REVIEWS KEY DEVELOPMENTS IN SHIPPING MARKETS AND THE MAIN SHIPPING SEGMENTS DURING THE PERIOD FROM JANUARY 2011 TO FEBRUARY 2012 AND INDICATES POSSIBLE FUTURE MARKET DIRECTIONS.

### SHIPBUILDING

**Shipyards' order cover continues to decline as more tonnage is** being delivered than contracted. 28 million cgt was contracted during 2011 while 50 million cgt left the shipyards. 74 million cgt was scheduled for delivery in 2011 but, according to our estimates, global yard capacity was not able to build more than 63 million cgt in 2011. Global yard capacity was utilized 80% in 2011, down 3 %-points from 2010. For 2012 and beyond, we expect pressure on yard capacity and yard utilization. South Korean yards seem best positioned to adapt to the difficult outlook. After extensive postponement activity, the spare capacity at global yards amount to 44 million cgt in 2014 if current yard capacity is maintained. In 2011, newbuilding prices fell on average 10% and are 40% below the 2008 peak-level. Time will tell whether newbuilding prices will decline in tandem with lower yard utilization or not.

### CONTAINER

The container market is dominated by operators' chase for market shares, which drove box rates down in 2011. Accordingly, the composite index declined 16% in 2011. The low box rates led to intensified vessel sharing agreements and removal of capacity. Consequently, time charter rates declined. The intensified focus on market shares has apparently led to an increased appetite for new, larger and more fuel-efficient vessels. To our surprise, 2011 became the year where second most Post-Panamax vessels were contracted. The supply-demand gap widened slightly in 2011 as distance-adjusted head-haul demand growth increased by 6% while nominal supply grew 8%. However, slow steaming managed to absorb much of the oversupply. The outlook for

2012 is dominated by the challenge of absorbing another large inflow of Post-Panamax vessels. The demand outlook seems weak, and remains most fragile in the main east-west trading routes where most of the orderbook is expected to be employed. Distance-adjusted demand is expected to increase by 5%. We doubt that this will be enough to absorb the Post-Panamax deliveries. Rates and values are expected to remain low during 2012.

### CRUDE TANKERS

The crude tanker market faced great challenges in 2011. The crude tanker market got worse in 2011 as the economic crisis intensified. Oil demand grew at a sluggish pace and the continuing inflow of new tonnage made matters even worse – pulling rates down. Timecharter rates and earnings were testing the historical lows. Newbuilding and secondhand prices declined accordingly. With freight markets in the doldrums, **owners' appetite** for new tonnage seems to have almost evaporated. For 2012, distance-adjusted demand is expected to increase by 7%. By itself, this sounds promising. But, the crude tanker market has been flooded by new tonnage entering the market in 2011, and yet more is set to enter the fleet in 2012. Accordingly, freight rates and asset values are expected to remain depressed in 2012.

### PRODUCT TANKERS

The product tanker market remains under pressure. Rates declined slightly in 2011 as owners battled overcapacity and declining demand. The product tanker fleet grew by 4% in 2011 as postponements and cancellations helped to curb fleet growth. Trade in seaborne oil product commodities increased 6% in 2011 mainly driven by increased European imports. However, since long-haul imports were to some extent replaced by short-haul imports, distance-adjusted demand grew only 5%. Nevertheless, the gap between supply and demand narrowed throughout 2011. The current orderbook for product tankers stands at 10% of the fleet and in combination

with a relatively high scrapping potential in 2012, the fleet is expected to increase by 2% in 2012. Trade in seaborne oil products is expected to increase 5% in 2012 driven largely by shorter-haul imports. As a result, distance-adjusted demand is expected up by 4%. Thus, in 2012, the supply-demand gap will narrow even further although oversupply is likely to endure – at least throughout 2012.

#### **CHEMICAL TANKERS**

The chemical tanker market had a slow start in 2011 but the year ended with rising spot rates and bounced back to levels last seen in 2008. Supply and demand growth ended more or less in balance as postponements (61% of scheduled deliveries) suppressed supply growth. The chemical fleet grew by 7% whereas distance-adjusted demand increased 6% in 2011. The chemical tanker market is characterized by a relatively limited number of active players, which may explain the low contracting during the past 3 years. Consequently, the orderbook currently represents about 8% of the fleet. The outlook for chemical tankers is relatively bright. Demand growth is expected to exceed supply growth by 2 percentage points in 2012 as the chemical fleet is projected to grow by 3% and distance-adjusted demand by 5%.

#### **LPG TANKERS**

Conditions in the LPG market are gradually improving. After a strong recovery in 2010 rates continued to improve in 2011. The fleet grew a modest 1% in 2011 even though both scrapping and postponements were kept low. Demand for seaborne LPG surged by 14% mainly driven by an increased demand from the Far East. As countries in the Middle East are by far the largest producers of LPG, the increased demand from the Far East has added significant ton-miles to distance-adjusted demand which grew 15% in 2011. By January 2012 the orderbook/fleet ratio stood at 9% and the fleet is expected grow by 1% in 2012. The scrapping potential in the LPG fleet is relatively large as 19% of the fleet is older than 20 years. Global demand for LPG is expected to continue its strong growth. LPG is seen as a healthier and more environmental

friendly alternative to gasoline in many smog-plagued cities. Distance-adjusted demand for LPG is expected to increase 13% in 2012 as particularly Asian countries are set to increase demand. Rates in the LPG tanker market are set to remain firm in 2012.

#### **DRY BULK**

A large and growing oversupply of tonnage continues to weigh down the Dry Bulk market. The Baltic Dry Index dropped in January 2012 to levels not seen since the financial crisis was at its worst. The fleet grew 14% in 2011 and had it not been for a record high level of scrapping, growth would have been even larger. Distance-adjusted demand grew 8% in 2011. Measured in volumes, seaborne Dry Bulk trade increased 7%. Thus, longer travel distances supported demand for Dry Bulk vessels in 2011. In 2012, the fleet is once again set for a large increase in capacity. The Dry Bulk fleet is scheduled to increase by 23% in 2012. However, cancellations and postponements of orders as well as a continuing high level of scrapping is expected to curb fleet growth significantly in 2012. We expect the Dry Bulk fleet to expand by 10% in 2012. Seaborne trade is expected to increase by 8% in 2012 and distances will continue to support demand for Dry Bulk capacity. Distance-adjusted trade volumes are expected to increase 9%. Thus, the outlook for the Dry Bulk market remains bleak.

*Accordingly, several ship segments are facing low freight rates, declining asset values and a short- to medium-term outlook where the risk of escalating overcapacity issues cannot be neglected. However, previous shipping cycles has taught us that occasional spikes in freight rates does happen even in downward trending markets.*





SHIPBUILDING

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# SHIPBUILDING

NEWBUILDING PRICES ARE DECLINING BECAUSE YARD CAPACITY HAS GROWN EXCESSIVELY, PUSHING DOWN THE GLOBAL ORDER COVER. IN 2011, SOUTH KOREAN YARDS APPEARED BEST POSITIONED TO HANDLE THE SLOWDOWN WHILE CHINESE, JAPANESE AND EUROPEAN YARDS WERE STRUGGLING TO ADAPT TO THE NEW MARKET SITUATION. YARD CLOSURE SEEMS ALMOST INEVITABLE AND NEWBUILDING PRICES ARE SET TO DECLINE FURTHER.

## NEWBUILDING PRICE

NEWBUILDING PRICES DROPPED 10% IN 2011. THE CONTRACTING/DELIVERY RATIO INDICATES THAT NEWBUILDING PRICES COULD HAVE DECLINED MORE IN 2011. ON THE OTHER HAND, THE HIGH STEEL PRICES SEEM TO BE PROVIDING NEWBUILDING PRICES WITH SOME DEGREE OF SHELTER.

### NEWBUILDING PRICES DOWN 10% IN 2011

The average newbuilding prices (per cgt) dropped 10% in 2011 and are now 40% below the 2008 peak-level. There is a high correlation between the average newbuilding prices and the contracting/delivery ratio. In 2011, the contracting/delivery ratio deteriorated 25% (fig. 1).

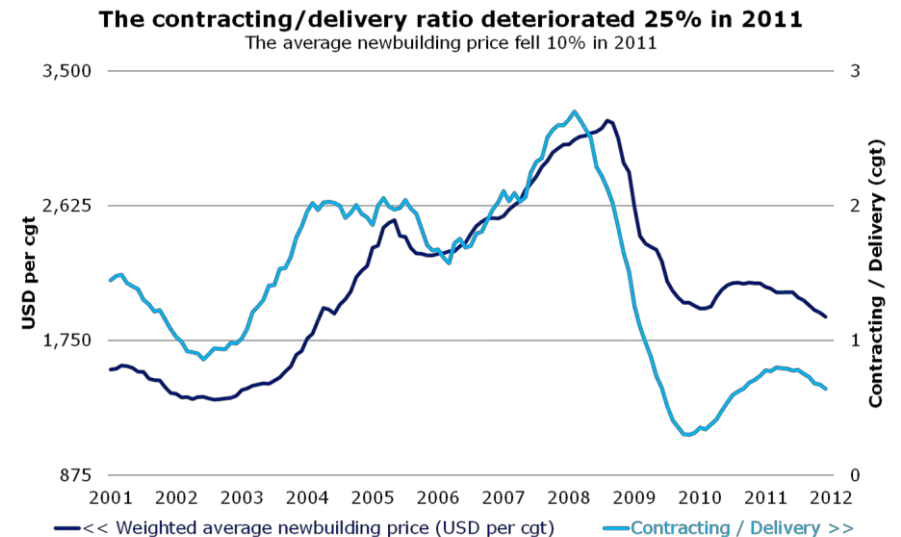
### NEWBUILDING PRICE 40% ABOVE THE 2002 LOW

One thing to consider is whether newbuilding prices are approaching construction costs. They are still 40% above the 2002-trough, but should newbuilding prices be expected to fall that much? Cost and prices do not necessarily go hand in hand, but we do expect some correlation. Steel prices have more than doubled since 2002, and it also seems reasonable to assume that labour costs have increased significantly since 2002.

### NEWBUILDING PRICE ABOVE THE TREND

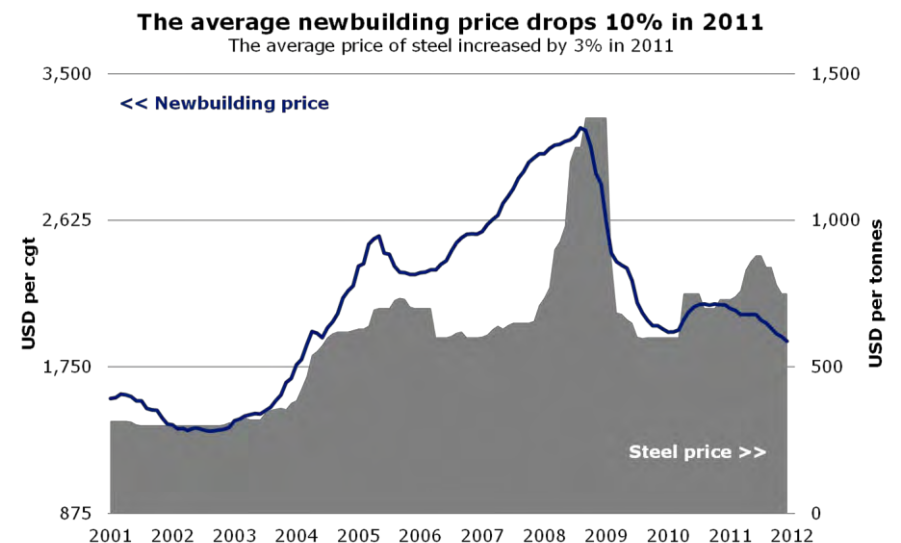
We would therefore argue that there is a point where lower yard utilization can no longer push down newbuilding prices any further. When that point comes, capacity, not prices, will have to give. Time will tell how much further prices can fall.

Figure SB.1



Sources: Clarksons, Danish Ship Finance

Figure SB.2



Sources: Clarksons, Danish Ship Finance



## GLOBAL CONTRACTING

28 MILLION CGT WAS CONTRACTED IN 2011. EUROPEAN OWNERS WERE THE MOST FREQUENT BUYERS. CONTAINER AND TANKER VESSELS WERE THE PREFERRED VESSEL TYPES. SOUTH KOREAN YARDS SECURED ALMOST HALF OF THE NEW ORDERS.

### 28 MILLION CGT CONTRACTED IN 2011

28 million cgt was contracted in 2011 (40 million cgt in 2010). Containers accounted for 9 million cgt, Tankers for 7 million cgt (LNG alone accounted for 4 million cgt!) and Dry Bulk for 6.5 million cgt. Only 20% (5.5 million cgt) of the contracted capacity was in other segments. The global order cover (i.e. global orderbook divided by annual capacity) dropped 20% to 26 months in 2011.

### SOUTH KOREA SECURED NEW ORDERS OF 13.5 MILLION CGT

South Korean yards took market share from Chinese yards in 2011. South Korean yards secured almost half of the contracted capacity (13.5 million cgt). Container and Tanker orders accounted for 85% (6 million cgt and 5 million cgt respectively). South Korea therefore maintains the position as the leading global builder of Containers and Tankers. But South Korean yards also added to their market position in the specialized tonnages. For example, orders of 1 million cgt were placed for Drillships in 2011. European owners signed 60% of the orders placed in South Korea during 2011. The order cover dropped on average 14% to 28 months in 2011.

### CHINA TOOK UP NEW ORDERS OF 9.5 MILLION CGT IN 2011

Chinese yards struggled to keep pace with their South Korean peers. In 2011, Chinese yards received new orders of 9.5 million cgt (19.5 million cgt in 2010) – primarily Dry Bulk tonnage, which accounts for 60% of the Chinese orderbook. Two thirds of all new orders were placed on behalf of Chinese or European owners. The order cover of Chinese yards dropped, on average, 17% to 28 months in 2011.

### JAPANESE YARDS CAMPAIGNING FOR NEW ORDERS

2011 was the third consecutive year that Japanese yards were campaigning for new orders and with little success. The strong yen continued to trouble the competitiveness of Japanese yards. The order cover seems to approach 18 months.

Figure SB.3

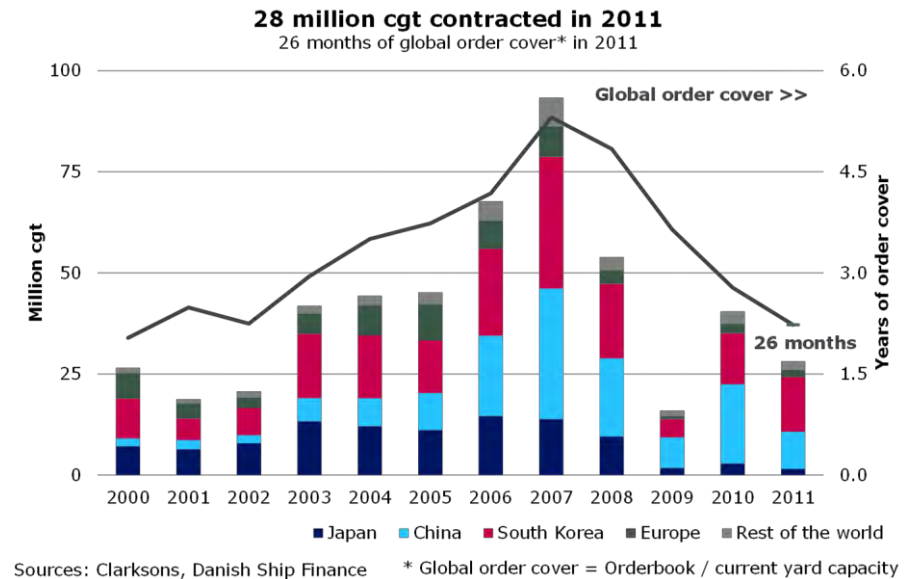
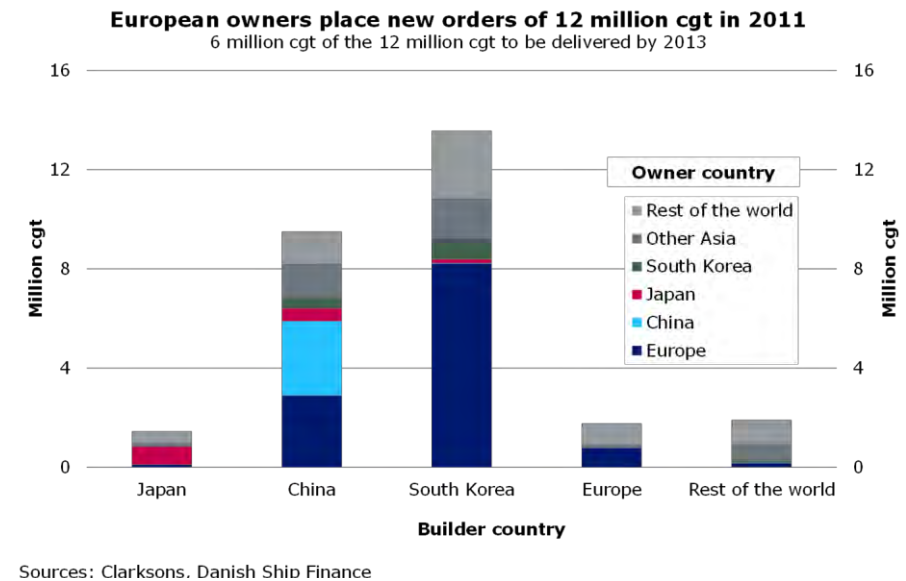


Figure SB.4



## GLOBAL DELIVERY

68% OF VESSELS SCHEDULED FOR DELIVERY IN 2011 WERE ACTUALLY BUILT IN 2011. ACCORDINGLY, 50 MILLION CGT WAS DELIVERED. CHINA BUILT 19 MILLION CGT AND A TOTAL OF 23 MILLION CGT OF DRY BULK TONNAGE WAS BUILT ACROSS THE FIVE REGIONS.

### 50 MILLION CGT DELIVERED IN 2011

In January 2011, 74 million cgt was scheduled for delivery in 2011. 65 million cgt (87%) was considered firm orders, while 9 million cgt could be purchase options. At the end of 2011, 50 million cgt (68%) was delivered (fig. 5). European owners took delivery of 21 million cgt (42%) in 2011.

### CHINA DELIVERS 19 MILLION CGT IN 2011

Chinese yards were scheduled to deliver 29 million cgt in 2011 (up from 19 million cgt in 2010) (fig.5). Actual deliveries fell short of the schedule. Chinese yards delivered 19 million cgt (65% of the 29 million cgt) in 2011 with Dry Bulk accounting for almost 12 million cgt, Tankers for 3.5 million cgt and Containers for less than one million cgt. 45% of the capacity built was for European owners while Chinese owners accounted for 32%.

### SOUTH KOREA DELIVERS 16 MILLION CGT IN 2011

South Korean yards were scheduled to build 24 million cgt in 2011 (up from 16 million cgt in 2010), with 16 million cgt actually being delivered (fig. 5). Tankers, Containers and Dry Bulk accounted for 5 million cgt each while Others took up the remaining 10%. 50% of the vessels built were for European owners.

### JAPAN DELIVERS 9 MILLION CGT IN 2011

Japanese yards were scheduled to build 11 million cgt in 2011 (up from 10 million cgt in 2010) (fig. 5). 9 million cgt ended up being delivered, primarily Dry Bulk (57% of the 9 million cgt) and Tankers (26% of the 9 million cgt) vessels. 60% of the capacity built at Japanese yards in 2011 was for Japanese owners while European owners accounted for almost 20%.

Figure SB.5

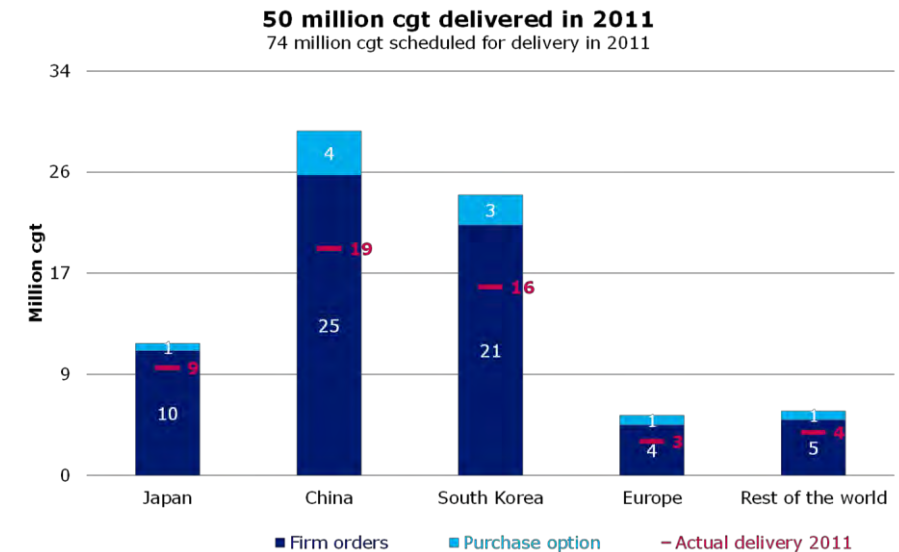
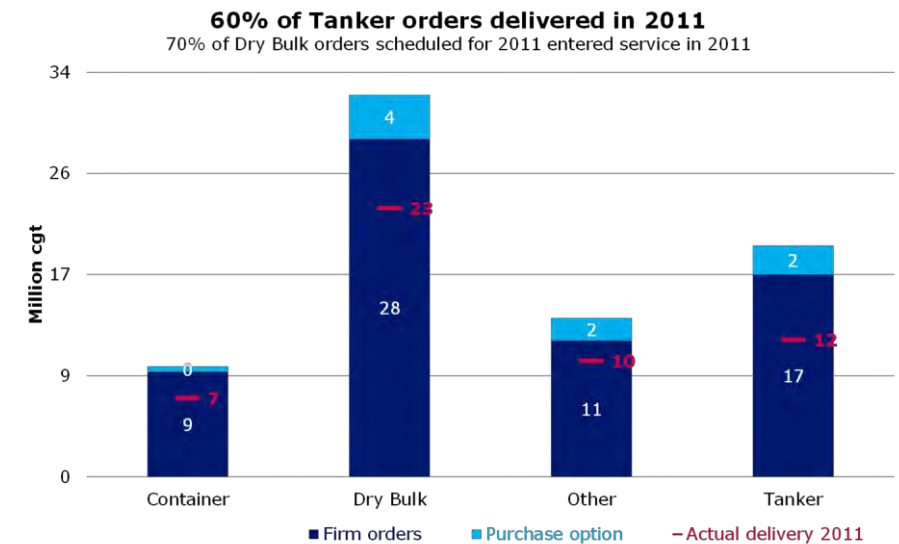


Figure SB.6



## YARD UTILIZATION

UTILIZATION OF THE GLOBAL YARD CAPACITY DROPPED 3 PERCENTAGE POINTS IN 2011 TO 80%. CAPACITY DECLINED SLIGHTLY AS A FEW JAPANESE AND EUROPEAN YARDS CLOSED. SOUTH KOREAN YARDS RAN THE HIGHEST CAPACITY UTILIZATION.

### GLOBAL YARD CAPACITY UTILIZATION OF 80% IN 2011

It would seem obvious that global yard utilization is declining when 24 million cgt of the 74 million cgt in scheduled 2011 deliveries was not delivered in 2011. However, it may be more surprising to know that global yard utilization only declined 3 percentage points, from 83% to 80%, in 2011 (fig. 7).

### CAPACITY WAS NEVER ABLE TO MATCH SCHEDULED 2011 DELIVERIES

The interesting issue here is that we cannot see any indication of the world's yards having the capacity to build 74 million cgt in 2011. Capacity at both South Korean and Chinese yards is 30% lower than required to deliver their scheduled orders for 2011. European yards have surplus capacity while capacity in the Rest of the world undershoots the orderbook by 50%. We estimate actual global yard capacity in 2011 at 63 million cgt.

### RESTRAINED YARD CAPACITY KEPT UTILIZATION HIGH IN 2011

By holding back their capacity, South Korean and Chinese yards in particular managed to maintain high yard utilization in 2011. Despite being the shipbuilding nation most exposed to order cancellations in 2011, South Korean shipyards managed to maintain yard utilization at 88%. The ten largest South Korean shipyards utilized 92% of their annual capacity in 2011. The Chinese shipyards utilized approximately 87% of capacity in 2011. The ten largest yards in China operate at 91% capacity utilization. Included in this figure, however, were two yards running at less than 80% (fig. 8).

### YARD CAPACITY STABLE IN 2011

Generally speaking, regional yard capacity was stable in 2011. There were some capacity adjustments in Japan and the European yard capacity seems to have dropped by approximately 2 million cgt in 2011. We estimate that global yard capacity fell by 3% in 2011.

Figure SB.7

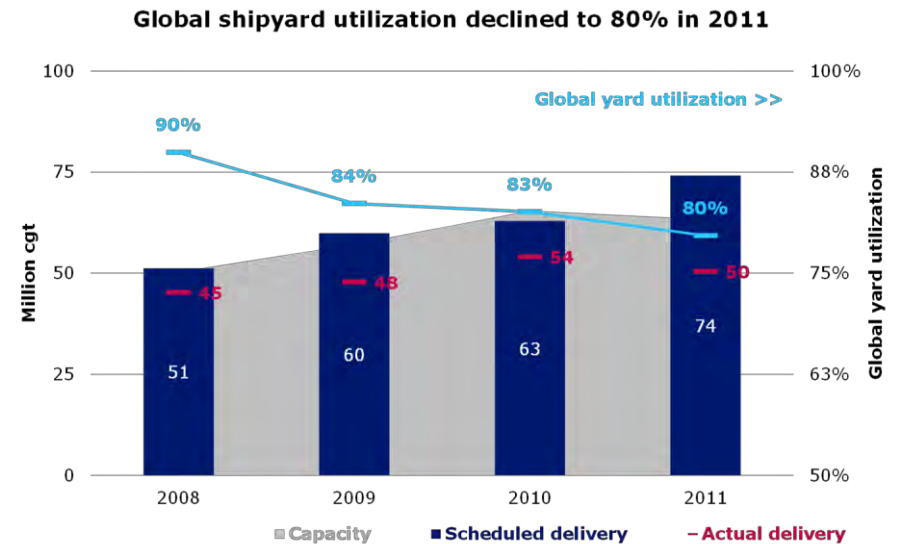
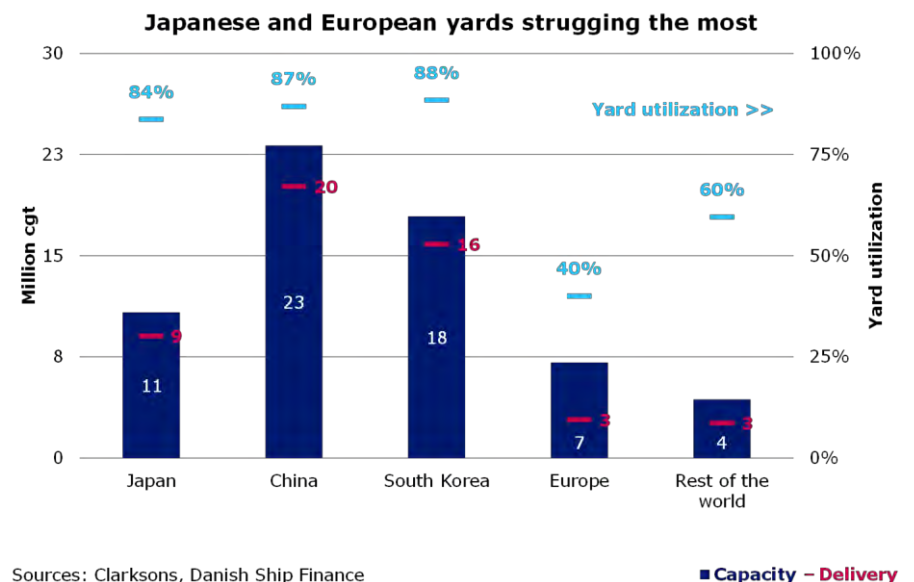


Figure SB.8





## GLOBAL ORDER POSTPONEMENT AND CANCELLATION

21 MILLION CGT WAS POSTPONED IN 2011 FOR A LATER DELIVERY WHILE 2 MILLION CGT WAS CANCELLED. SOUTH KOREA WAS THE MOST EXPOSED TO ORDER CANCELLATIONS. 40% OF THE POSTPONED ORDERS WERE DRY BULK ORDERS.

### 21 MILLION CGT POSTPONED FROM 2011 FOR LATER DELIVERY

As mentioned above, 74 million cgt was scheduled for delivery in 2011 with actual deliveries amounting to 50 million cgt. 24 million cgt was not built in 2011. 21 million cgt was re-scheduled to a later delivery date. Of these, 3 million cgt changed segment from Tanker, Container or Dry Bulk to Other. 2 million cgt was cancelled outright (fig. 9).

### 10 MILLION CGT SCHEDULED FOR CHINESE SHIPYARDS IN 2011

Chinese shipyards apparently went through 2011 without any major cancellations. Chinese yards were due to have built 10 of the 24 million cgt in 2011. An equal amount was postponed for later delivery. 8 million cgt was postponed one year forward for delivery in 2012 (fig. 9).

### 8 MILLION CGT WAS SCHEDULED FOR SOUTH KOREAN SHIPYARDS IN 2011

South Korean shipyards struggled to maintain the size of their orderbook. South Korean shipyards were to have delivered 8 of the 24 million cgt in 2011. Only 3 million cgt was postponed for later delivery, while the remaining 5 million cgt was cancelled (fig. 9).

### 40% OF POSTPONED ORDERS WERE DRY BULK

Dry Bulk orders were impacted the most. 32 million cgt of Dry Bulk orders was scheduled for delivery in 2011. 22.5 million cgt was actually delivered in 2011. Of the remaining 9.5 million cgt, 8 million cgt was postponed for later delivery. The Dry Bulk orderbook shrank by 1.5 million cgt (fig. 10).

### 30% OF POSTPONED ORDERS WERE TANKER ORDERS

A total of 19 million cgt was scheduled for delivery in the Tanker segments during 2011. 11.5 million cgt was actually delivered. Of the unsettled 8 million cgt, 4.5 million cgt was re-scheduled for later delivery whereas 3.5 million cgt was cancelled (fig. 10).

Figure SB.9

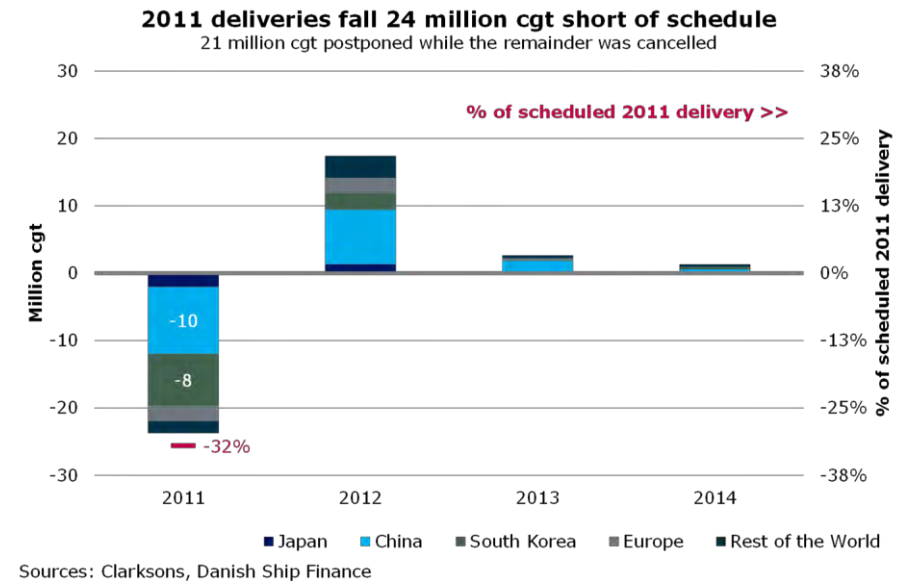
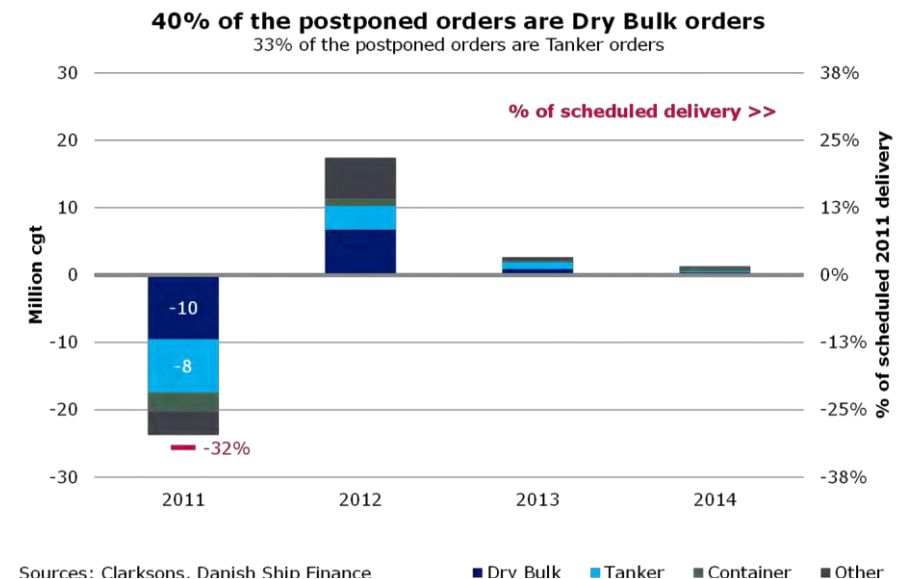


Figure SB.10



## OUTLOOK

THE OUTLOOK FOR THE GLOBAL SHIPBUILDING INDUSTRY IS BLEAK. YARD CAPACITY HAS GROWN TOO BIG FOR FUTURE DEMAND. NEW ORDERS OR A REDUCTION OF YARD CAPACITY ARE REQUIRED IF NEWBUILDING PRICES ARE TO STABILIZE.

### CRITICAL OUTLOOK FOR THE GLOBAL SHIPBUILDING INDUSTRY

The outlook for the global shipbuilding industry is bleak. While global yard capacity has just passed its peak, it is still historically high. The size of the global orderbook is currently 46% below the 2008-peak and expected to be almost halved within the next 12 months (exclusive of any potential new orders placed during 2012).

### LOW EXPECTATIONS FOR A REBOUND IN CONTRACTING ACTIVITY

Several ship segments are facing low freight rates, declining asset values and a short- to medium-term outlook, in which the risk of escalating overcapacity issues cannot be disregarded. Nevertheless, new orders will be placed in 2012 and beyond. Shipyard capacity seems to have grown ahead of demand for new, quality, fuel-efficient, competitively-priced and environmentally-friendly vessels.

### 48 MILLION CGT TO BE DELIVERED IN 2012

Orders scheduled for delivery in 2012 exceed estimated yard capacity. The same was the case in 2011. In our forecast, we apply a 2011 scenario to the 2012 schedule, by postponing one third of scheduled deliveries and thereby reducing scheduled 2012 deliveries from the original 67 million cgt to 48 million cgt (fig. 11). This figure is our best estimate based on individual yard performances in 2011. As a result, we estimate global yard capacity utilization at 82% in 2012. On the other hand, there is obviously more to deliveries than yard performance. Shipowners' ability to take delivery of their newbuildings is correlated with the situation in the freight markets and the ship financing squeeze. If market conditions deteriorate any further some owners may fail to take delivery in 2012, not to mention that their appetite for ordering new vessels will be reduced.

### 42 MILLION CGT TO BE DELIVERED IN 2013

The extensive postponement activity is expected to lift 2013 deliveries beyond the current schedule. We forecast that 43 million cgt (up 10 million cgt from the current schedule) will be delivered in 2013. We assume the same delivery performance for the 2013

Figure SB.11

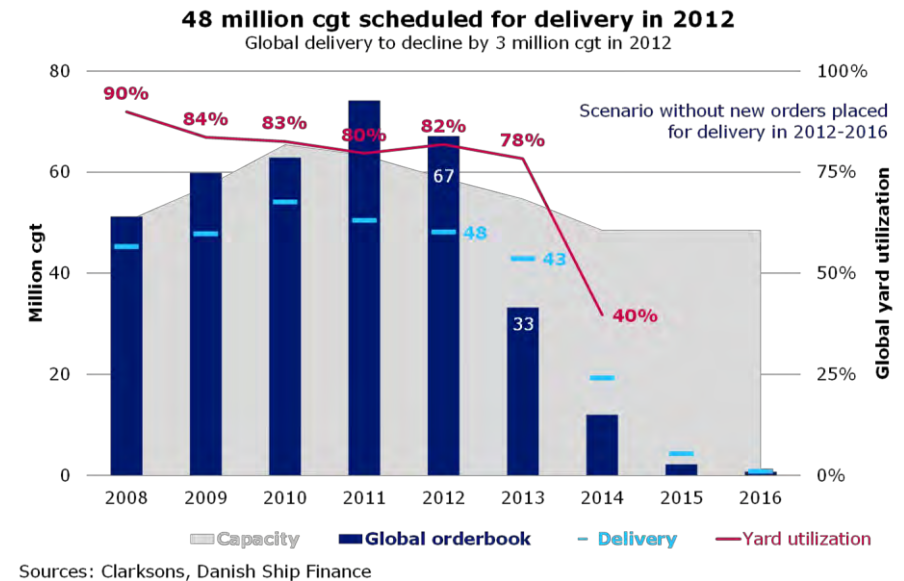
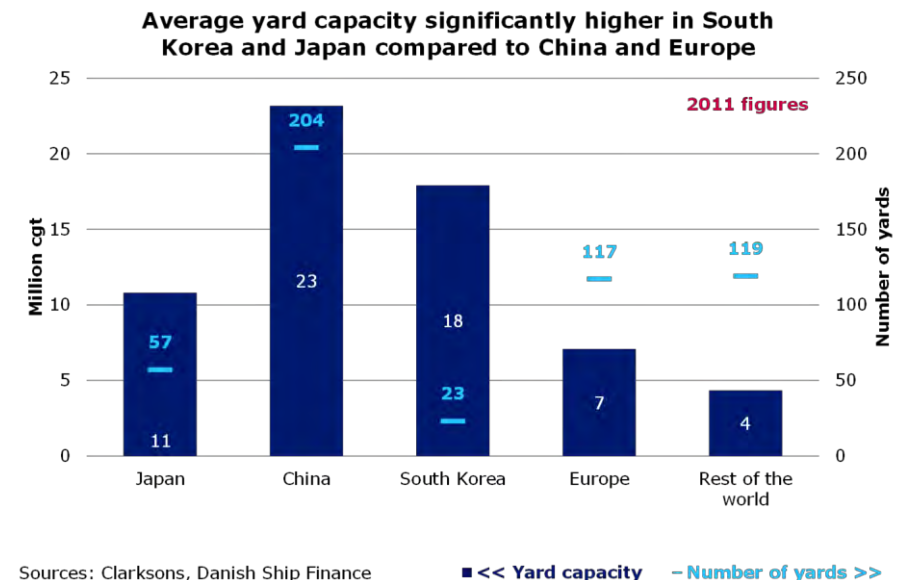


Figure SB.12



deliveries as for the 2012 deliveries. As a result, we estimate global yard capacity utilization at 78% in 2013. Currently, the global orderbook looks very thin after 2013. Presumably, new orders will be placed for delivery in 2014 and beyond but will it be enough to utilize current capacity? We do not think so.

#### WHERE WILL YARD CAPACITY ADJUST FIRST?

Yard capacity has grown too big for future demand. Shipyards without a sufficient order cover cannot maintain a steady production flow. Eventually some yard capacity will disappear. Clearly, the question is where and when? Experience from previous periods of overcapacity has taught us that capacity adapts slowly to weaker demand. However, as with other investment-intensive industries, concentration of ownership plays a significant role. If the industry is concentrated on relatively few large owners, shipyard capacity is inclined to be adjusted less frequently but more dramatically.

There are big differences between the four major shipbuilding nations. In Japan, 57 shipyards account for the estimated 2011 capacity of 11 million cgt. In South Korea, the estimated 2011 capacity of 18 million cgt was distributed on 23 shipyards while the Chinese capacity of 23 million cgt was available through 204 shipyards. In Europe, 117 yards have an estimated aggregate capacity of 7 million cgt (fig 12). One might expect that a process of reducing yard capacity would be more feasible and agile in China and Europe than in South Korea and Japan, but this is certainly not a foregone conclusion.

#### YARD CAPACITY DOWN 15 MILLION CGT BETWEEN 2012 AND 2014

We apply a bottom-up approach to yard capacity based upon individual yards' orderbook. We assume that market mechanisms will dictate prompt yard capacity adjustments. Clearly, actual capacity adjustments might be less responsive to market mechanisms in case of government interventions. However, we present a scenario where yard capacity is scaled back to the 2008-level by 2014. We therefore assume that 20% (15 million cgt) of the 2011-yard capacity will exit the newbuilding market within three years. Yards do not necessarily have to shut down as they might either scale down capacity by closing dry docks or simply start operating as repair yards (fig. 14 and fig. 15).

Figure SB.13

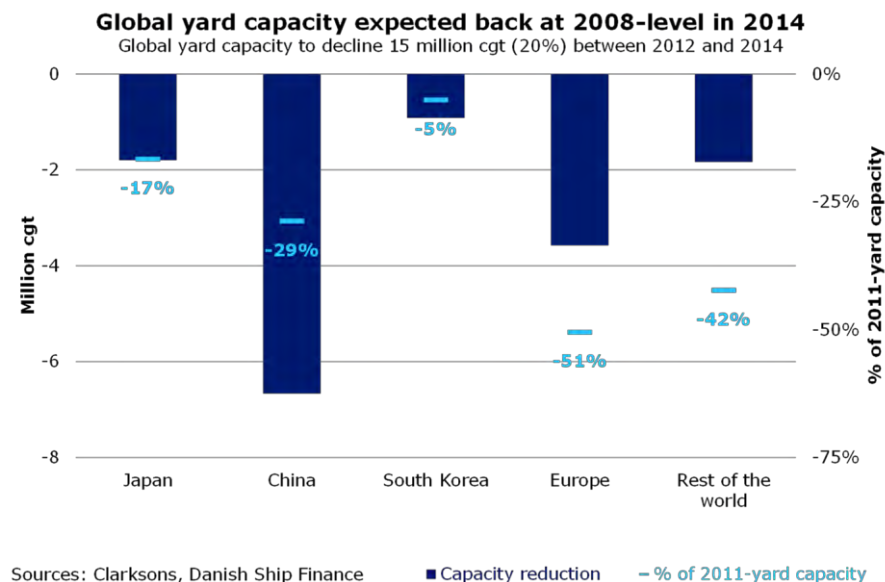
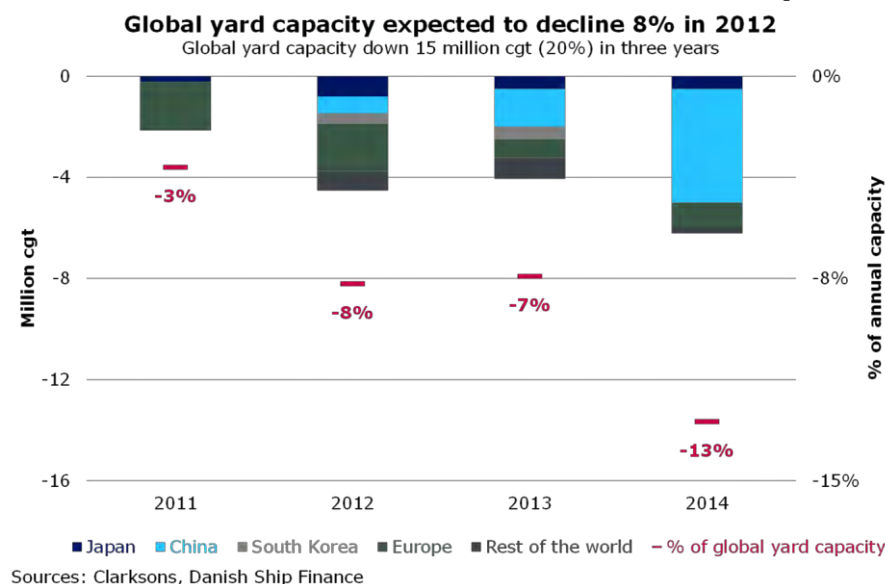


Figure SB.14





### CHINESE YARD CAPACITY DOWN 30% IN THREE YEARS

We expect to see the largest adjustments in China and Europe (fig. 13). While the largest Chinese yards have a strong order cover, several of the smaller yards are struggling to win new orders and utilize capacity. Many of these yards have primarily been building Dry Bulk vessels. We doubt that they will all acquire the necessary skills to become able to build high specification vessels in the near future. Therefore, we expect that almost 7 million cgt (30% of 2011 capacity) will close down within the next three years. Most of it – 4.5 million cgt – is expected to close in 2014 (fig. 14).

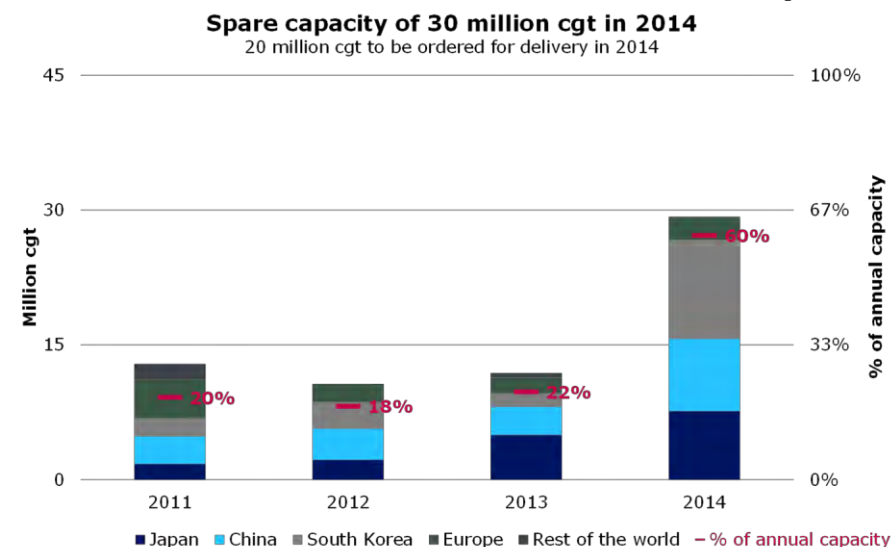
### 20 MILLION CGT TO BE CONTRACTED FOR DELIVERY IN 2014

Global yards' spare capacity will rise steeply if global yard capacity is not reduced over the next three years. We estimate global yard capacity at 63 million cgt in 2011. If this capacity is maintained until 2014, spare capacity at global yards will peak at 44 million cgt in 2014 (by comparison 50 million cgt was delivered in 2011). However, if global yard capacity is reduced according to our estimations, spare capacity at global yards will amount to 29 million cgt in 2014. For yard utilization to stay close to 80%, new orders of 20 million cgt, scheduled for delivery in 2014, will be required (fig. 15).

### NEWBUILDING PRICES WILL DECLINE IN 2012

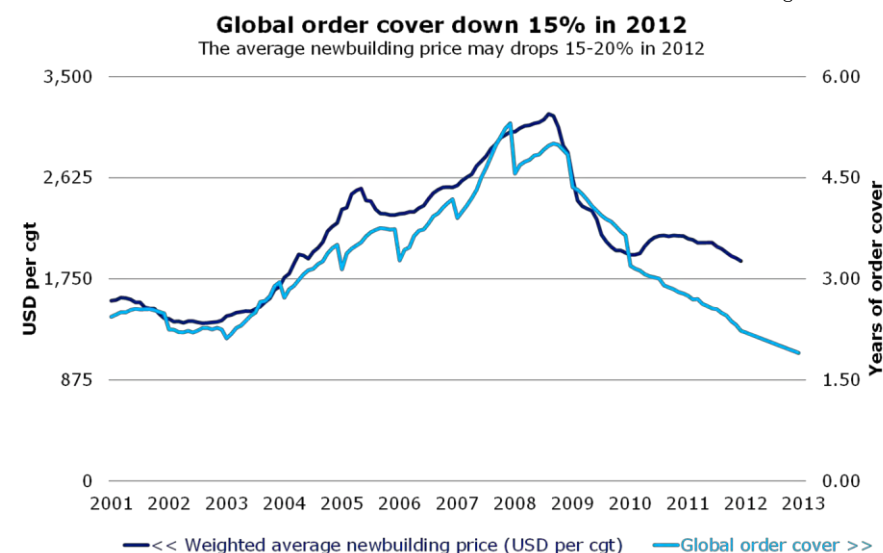
Will newbuilding prices stabilize if yard capacity is reduced to meet lower demand? That is difficult to say. We have previously argued that there comes a point when lower yard utilization can no longer push down newbuilding prices any further. When that point is reached, capacity, not prices will have to give. In 2012, some yards will struggle to utilize their capacity, while others will have full orderbooks well into 2013. As a result, there will be large differences between, for example, South Korean and Chinese yards as well as differences between segments. Obviously, yards capable of building advanced vessels should be much better off than yards primarily building Dry Bulk vessels. Therefore, we expect that South Korean shipyards together with the largest Chinese shipyards will be the better positioned to stick it out over the next two years. On average, we forecast that newbuilding prices for less sophisticated vessels – or at least shipyard profitability – could decline by as much as 15-20% in 2012 (fig. 16).

Figure SB.15



Sources: Clarksons, Danish Ship Finance

Figure SB.16



Sources: Clarksons, Danish Ship Finance



CONTAINER

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# CONTAINER

SUPPLY GROWTH EXCEEDED DEMAND GROWTH BY 2 PERCENTAGE POINTS IN 2011 AS DEMAND TURNED OUT TO BE WEAKER THAN EXPECTED. A LARGE ORDERBOOK WITHIN THE POST-PANAMAX SEGMENT IN TANDEM WITH A FRAGILE DEMAND SCENARIO DOMINATE THE OUTLOOK IN THE CONTAINER SEGMENT.

## FREIGHT RATES

OVERCAPACITY AND LINERS' CHASE FOR MARKET SHARE HAVE SENT BOX RATES DOWN BY 27% FROM ITS PEAK IN THE THIRD QUARTER OF 2010. THE DECOUPLING OF BOX RATES FROM TIME CHARTER RATES HAS COME TO AN END AND TIME CHARTER RATES HAVE FALLEN 54% SINCE MARCH 2011.

### BOX RATES DOWN 16% IN 2011

When we last published our Shipping Market Review box rates out of China had fallen steadily since their August 2010 peak. Apart from a few brief periods of recovery, this is still the case. By December 2011, the composite index had fallen 27% to index 881 (fig. 1). A drop this severe was last recorded in 2009. However, the 2009 box rates were affected by deteriorating demand, whereas box rates in 2011 were primarily pushed down by the supply of new vessels.

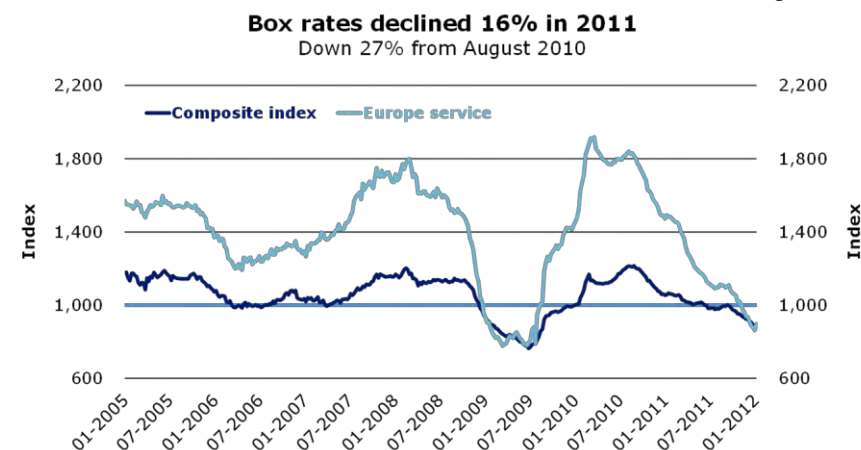
### BOX RATES TO EUROPE SUFFERING THE MOST

Since August 2010, box rates from China to Europe have fallen 53% to index 861 (fig. 1). This is partly due to additional service loops. But the main reason is the fundamental issue of overcapacity that is most evident on the Asia-Europe service, where operators have stepped up their focus on market share. This has led to an increase in vessel sharing agreements and removal of capacity (lay-ups).

### TIMECHARTER RATES APPROACHING ALL-TIME LOW

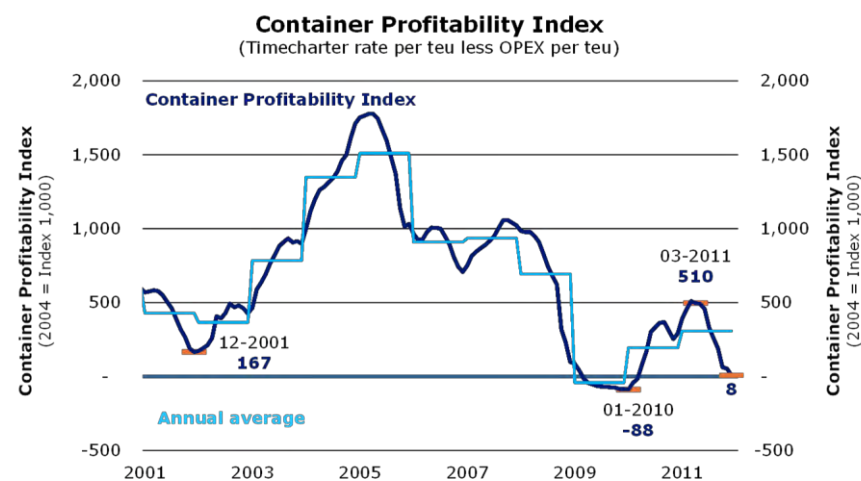
The container profitability index has dropped from index 510 in March 2011 to index 8 in December 2011, the equivalent of a 54% drop in time charter rates. This is mainly due to a growing idle fleet. However, the average 2011 container profitability index was slightly higher (index 309) than the average 2010 index at 193 (fig. 2).

Figure CS.1



Sources: China's Ministry of Commerce, Danish Ship Finance

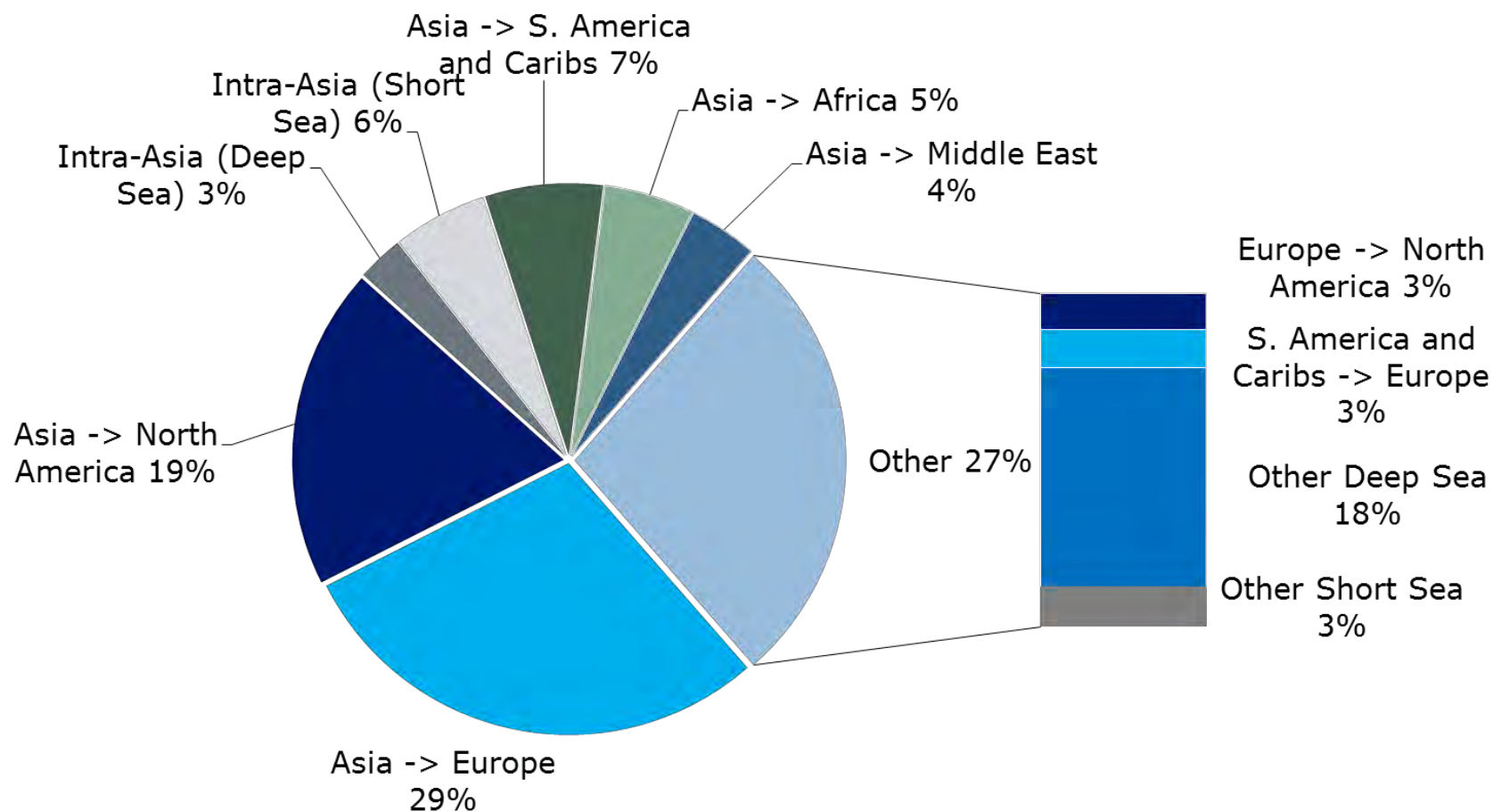
Figure CS.2



Sources: Clarksons, Danish Ship Finance



## Total Head-Haul Container Routes 2011 (measured in teu-nautical miles)



Sources: IHS Global Insight, Danish Ship Finance

## SUPPLY AND DEMAND

THE NOMINAL SUPPLY-DEMAND GAP WIDENED SLIGHTLY IN 2011 AS THE CONTAINER FLEET INCREASED 8%. THIS FIGURE EXCEEDED DISTANCE ADJUSTED HEAD-HAUL DEMAND THAT GREW 6%. LARGER VESSELS STILL DOMINATE DELIVERIES AS THE POST-PANAMAX FLEET GREW 18%.

World trade volumes have been revised downwards by 0.6 percentage points since September 2011. This is mainly due to lower imports from the advanced economies, and thus impacts the main east-west trade routes.

### 8% FLEET GROWTH IN 2011

The container fleet grew by 8% in 2011 as 1.2 million teu was delivered and 75,000 teu was scrapped (fig. 4). During the first quarter of 2011 270,000 teu was delivered. Deliveries then accelerated with 477,000 teu being delivered in the second quarter. Fortunately for box rates, the quarterly inflow of tonnage fell by 50% and 440,000 teu was delivered during the last two quarters of 2011. Panamax deliveries almost came to a halt in 2011, as a modest 30,000 teu entered the fleet (92% less than the 2010 deliveries of 365,000 teu).

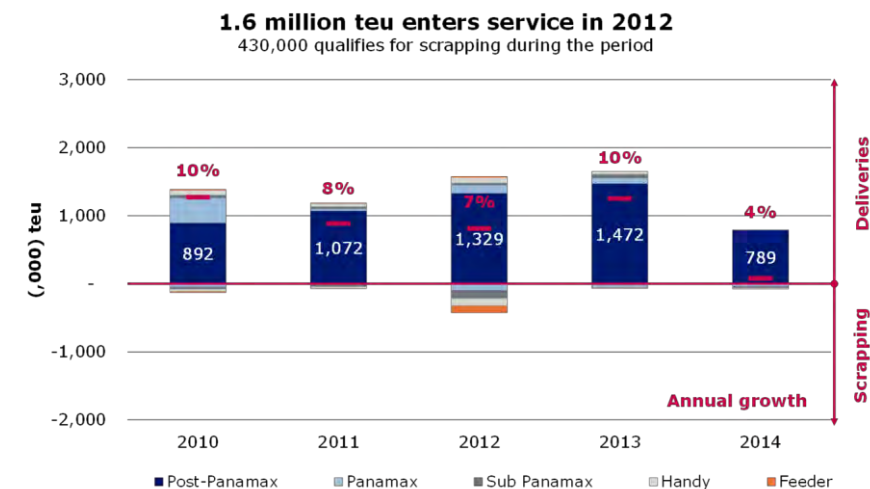
### LARGE VESSELS STILL DOMINATING DELIVERIES

The Post-Panamax fleet has doubled in less than five years. 2011 was another record year in terms of Post-Panamax deliveries as 1.1 million teu was delivered. Accordingly, the segment accounted for 90% of total 2011 deliveries (64% in 2010). New additions to the fleet are primarily large Post-Panamax vessels. In 2011, deliveries of vessels larger than 8,000 teu totalled 780,000 teu (680,000 teu in 2010).

### MODERATE SCRAPPING IN 2011

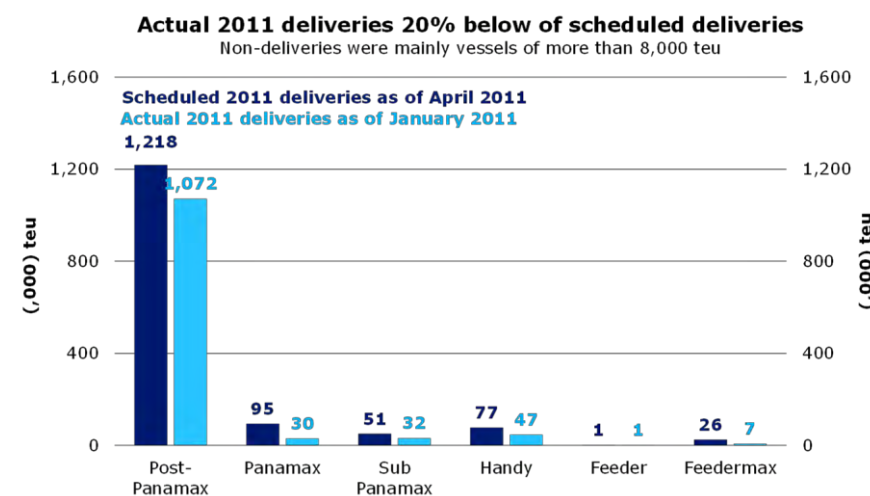
75,000 teu, or 0.5% of the fleet, was scrapped in 2011 (fig. 4). Of this, 24,000 teu was in the Handy segment and thus 1.3% of the Handy segment was scrapped. The Feeder fleet has declined since 2006, and in 2011, 3.4% of the Feeder segment (4,100 teu) was scrapped. There was moderate scrapping in the Panamax segment (14,000 teu) and no registered scrapping of Post-Panamax vessels.

Figure CS.4



Sources: Clarksons, Danish Ship Finance

Figure CS.5



Sources: Clarksons, Danish Ship Finance

## 20% OF SCHEDULED DELIVERIES WERE NOT DELIVERED

Actual deliveries were 20% below scheduled deliveries, equivalent to 280,000 teu (fig. 5). In April 2011, scheduled deliveries were 1.5 million teu, whereas 1.2 million teu were actually delivered. We estimate that 140,000 teu has been postponed for future delivery, and that 140,000 teu has been cancelled.

## PANAMAX AND LARGE POST-PANAMAX SUBJECT TO POSTPONEMENT

In the Panamax segment 70% of scheduled deliveries did not materialize, as only 30,000 teu was delivered (fig. 5), with hardly any postponements among the smaller vessels of the Post-Panamax segment. In the Post-Panamax segment 147,000 teu did not materialize. Of this, 127,000 teu were vessels larger than 8,000 teu (14% of scheduled deliveries), whereas only 20,000 teu of vessels smaller than 8,000 teu did not materialize (6% of scheduled deliveries).

## HEAD-HAUL CONTAINER DEMAND UP BY 6% IN 2011

Distance adjusted head-haul demand grew by 6% in 2011 (fig. 6). Not all key head-haul markets developed as expected. North American imports fell short of expectations, whereas European and Intra-Asian imports were higher than expected (fig. 7).

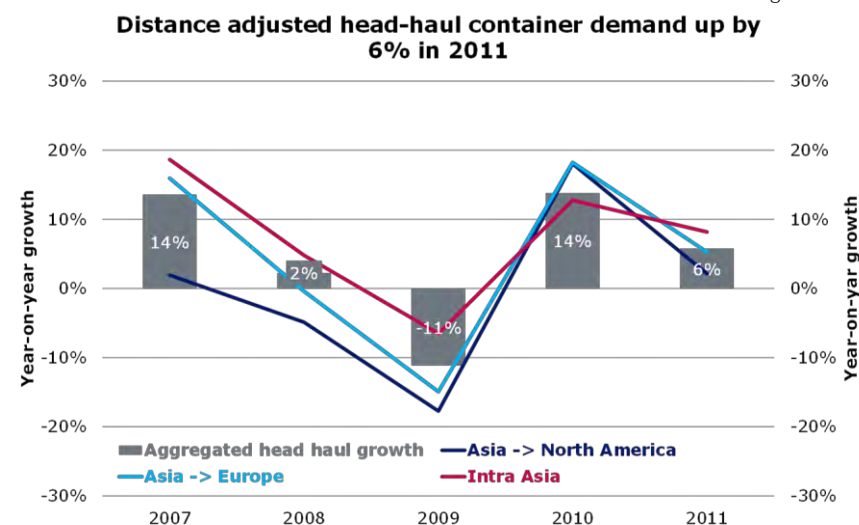
## EUROPEAN HEAD-HAUL DEMAND UP BY 5% IN 2011

Distance adjusted head-haul demand from Asia to Europe was up 5% in 2011, which is a severe slowdown compared to 18% in 2010 (fig. 6), but still higher than expected (fig. 7). Given the current situation in Europe with high public deficits, debt and unemployment, and the fact that 2010 was a rebound year following the dreadful 2009, growth rates were not expected to continue at 2010 levels. However, the financial situation varies greatly within Europe. Germany, the European locomotive, is still the main driver of growth.

## NORTH AMERICAN DEMAND DISAPPOINTED IN 2011

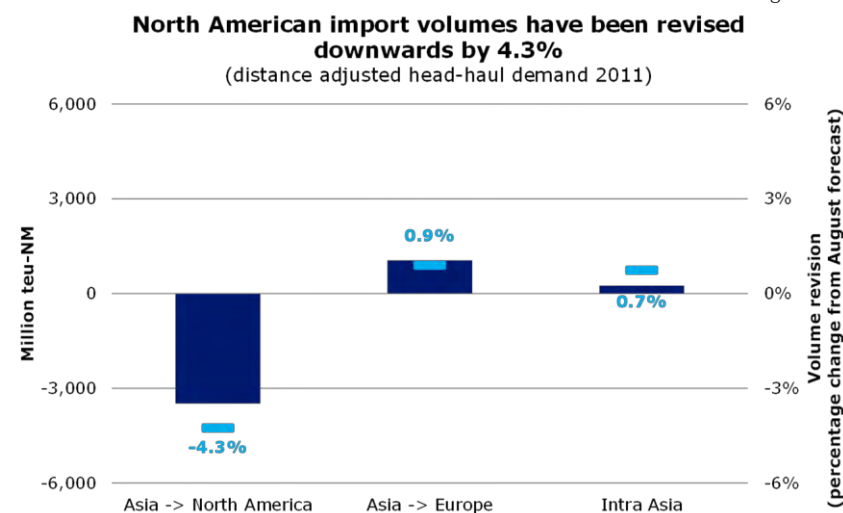
North American imports disappointed in 2011 and head-haul demand growth from Asia was 2% (fig. 6). Even though a slowdown was expected, deceleration was deeper than projected and distance-adjusted head-haul demand growth has been revised downwards by 4.3% since August 2011 (fig. 7).

Figure CS.6



Sources: IHS Global Insight, Danish Ship Finance

Figure CS.7



Sources: IHS Global Insight, Danish Ship Finance



### INTRA-ASIAN HEAD-HAUL DEMAND UP BY 8% IN 2011

Intra-Asia, the largest trading route measured in nominal teu, was affected by lower European and North American demand. This was partly reflected by the Chinese manufacturing index - PMI - which for the first time since February 2009 fell below index 50 in November 2011. Intra-Asian head-haul demand grew 8% in 2011 (fig. 6), driven by strong Indian and Indonesian demand.

### NOMINAL OVERSUPPLY REACHES 3 MILLION TEU

Head-haul demand grew 7% from 2008 to 2011. Fleet growth during the same period was 25%, and thus spare capacity was in the range of 2.8-3 million (fig. 8). Accordingly, 60% of tonnage delivered from 2008 to 2011 is currently in nominal excess supply. The supply surplus increased by 200,000 teu during 2011, representing 16% of 2011 deliveries.

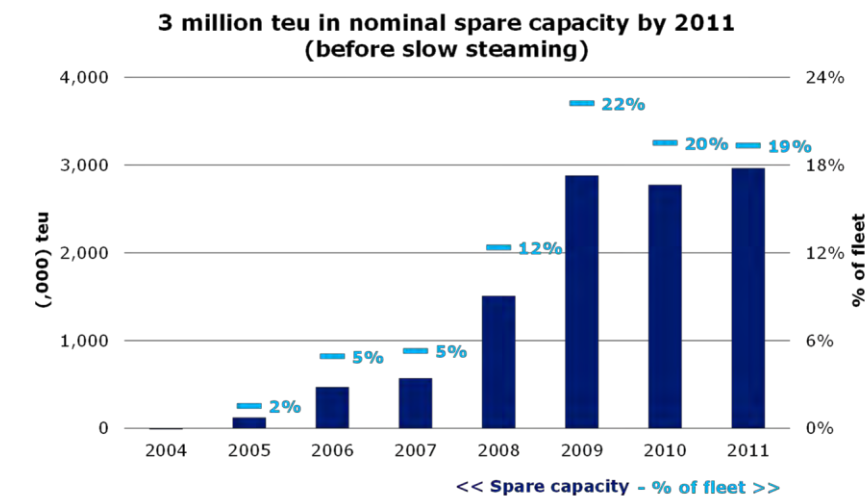
### EXTENSIVE USE OF SLOW STEAMING

With rising bunker costs and nominal excess supply at 3 million teu, we expect slow steaming is here to stay. By reducing the average Post-Panamax speed across routes to 17.2 knots, we estimate that slow steaming currently absorbs 3.5 million teu.

### THE SUPPLY-DEMAND GAP WIDENED IN 2011

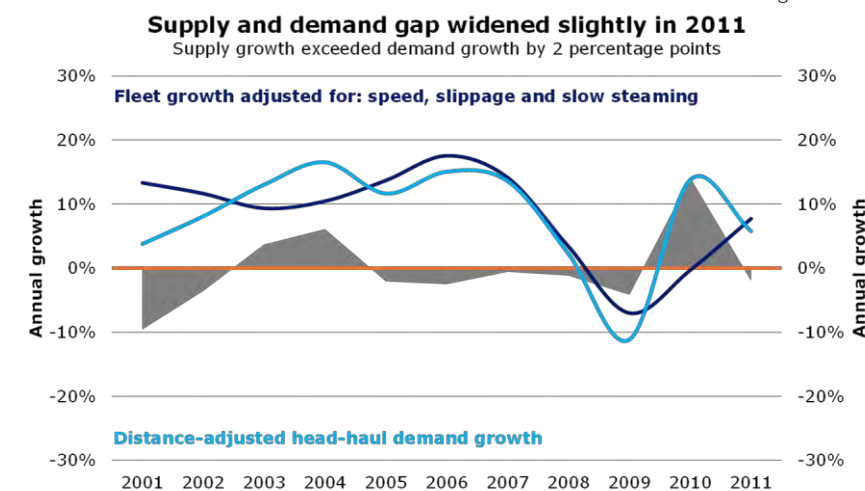
The gap between supply and demand widened in 2011 as fleet growth exceeded distance-adjusted head-haul demand growth even after taking slow steaming into account (fig. 9). However, the supply-demand balance diverges within the container segments. The Post-Panamax segment grew by 18% in 2011, and vessels larger than 8,000 teu were up by 26% in 2011. In contrast, the two main head-haul trading routes, from Asia to Europe and Asia to North America, which is where most new Post-Panamax vessels are launched, distance-adjusted demand was up 4% in 2011. In other words, these routes are struggling extremely hard to absorb the annual inflow of tonnage.

Figure CS.8



Sources: IHS Global Insight, Clarksons, Danish Ship Finance

Figure CS.9



Sources: IHS Global Insight, Clarksons, Danish Ship Finance

## CONTRACTING AND SHIP VALUES

THERE WERE STRONG CONTRACTING ACTIVITY WITHIN THE POST-PANAMAX SEGMENT IN 2011. NEWBUILDING PRICES EXPERIENCED A MODEST 5% REDUCTION. SECONDHAND PRICES DECLINED BY 27%.

Contracting activity has picked up significantly since the second half of 2010. From a supply-demand perspective this seemed premature as owners were struggling to manage the escalating oversupply. However, recent contracting activity should be viewed from a cost saving (USD/teu) perspective. Owners are able to contract more fuel-efficient vessels at a 20-30% discount compared to the high levels of 2007/2008. By contracting larger vessels, owners can significantly lower the slot cost per moved teu. Therefore, we believe that owners have placed recent contracts in the knowledge that vessels will not necessarily be fully utilized when they hit the water. Owners seem willing to pay a premium for fuel efficiency and speed flexibility together with other environmentally-friendly design features.

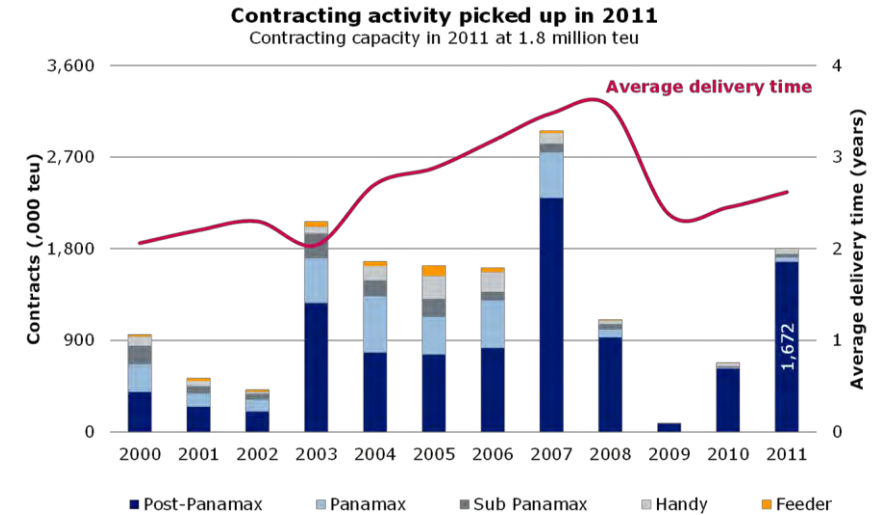
### STRONG CONTRACTING ACTIVITY IN THE FIRST HALF OF 2011

Contracted capacity in 2011 was 1.8 million teu (fig. 10). 93% of all 2011 contracts were for Post-Panamax vessels. The volume of Post-Panamax vessels contracted in 2011 was the second-highest ever recorded in a single year, and this occurring at a time when world trade volumes were still struggling to recover from the economic crisis.

### SECONDHAND VALUES DROPPED 27% IN 2011

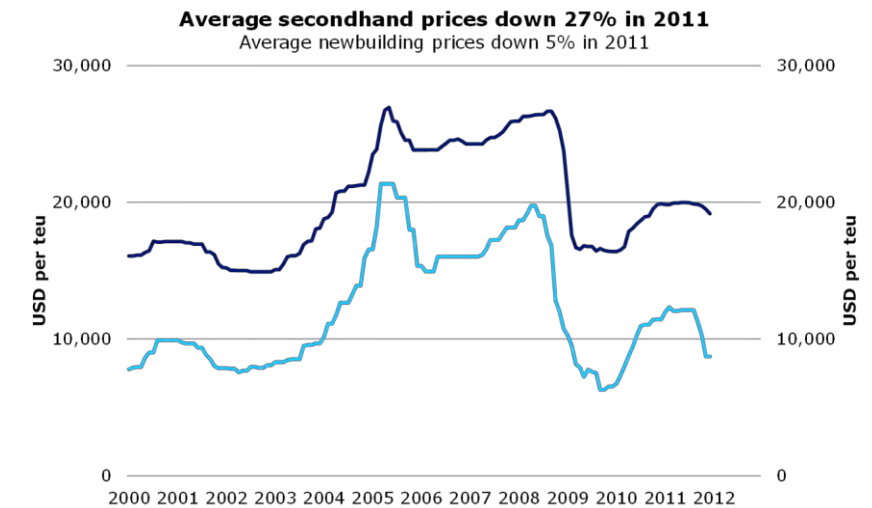
Despite the strong contracting activity and rising steel prices newbuilding prices experienced a modest reduction of 5% in 2011 (fig. 11). Secondhand prices experienced a decent first half of the year as values increased by 1.4%. This changed in the second half and secondhand prices dropped 28%, ending 27% lower than at the beginning of the year.

Figure CS.10



Sources: Clarksons, Danish Ship Finance

Figure CS.11



Sources: Clarksons, Danish Ship Finance

—Newbuilding —10-year old

## OUTLOOK

THE SUPPLY-DEMAND GAP IS EXPECTED TO WIDEN FURTHER IN 2012. THE FLEET IS PREDICTED TO INCREASE 7% DOMINATED BY A LARGE INFLOW OF POST PANAMAX VESSELS. HEAD-HAUL DEMAND GROWTH IS PROJECTED AT 5% AND TO BE MAINLY DRIVEN BY NORTH-SOUTH AND INTRA-ASIAN TRADING ROUTES.

Since September 2011, the IMF has revised world GDP for 2012 downward by 0.8 percentage point. This is mainly due to the euro area which is expected to suffer a mild recession. Although the slowdown in North America and the euro area is likely to dampen Intra-Asian demand, domestic demand is expected to continue supporting growth.

### STABILIZATION OF THE ORDERBOOK/FLEET RATIO

Since the second half of 2010 the orderbook/fleet ratio has stabilized at a historically low range of 27-30%, and currently it represents about 28% of the total fleet (fig. 12). With overcapacity dominating the headlines in the container industry, this might sound like good news. However, contracting activity intensified during 2011 and the orderbook measured in teu is currently 12% higher than one year ago. Therefore, a large annual inflow of capacity is still expected going forward.

### 7% FLEET GROWTH IN 2012

The container fleet is expected to grow by 7%, or 1.2 million teu, in 2012 (fig. 13). Approximately 1.6 million teu is expected to be delivered during the period and 430,000 teu qualifies for scrapping. Post-Panamax deliveries are expected to be 1.3 million teu, meaning that the segment will grow by 17%. Of these, 1 million teu will be vessels larger than 8,000 teu. Deliveries in the Panamax segment are expected to be modest, but still higher than in 2011. The Panamax orderbook is currently for 210,000 teu, and 120,000 teu is expected to be delivered this year.

### 430,000 TEU QUALIFIES FOR SCRAPPING IN 2012

A total of 430,000 teu will qualify for scrapping in 2012 if all vessels older than 25 years will be scrapped (fig. 13). In the Panamax segment 90,000 teu qualifies for scrapping. In the Sub-Panamax and Handy segment 6-7% (125,000 teu and 107,000 teu respectively) of the fleet qualifies for scrapping. And in the Feeder segment more than 40% of

Figure CS.12

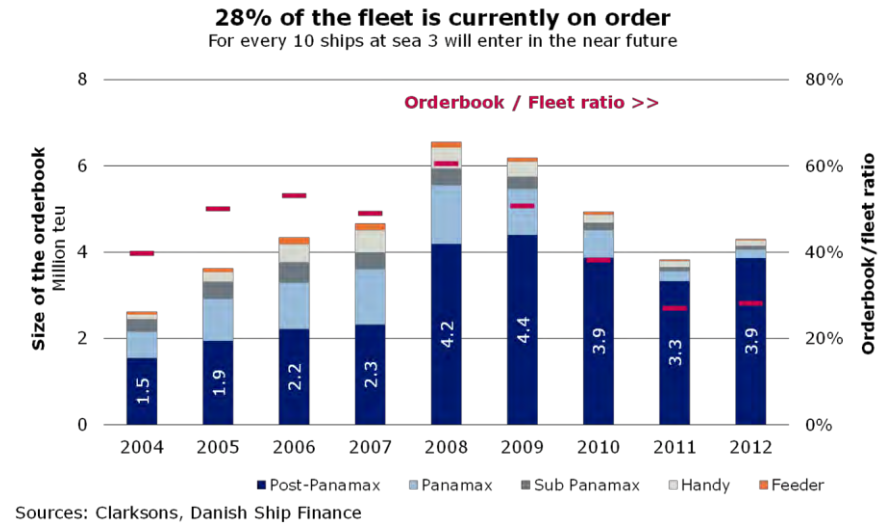
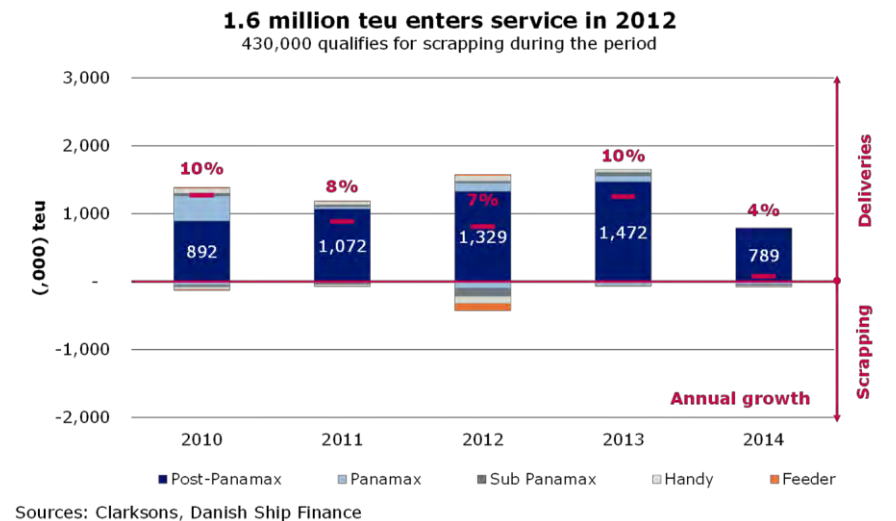


Figure CS.13



the fleet qualifies for scrapping and about 9% of the Feedermax fleet. However, owners' scrapping behaviour could well be dictated as much by the present overcapacity as by the age structure of the fleet. The projected scrapping will do nothing to help the supply-demand balance as most overcapacity is found in the Post-Panamax segment. The Post-Panamax fleet is relatively young, and we find it unlikely that owners will want to scrap these vessels. If they did, it would indeed be a radical change in owners' scrapping behaviour.

### 300,000 TEU COULD BE POSTPONED FROM 2012 TO 2013

Fleet growth might be reduced by significant postponements. In 2011, a large share of expected Post-Panamax (larger than 8,000 teu) and Panamax vessels did not materialize. If this trend continues in 2012, we expect up to 300,000 teu to be postponed from 2012 to 2013 (fig. 14).

### DISTANCE-ADJUSTED CONTAINER DEMAND UP BY 5% IN 2012

Distance-adjusted head-haul demand growth is expected to be 5% in 2012 (fig. 15). However, the demand outlook for 2012 is not quite as rosy as previously expected. Accordingly, the outlook is revised down 2 percentage points from 7% in August. The slowdown is primarily driven by weaker European economic growth.

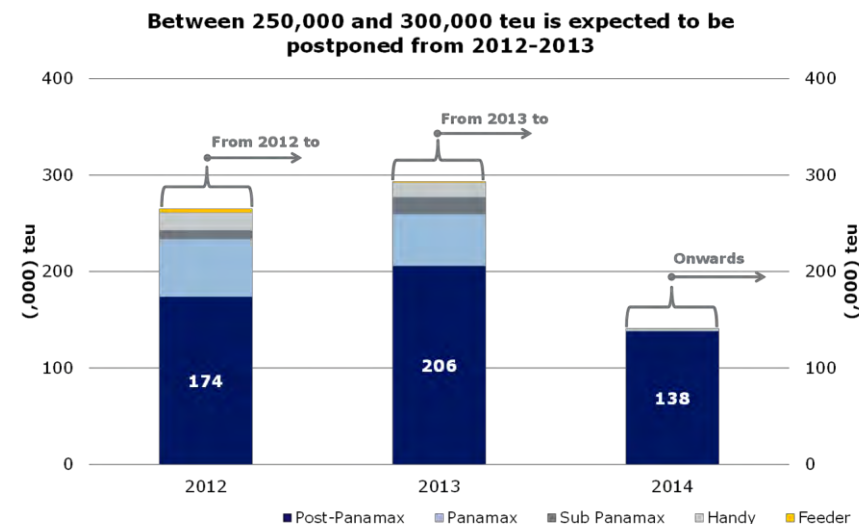
### MODEST DEMAND OUTLOOK FOR NORTH AMERICA AND EUROPE

North American distance-adjusted imports from Asia are expected to grow by 3.3% in 2012, which is 1.2 percentage points higher than in 2011. Total North American distance-adjusted imports are expected to grow by slightly less, namely 2.9%, which is the same level as in 2011. European imports from Asia are expected to slow from 5.3% in 2011 to 2.6% in 2012. Total European import growth is also expected at 2.6%, which is a considerable drop compared to the 2011-level of 5.7%. Hence, the two largest head-haul trading routes' share of overall global market is declining. North American and European demand is not expected to be the main driver of growth in 2012.

### NORTH-SOUTH ROUTES AND INTRA-ASIAN DEMAND DRIVING GROWTH

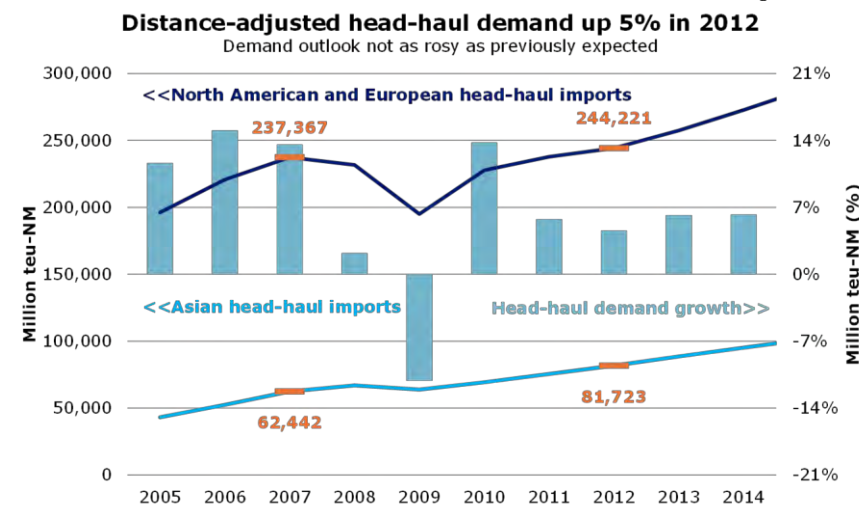
The demand outlook for emerging markets is also revised downwards, although it remains robust. Expansion in 2012 is therefore projected to come from Intra-Asia, Latin America, Africa and the Middle East. Intra-

Figure CS.14



Sources: Clarksons, Danish Ship Finance

Figure CS.15



Sources: IHS Global Insight, Danish Ship Finance



Asian head-haul demand growth is projected at 7.8% in 2012 (8.2% in 2011).

### 3.3 MILLION TEU EXPECTED TO BE SPARE CAPACITY BY 2012

We expect 20% of the fleet (3.3 million teu) to be in nominal excess supply in 2012 (fig. 16). Overcapacity is forecasted to increase by 400,000 teu from 2011, as inflow of tonnage is expected to surpass demand growth. We expect most of the current overcapacity to be absorbed by the lasting effects of slow steaming with an average Post-Panamax speed at 17.2 knots (fig. 17). However, if the supply-demand balance deteriorates by more than estimated, the average Post-Panamax speed might be reduced further. We do not expect average speeds to be reduced below 15 knots.

Overcapacity mainly affects the Post-Panamax segment. Higher import volumes from Asia into North America and Europe, are only expected to contribute 30% to the annual increase in distance-adjusted head-haul demand volumes. This does not look to be enough to absorb the 17-19% increase in Post-Panamax tonnage scheduled in 2012-2013.

### RATES AND VALUES IN 2012

Overcapacity in the Post-Panamax segment has been an issue since 2008. However, in light of the current deteriorating outlook for demand and expected Post-Panamax deliveries, the overcapacity issue continues to grow. The impact will be most significant on the large east-west trade routes, where most of the orderbook is scheduled to be deployed and where demand growth looks the weakest. The demand outlook for emerging markets seems robust and thus not all trade lanes will suffer equally. We expect the overall supply-demand imbalance to keep rates low during 2012. However, we might experience some spikes in box rates following further lay-ups of tonnage, but we do not see this as a full recovery. We expect the idle fleet to continue growing during 2012, which will keep pressuring timecharter rates during the year.

Figure CS.16

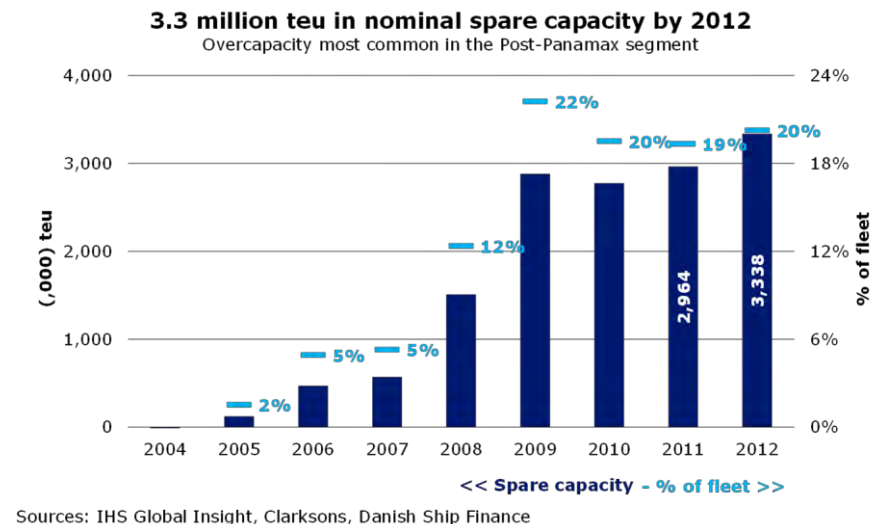
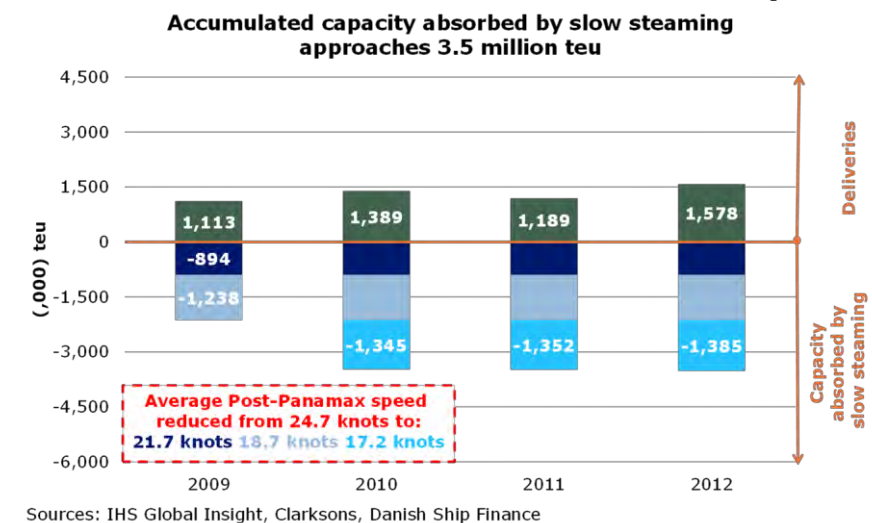



Figure CS.17





## CRUDE TANKERS

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DANMARKS  
SKIBSKREDIT

# CRUDE TANKERS

TANKER OWNERS HAD VERY LITTLE TO CHEER ABOUT IN 2011. THE MARKET GOT WORSE AS THE YEAR WORE ON. THE GLOBAL ECONOMIC CRISIS INTENSIFIED, GLOBAL OIL DEMAND GREW AT A SLUGGISH PACE AND THE CONTINUING INFLOW OF NEW VESSELS MADE THE SITUATION EVEN WORSE. THE OUTLOOK FOR THE TANKER MARKET IS DOMINATED BY HIGH FLEET GROWTH AND A MODEST INCREASE IN OIL DEMAND. WE EXPECT THE SUPPLY-SIDE TO DOMINATE THE CRUDE TANKER MARKET IN 2012.

## FREIGHT RATES

RATES DECLINED IN 2011 AS OIL DEMAND GREW MODESTLY AND NEW VESSELS KEPT COMING OUT FROM THE YARDS. THIS TREND GOT WORSE AS THE YEAR PROGRESSED.

The overall tanker freight market fell in 2011. Even though rate improved marginally on some routes, rising bunker prices undercut earnings. Global oil demand in 2011 was only slightly higher than in 2010 as the European debt crisis and the slow growth in the US continued to hurt the global economy.

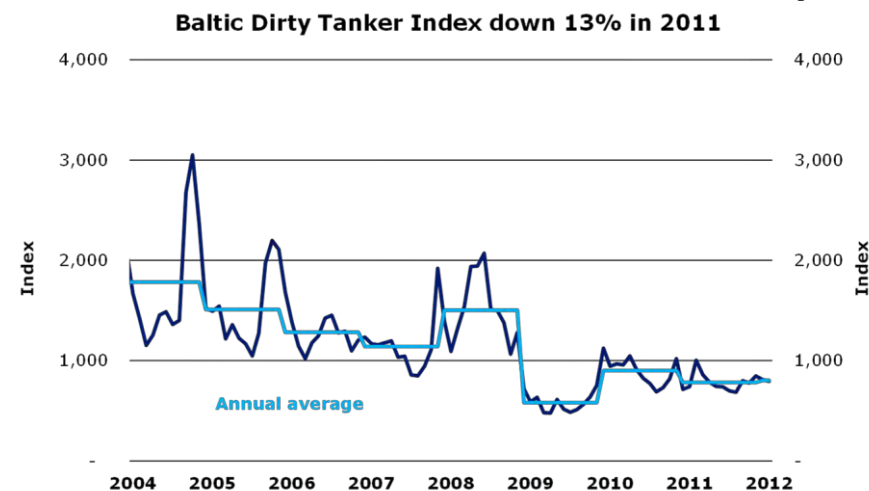
### THE BDTI DOWN 13% IN 2011

The annual Baltic Dirty Tanker Index (BDTI) fell by 13% compared to 2010 (fig. 1). However, the average index of 2011 was still 35% higher than in 2009. The BDTI began to slide during the spring of 2011. The index fell from a monthly average of 1,000 in March to 685 by September 2011. Market conditions have improved a bit with the winter season approaching and the index hovered around 800 during the last quarter of 2011. By the end of January 2012, the monthly average stood at 811, up 14% year-on-year.

### VLCC TIMECHARTER RATES DROPPING BACK TO LEVELS OF THE EARLY 1990S

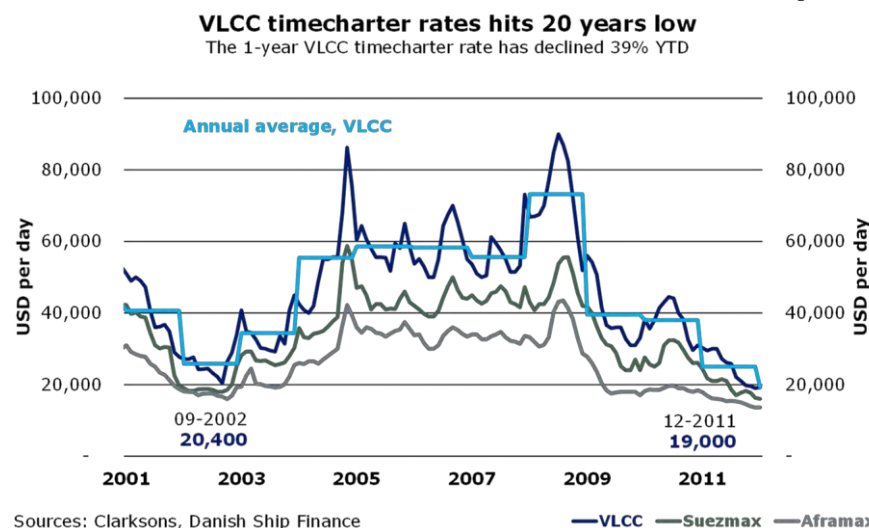
Charter rates have fallen by some 30% over the past year. The average 1-year charter rate was USD 30,000 per day during the first month of 2011 compared to USD 19,000 per day in December (fig. 2). Even with the current low charter rates, charterers are still reluctant to charter in vessels. This might indicate that charterers believe things will get worse before they get better.

Figure T.1



Sources: Clarksons, Danish Ship Finance

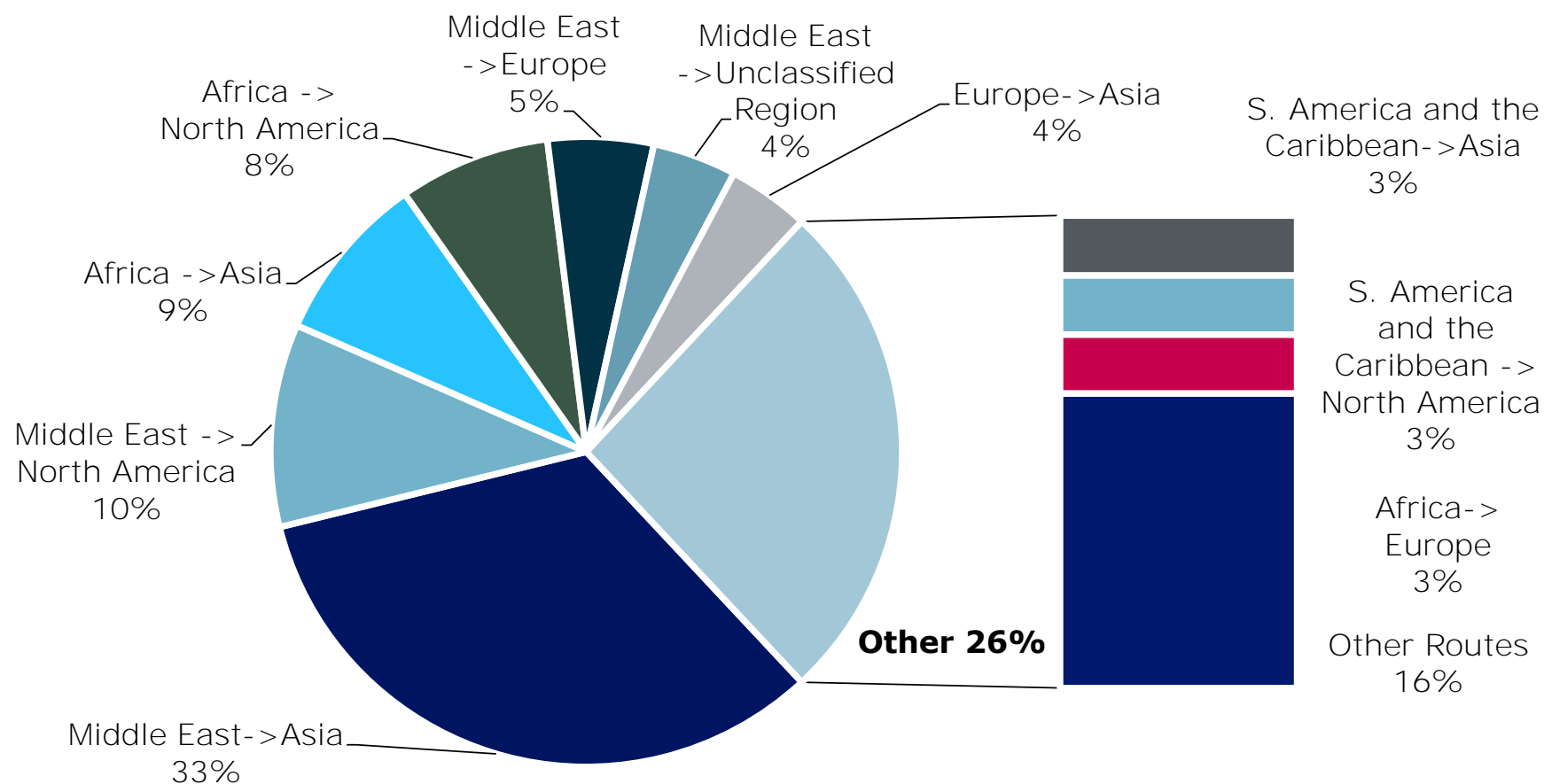
Figure T.2



Sources: Clarksons, Danish Ship Finance

Figure T.3

## MAJOR FRONT-HAUL CRUDE TANKER ROUTES (MEASURED IN BILLION TON-NAUTICAL MILES, 2011)



Sources: IHS Global Insight, Danish Ship Finance



## SUPPLY & DEMAND

CRUDE TANKER DEMAND WAS OUTSHINED BY SUPPLY IN 2011. THE TANKER MARKET GOT WORSE AS THE YEAR UNFOLDED. THE GLOBAL ECONOMIC CRISIS INTENSIFIED, OIL DEMAND GREW MODERATELY AND RATES FELL, AND THE EFFECT WAS COMPOUNDED BY A PERSISTENT TANKER OVERSUPPLY.

At the beginning of 2011, a record high 43.2 million dwt was scheduled for delivery during the year. Fortunately for timecharter rates and asset values, less was delivered.

### THE CRUDE TANKER FLEET GREW 7% IN 2011

The supply of crude tanker tonnage grew 7% (20 million dwt) in 2011 as 30 million dwt reached the sea in 2011 and 10 million dwt left the fleet (fig.4). Growth was not evenly distributed across segments, however; the VLCC segment grew by 8% and the Suezmax fleet expanded by 9% while the Aframax fleet grew by a modest 3% in 2011. Entering capacity was stable from quarter to quarter, with an average of 7.5 million dwt being delivered per quarter in 2011.

### 35% OF SCHEDULED DELIVERIES POSTPONED IN 2011

In 2011, 11.5 million dwt (28%) of scheduled orders never materialized (fig. 5). Whether these orders have been cancelled or were simply postponed is difficult to say. However, we estimate that 9.2 million dwt was postponed during 2011. The average postponement time was 8 months, VLCCs clearly being the most affected. Generally, the aggregate orderbook was postponed by 2–3 months during the period from April 2011 to January 2012.

### SOME NEWBUILDING CONTRACTS CANCELLED OUTRIGHT

For the first time we find clear evidence of cancellations based on **Clarksons' current orderbook**. Our orderbook monitoring reveals that 5.9 million dwt (15% of expected 2011 deliveries) have left the orderbook since April 2011. Of these, 2.2 million dwt was scheduled for delivery in 2011 while the rest was for delivery in 2012 or beyond. Indeed, these cancellations have brought some relief to the gloomy crude tanker market.

Figure T.4

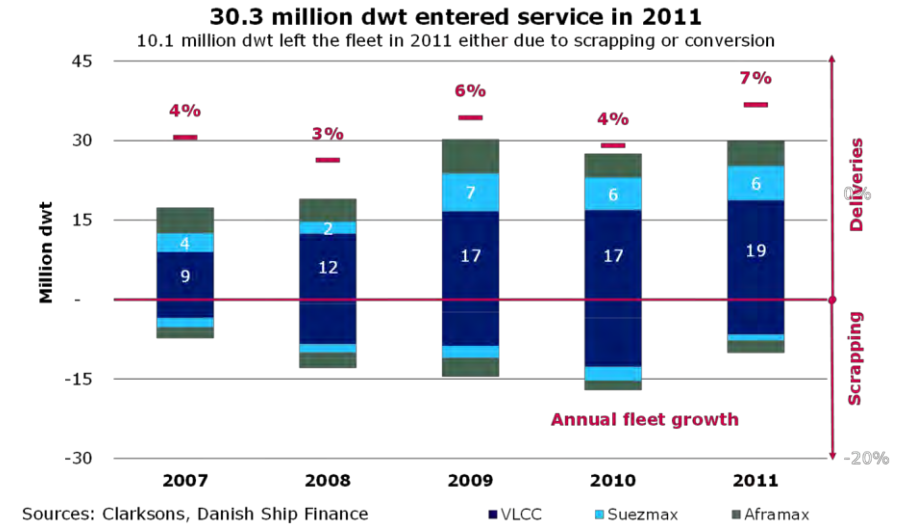
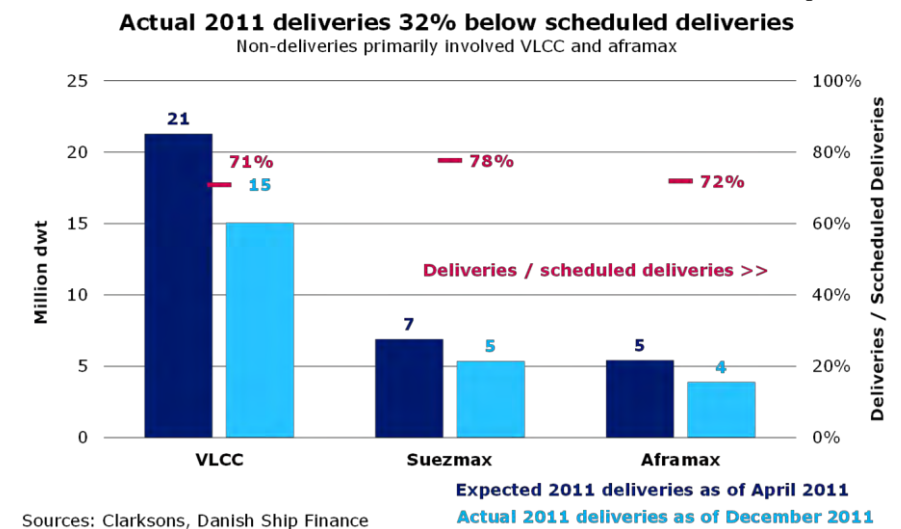


Figure T.5



### DELETIONS RUNNING SLOW DESPITE SOFT EARNINGS

6.5 million dwt (only 3% of the fleet) was scrapped in 2011 (fig. 4). Scrapping activity in 2011 reached approximately the same levels as in 2010 and the majority of vessels scrapped in 2011 were VLCC or Aframax vessels. In terms of historical scrapping activity this is not a significant amount - it hardly reached the levels of 2009.

### YOUNG VESSELS SCRAPPED IN 2011

During the second half of 2011, some younger vessels (14-16 years old) were sold for demolition. These relatively young vessels are some of the first generation double hull tankers with relatively poorer speed economics and of a relatively smaller size (<300,000 dwt) compared to their modern, larger sisters. The combination of high demolition prices, high bunker costs and low earnings makes scrapping candidates out of such vessel. We expect this trend to pick up in the near future.

### 3.5 MILLION DWT CONVERTED FROM CRUDE TANKERS INTO OTHER TYPES

Scrapping was at a moderate level in 2011 and the same could be said for tankers being converted into other types. A total of 3.5 million dwt was converted from crude tankers into other types; mainly Dry Bulk or Offshore related vessels. However, such conversion activity is nothing remarkable. Compared to the previous three years, the conversion activity in 2011 has dropped by approximately 65% (fig. 4).

### EXTENSIVE USE OF SUPPLY-CUTTING MEASURES

When we last published our Shipping Market Review in May 2011, slow steaming becoming a widely used means of reducing supply availability. The incentive to slow steam only grew throughout the year, as bunker cost kept rising. However, many owners are unable to slow steam on the laden leg due to fixed discharge dates, but many are slow steaming on the ballast leg. Slow steaming indeed brought some relief to the crude tanker market in 2011, but the extent of slow steaming did not prevent rates from falling during the year.

### ONLY MINOR GAINS FOR 2011 TONNE-MILE GROWTH

Distance-adjusted crude tanker demand increased by 7% during 2011 (fig. 6). Global seaborne crude oil imports increased 6% while travel distances only contributed 1 percentage point. Travel distances increased only slightly as Atlantic basin exports to Asia (long-haul) were reduced in 2011 and replaced by Middle East exports (short-haul).

Figure T.6

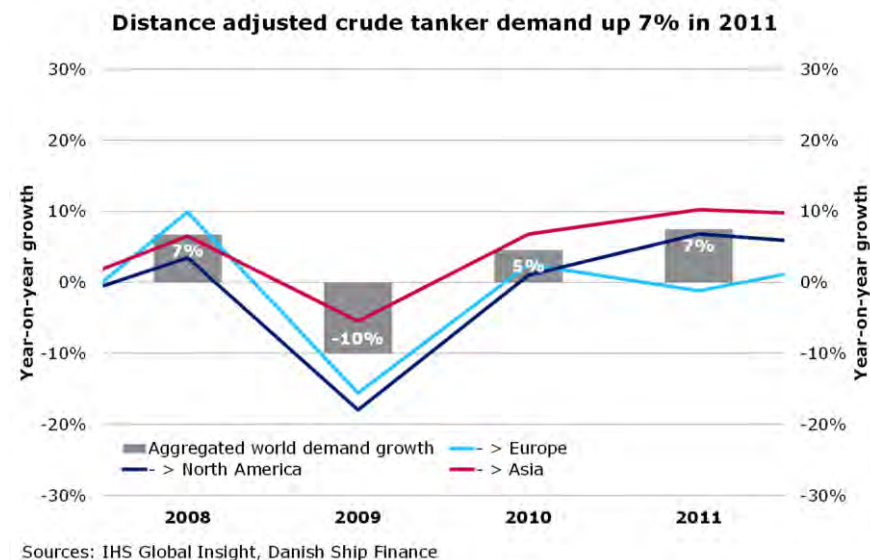
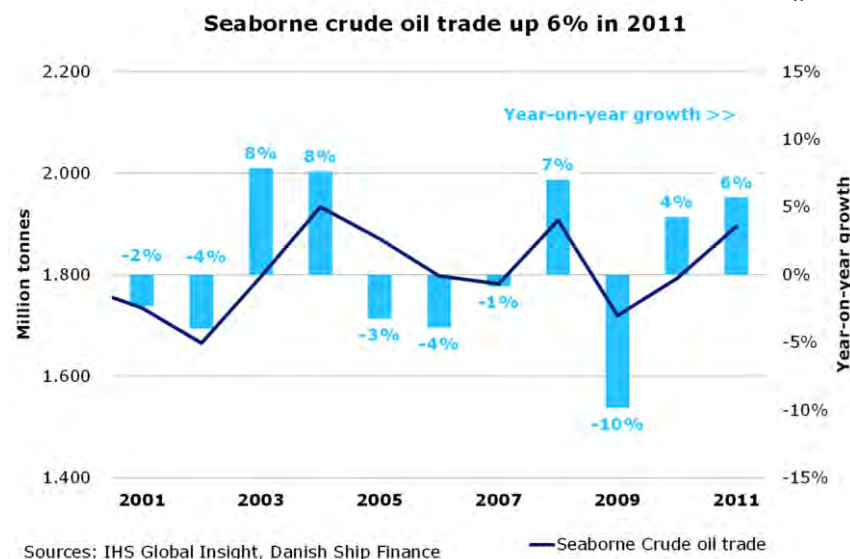


Figure T.7



However, US imported crude oil travels longer as Middle East imports replaced Atlantic basin imports. Distance-adjusted crude tanker demand just slightly surpassed pre-crisis levels (2008).

### SEABORNE CRUDE OIL TRADE UP 6% IN 2011

Global seaborne crude oil trade volumes grew by 6% in 2011 bringing 2011 volumes in slightly below 2008 levels but still higher than 2007 volumes (fig. 7). Asian imports were the main driver behind the increased volumes as China continued its unsaturated demand for crude oil. Still, most main importers increased import volumes in 2011. However, European crude oil imports actually fell 9% in 2011 as the Libyan conflict halted crude imports from Libya and imports with no substitution coming in from elsewhere.

### GLOBAL OIL CONSUMPTION UP 1 MILLION BARRELS PER DAY IN 2011

Global oil consumption continued to grow despite negative growth in the OECD area overall. Global oil consumption grew by 1 million barrels per day (1%) driven by strong Asian demand (fig. 8). North American demand and European demand both fell by 250,000 barrels per day (1%) in 2011 as the global economic crisis accelerated. The decrease in North American oil consumption eroded the 2% increase for 2010 and North American oil consumption is now back at 2009 levels.

### CHINA DRIVES GLOBAL OIL CONSUMPTION

Once again, China was the largest contributor to the increase in global oil demand. Chinese oil consumption increased by an astonishing 7% (0.65 million barrels per day) in 2011. The increase in Chinese oil consumption was single-handedly more than enough to offset the decline in both European and North American oil consumption in 2011.

### A SUPPLY GLUT OF VESSELS IN 2011

To sum up, the balance between supply and demand for crude tanker tonnage continued to worsen as 2011 wore on. This imbalance is the key factor behind the depressed freight rates. The situation in the Arabian Gulf during the second half of 2011 clearly illustrates the situation on the crude tanker market with too many vessels available for cargoes and rates falling (fig. 9).

Figure T.8

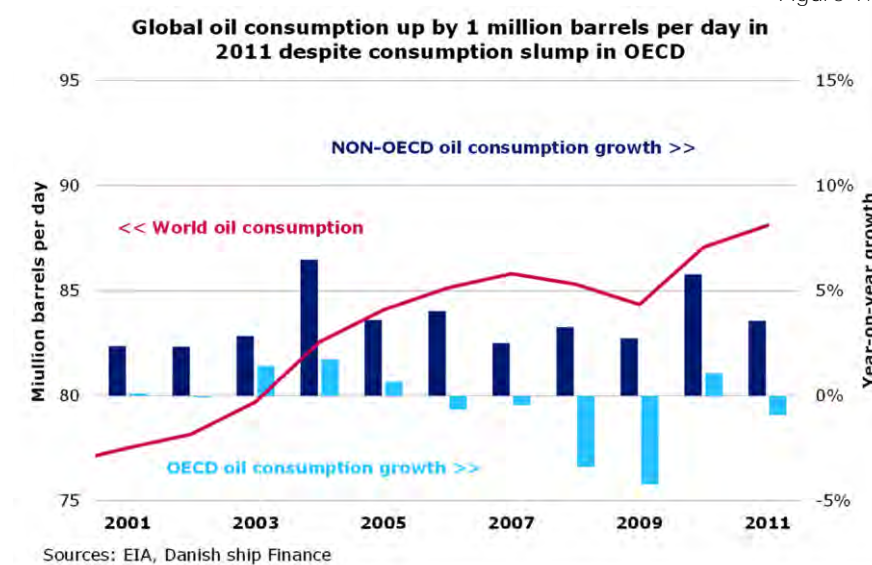
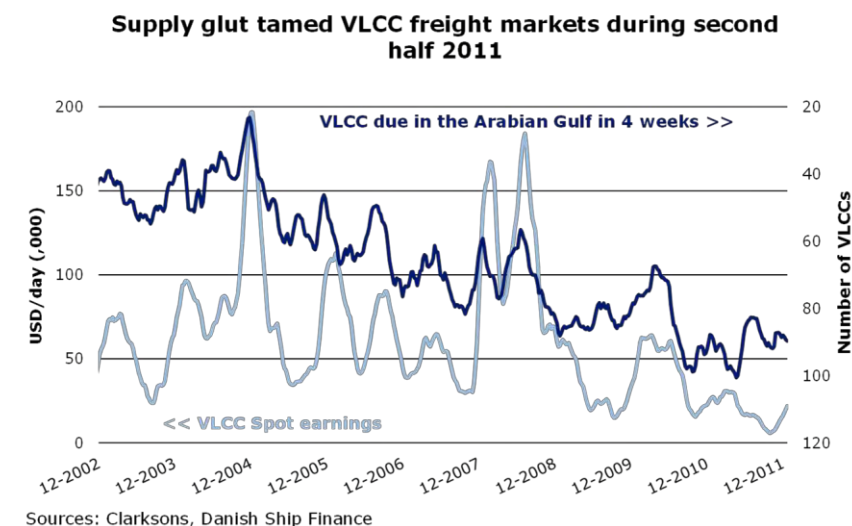


Figure T.9



## CONTRACTING AND SHIP VALUES

CONTINUED WEAKNESS IN THE FREIGHT MARKET CAUSED SUBDUED DEMAND FOR NEW VESSELS THIS YEAR. NEWBUILDING AND SECOND-HAND PRICES LARGELY UNCHANGED FROM 2010 LEVELS.

### CONTRACTING DROUGHT IN 2011

The oversupply in the crude tanker market has pushed timecharter rates and earnings down to near all-time lows. Owners have responded by ordering relatively few new vessels in 2011. A mere 4.7 million dwt of fresh orders were placed in 2011, against 32.1 million dwt in 2010. For the first time in 10 years new Suezmax orders have surpassed those of VLCC's as only three new VLCC orders appear in the order book. Contracted crude tanker vessels in 2011 marked an all-time low, 66% lower than the previous year of lowest contracting activity (2002).

### DELIVERY TIMES INCREASED SLIGHTLY IN 2011

The average delivery time is increasing slightly. Current average delivery time for crude tankers is 2.7 years (fig. 10). We are unsure of the sustainability of this trend as more tonnage is being delivered than contracted. However, when based only on orders with a confirmed delivery date, the average delivery time drops to 2.1 years making delivery time unchanged from 2010.

### NEWBUILDING PRICES WANING

Newbuilding prices remained fairly stable but showed a declining trend. In 2011, average newbuilding prices were 2% below the 2010-average. However, average newbuilding prices are down 6% year-on-year (fig. 11).

### SECONDHAND PRICES FELL 1% IN 2011

The secondhand market saw a slight improvement during the first half of 2011 as rates were fairly stable. However, as rates began to drop, secondhand prices dropped accordingly. From the first to the second half of 2011, secondhand prices fell by 6%. Secondhand prices were down 10% in 2011 compared to 2010 (fig. 10).

Figure T.10

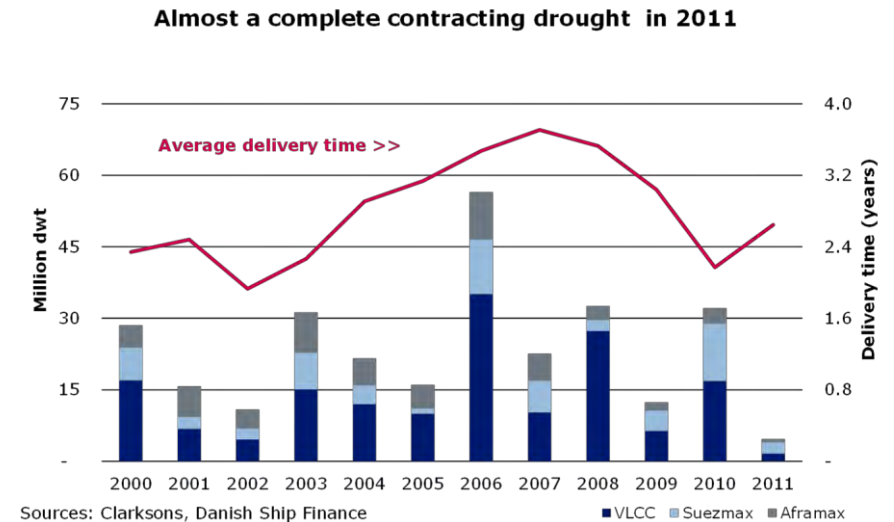
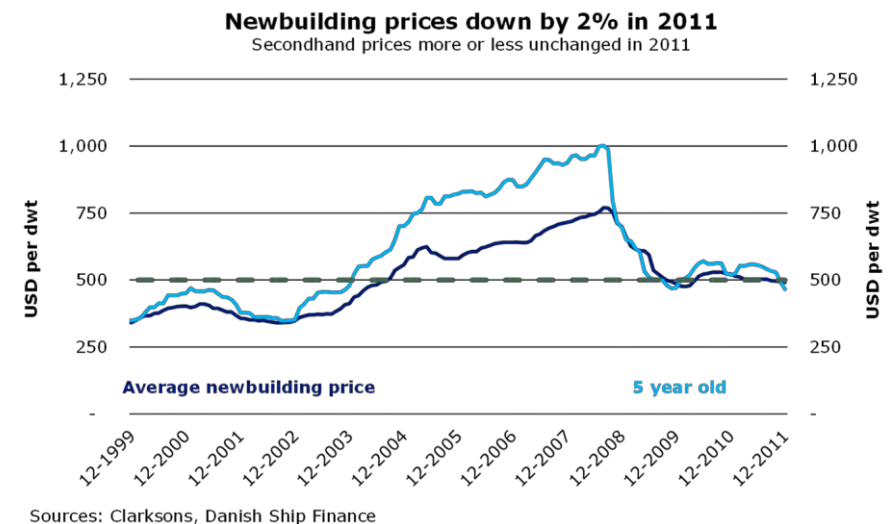


Figure T.11





## OUTLOOK

DISTANCE-ADJUSTED DEMAND IS EXPECTED TO INCREASE BY 7% IN 2012 AND FLEET GROWTH IS EXPECTED TO BE 11%, BUT AFTER SCRAPPING, CANCELLATIONS AND POSTPONEMENTS FLEET GROWTH IS EXPECTED TO BE ABOUT 7%. FREIGHT RATES ARE EXPECTED TO REMAIN DEPRESSED IN 2012 AS DEMAND IS ONLY JUST KEEPING PACE WITH THE INFLOW OF NEW TONNAGE. BUT THE OVERHANG OF TONNAGE SUPPLY FROM PREVIOUS YEARS WILL STILL TROUBLE THE CRUDE TANKER MARKET.

Looking ahead, sentiment is indicating that we will see the crude tanker market squeezed in 2012. Especially, the larger segments will face tremendous challenges.

### TWO NEW VESSELS FOR EVERY TEN AT SEA

By January 2012, the global orderbook for crude tanker vessels stood at 66.5 million dwt and the fleet accounted for 341 million dwt. The orderbook/fleet ratio is 20% or put another way for every ten vessels at sea, an additional two are scheduled to enter service in the coming years (fig. 12). Unfortunately, the orderbook/fleet ratio is not equally distributed between segments. The orderbook/fleet ratio is 29% for Suezmax, VLCC's is slightly less while for Aframax vessels it is only 7%. the current order book/fleet ratio at 20% is the lowest recorded since 2003.

### 7% FLEET GROWTH IN 2012

Taking expected scrapping and postponements into account, we expect a total net fleet addition of 21.2 million dwt (7% of the fleet) in 2012. For 2013, the fleet is expected to expand by a further 15 million dwt. This corresponds to 7% fleet growth in 2012 and a 4% increase in 2013 (fig. 13). Obviously, this scenario assumes that no new contracts will be placed for delivery in 2012 and 2013. However, our fleet forecast could underestimate future fleet supply growth if postponements fall short of projections or if scrapping activity fails to fulfil our forecast.

### 38 MILLION DWT SCHEDULED FOR DELIVERY IN 2012

According to the latest orderbook an additional 38 million dwt is expected to enter service in 2012. This entering capacity corresponds to fleet growth of 11% before scrapping. In 2011, approximately 30% of scheduled deliveries were postponed one year forward or more.

Figure T.12

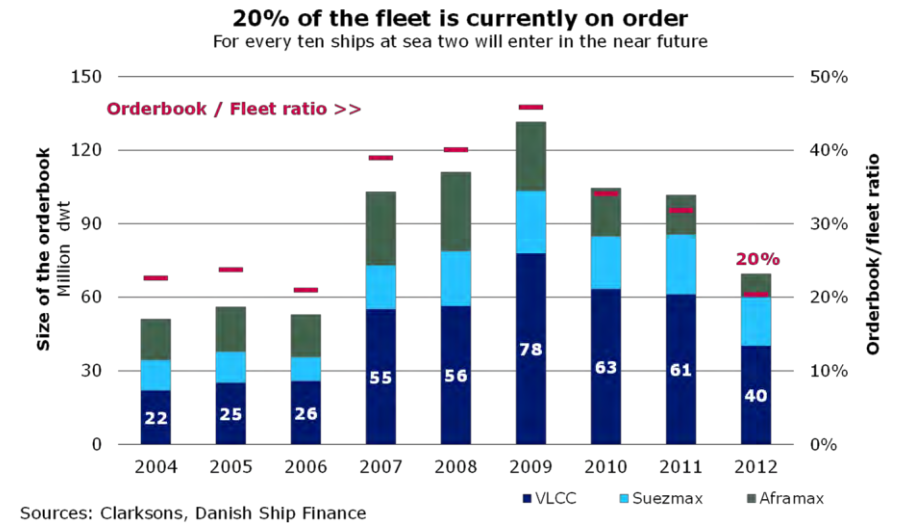
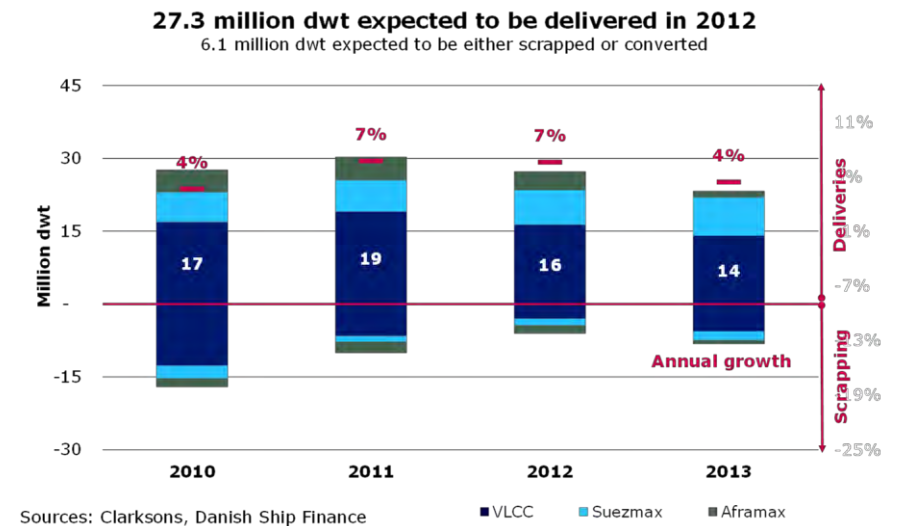


Figure T.13



However, we do not expect to see as much capacity postponed in 2012 as was the case in 2011. Instead, we expect cancellations to increase. We estimate that 20%, on average, will be postponed in 2012. Taking these postponements into consideration, deliveries in 2012 are expected to reach 30.5 million dwt with 7-8 million dwt postponed to 2013 (fig. 14). This will bring annual deliveries in slightly below 2010 deliveries.

### 8% OF 2012 DELIVERIES MIGHT BE CANCELLED

As discussed above, approximately 2 million dwt of deliveries scheduled for 2011 were cancelled. Since current market conditions are not expected to improve shipowners' financial statements in general, we expect that cancellations will continue to reduce the order book in 2012. Cancellations in 2012 are expected to reach between 3-4 million dwt. Hence, total 2012 deliveries will be 27 million dwt (fig.13).

### MODEST SCRAPPING ACTIVITY IN 2012

Increased scrapping does indeed seem inevitable as charter rates are in the doldrums, fixture periods are shortening and many newbuildings are expected to enter service during the coming year. Yet, scrapping and conversion has only been 2.5 million dwt on average per quarter in 2011 versus a quarterly average of 4.2 million dwt during 2010. We regard the scrapping activity in 2011 as a clear indication of what to expect in 2012: taking the age distribution and the size of the current order book of each segment into account, we expect that 6.1 million dwt will be scrapped in 2012 (2% of the fleet) (fig.13). The VLCC segment clearly illustrates the situation in the crude tanker market as only 3.4 million dwt is older than 19 years. With a relatively young tanker fleet, high **bunker cost and low earnings, owners' might start to look at speed economics and size when considering if a vessel should be scrapped or not.** When looking at the individual vessels, we estimate that there is an additional 10 million dwt of potential scrap candidates in 2012. For example, in comparing a modern VLCC carrier with a first generation double hull, we find that a modern VLCC may have 25% better fuel economy than the older vessel.

### DISTANCE-ADJUSTED CRUDE TANKER DEMAND UP BY 7% IN 2012

In 2012, demand is expected to increase by 7% when adjusting for distances. However, the demand outlook is not as bright as previously indicated. In March 2011, the outlook for 2012 was at 8.2% which has been revised down to 7%. The revision is primarily driven by expectedly weaker economic growth in the OECD countries, especially in Europe.

Figure T.14

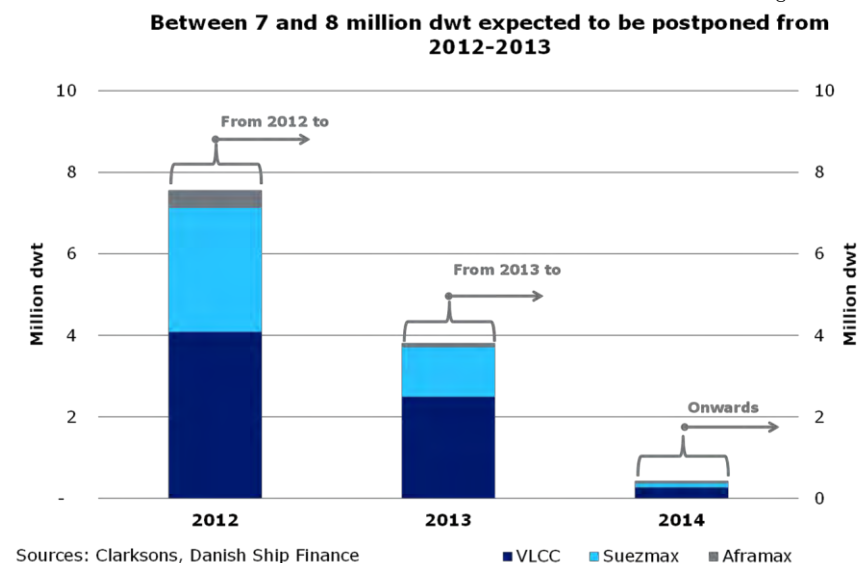
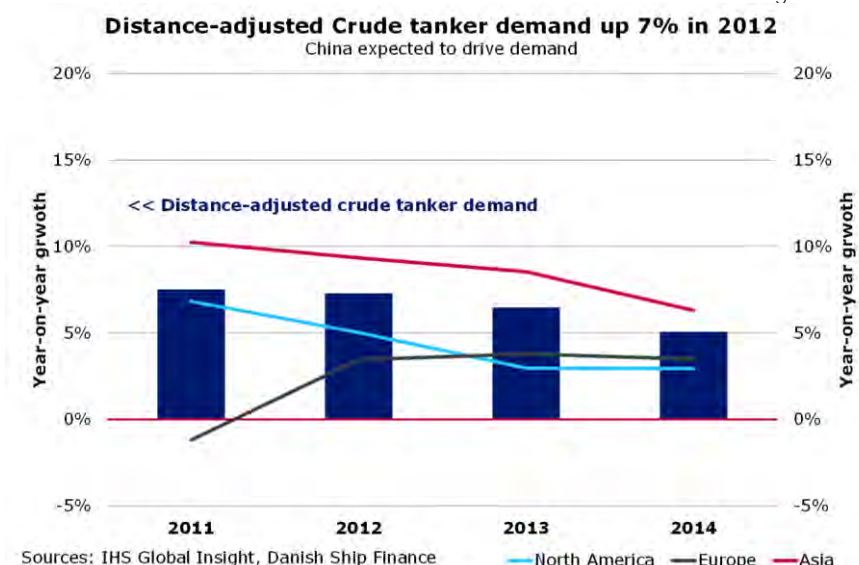


Figure T.15



Indeed, this demand forecast is very fragile, as depressing news about the state of the OECD economies keeps coming in.

#### GROWING DEMAND IS EXPECTED TO ORIGINATE CLOSER TO IMPORTERS

The growing demand for crude oil tankers originates from countries closer to the large oil producing countries. Especially the Far East is expected to see increased demand for crude oil. But that in turn offers fewer tonne-miles as compared to demand from the Western hemisphere. However, volume demand in the Far East will have to grow by a factor of almost two to offset the decline in volumes that previously were destined for the West. In 2012, the three major crude oil export regions (Middle East, Africa and S. America/the Caribbean) are expected to raise daily export volumes by 2.8 million barrels per day. However, most of the increase will be sourced from the Middle East (1.6 million barrels) to the Far East especially China, which will impact tone-mile demand.

Traditionally, the USA has been a long-haul importer of crude oil. Recently, US imports have been replaced from long-haul to short-haul distances, as especially South America has grown in popularity. Furthermore, US domestic production and imports from Canada is expected to grow during the next couple of years as shale oil and oil sands production becomes more efficient. Hence, US seaborne imports will most likely continue to fall and not add many tonne-miles.

#### GLOBAL OIL CONSUMPTION UP 1.3 MILLION BARRELS PER DAY IN 2012

Global oil consumption is expected to increase by 1% in 2012 (up 1% in 2011) (fig. 17). Global oil consumption is currently at an all-time high and is expected to exceed 90 million barrels per day sometime in 2013. At the same time, non-OECD countries are expected to consume as much oil as the OECD countries. Non-OECD oil consumption is expected to grow by 6.3% (2.7 million barrels per day) during the next two years while the OECD is expected to be stagnant (+0.6%).

#### SLOWING CHINESE GROWTH

The Chinese market for crude oil continues to grow providing some security for the seaborne crude oil market. Chinese oil consumption is expected to increase 5% in 2012 largely driven by demand for manufactured products and private car ownership. But even growth in Chinese oil consumption is slowing compared to the 8% average of the last three years. However, EIA might be to bearish on Chinese growth as Chinese growth often turns out to be a surprise on the positive side.

Figure T.16

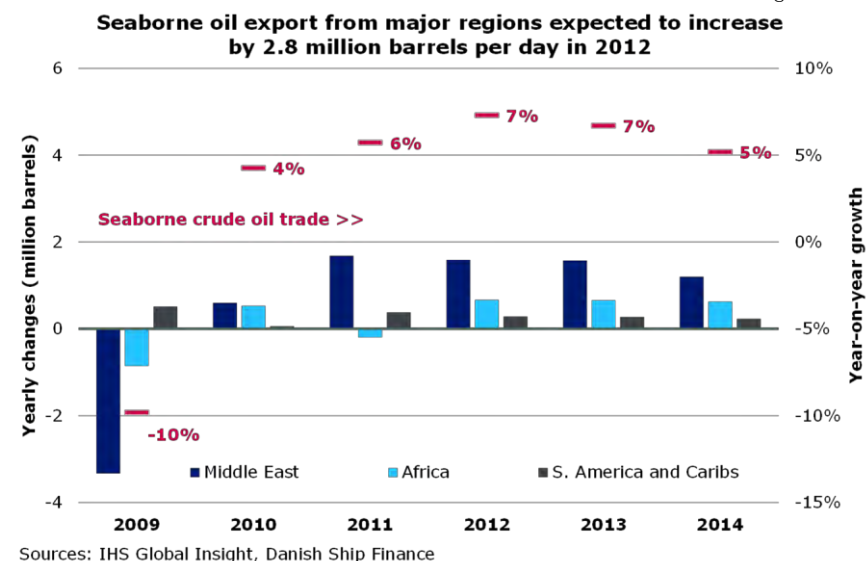
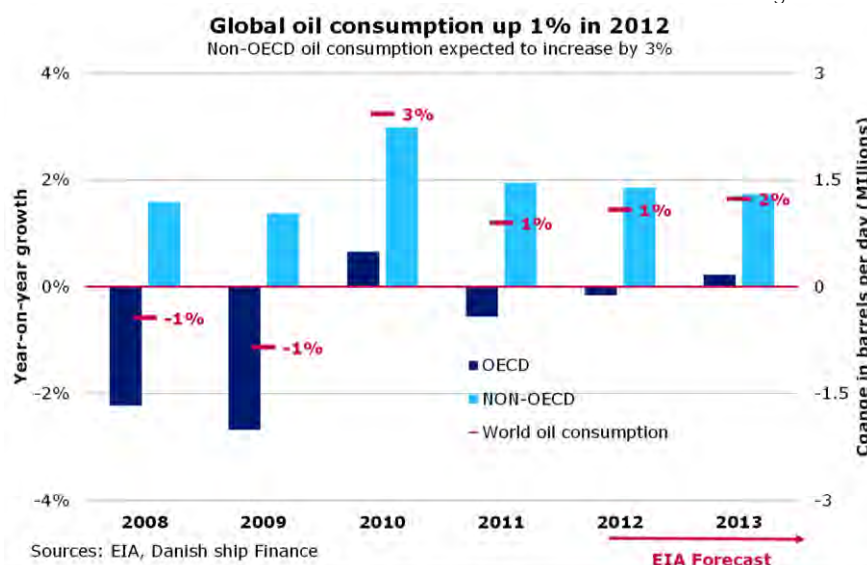


Figure T.17



### REFINERY CLOSURES DAMPEN DEMAND FOR SUEZMAX TANKERS

During 2012, a total of five refineries, two in the USA and the rest in Europe, are expected to close down operations. This certainly does not bode well for the Suezmax tanker market in 2012 as these refineries were dependent on West African crude imports, the key trade route for Suezmaxes. Perhaps even more refineries will close down operations in 2012 and put further downward pressure on the Suezmax segment. As discussed in the product tanker section, this would most likely increase oil product imports into the US.

### SANCTIONS ON IRANIAN CRUDE OIL

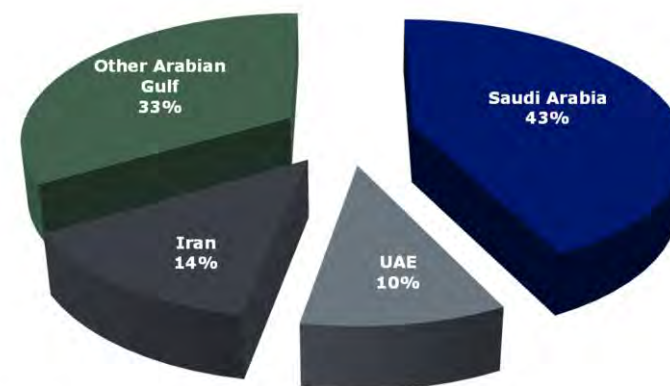
The USA and European backed sanctions against Iran are expected to affect the crude tanker market in two ways. First, Iran exports 2.2 million barrels per day or 14% of seaborne crude exports from inside the Strait of Hormuz (fig. 18). Iranian crude oil exports go to India and China whereas EU oil imports from Iran amounted to almost 6% of total imports in 2010. We expect that the substitution barrels to the EU will come from other OPEC members and that Iranian crude oil will go to Asia. Thus tanker market fundamentals on a tonne-mile basis will for the most part be unchanged. Secondly, the embargo will certainly impose heavy restrictions on the usage of National Iranian Tanker Company tankers for voyages to the EU or the US. We expect the overall impact of these sanctions will take out the Iranian Aframax and Suezmax tankers from trading while tying up the VLCC fleet in floating storage with Iranian crude oil. This will improve tanker market fundamentals as the Iranian VLCC fleet accounts for 5% of the global VLCC fleet. However, oversupply will most likely still remain an issue.

### RATES AND VALUES

Looking ahead, the crude tanker market is expected to continue to struggle to absorb the large inflow of new tonnage entering service in 2012. We expect, that 2012 will be a re-run of 2011 on the supply side, with little chance of demand holding up as strongly. If our predictions about the market conditions turn out to be fairly accurate, we would expect rates to remain low in 2012. Such market developments will most likely cause asset values to decline further in 2012. We expect that VLCCs and in particular Suezmaxes will face the worst market conditions in 2012 especially the latter. Clearly, scrapping, cancellations and delays could be a positive surprise, but much is needed to balance supply and demand.

Figure T.18

**53% of world seaborne crude exports comes from inside the Arabian gulf**  
Average share of MEG seaborne exports



Sources: IHS Global Insight, Danish Ship Finance



A wide-angle photograph of a large cable-stayed bridge spanning a body of water. The bridge features two tall, dark pylons with numerous stay cables fanning out to support the deck. The sky is a mix of blue and orange, indicating sunset or sunrise. The water in the foreground is dark with small, choppy waves. The text "PRODUCT TANKERS" is overlaid on the right side of the image, underlined.

PRODUCT TANKERS



DANMARKS  
SKIBSKREDIT

# PRODUCT TANKERS

THE GAP BETWEEN SUPPLY AND DEMAND IS EXPECTED TO NARROW FURTHER IN 2012. HOWEVER, IT REMAINS UNCERTAIN WHETHER DEMAND WILL FULLY ABSORB SUPPLY BEFORE THE END OF 2012.

## FREIGHT RATES

THE PRODUCT TANKER MARKET FACED CONSIDERABLE CHALLENGES IN 2011, AS OWNERS BATTLED OVERCAPACITY, DECLINING DEMAND AND LOW FREIGHT RATES. 2011 RATES WERE, ON AVERAGE, SLIGHTLY BELOW 2010 LEVELS.

After a slight recovery in product tanker rates during the first quarter of 2011, rates declined as new tonnage was delivered and demand waned. However, rates improved again during the second half as demand increased. The Baltic Clean Tanker Index (BCTI) gained 160 index points during 2011, closing at index 793. In 2011, the smaller vessels have provided most of the positive story while rates for the larger vessels have been in the doldrums.

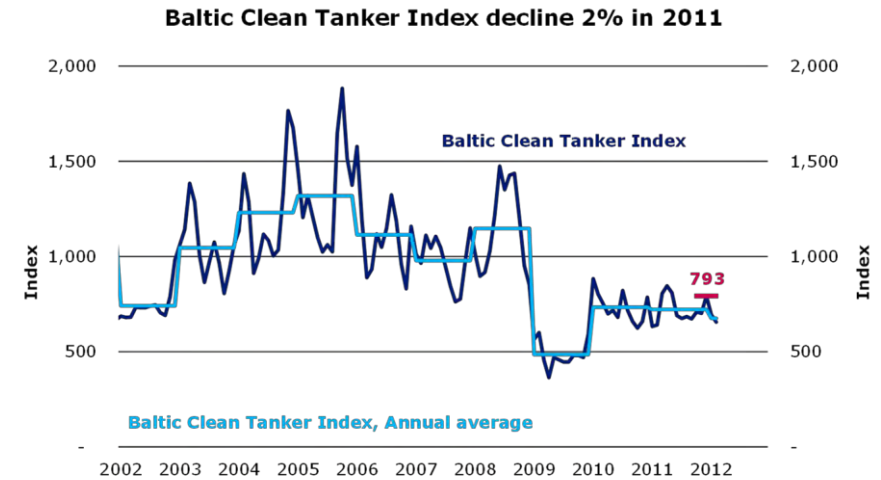
### THE BALTIC CLEAN TANKER INDEX DECLINED 2% IN 2011

The BCTI index remained low in 2011, slightly below 2010 levels. The index is 49% above 2009 levels. The index fell 4% from the first to the second half of 2011. By the end of January 2012, the daily observations of the index had fallen below 700. The monthly average stood at 695, down 10% year-on-year.

### CHARTER RATES TOOK OPPOSITE DIRECTIONS IN 2011

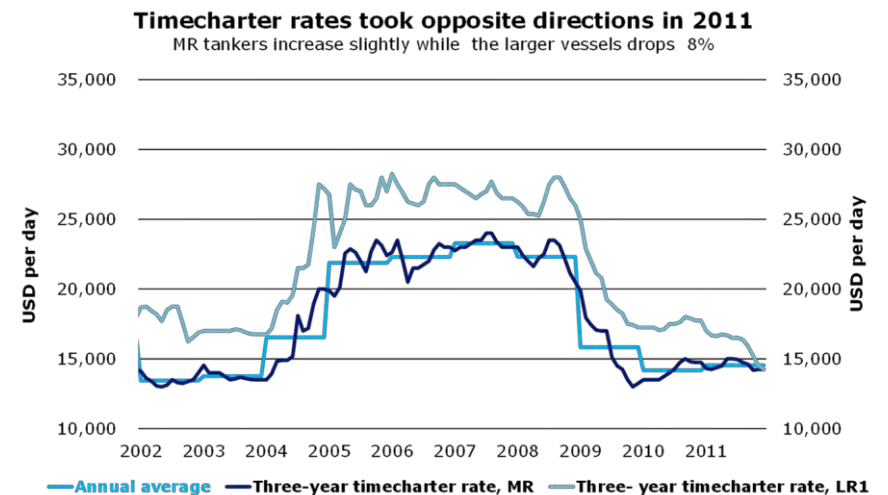
Charter rates took different directions in 2011, as MR tankers improved marginally over 2010 levels (3%) whereas LR tankers declined 8%. LR charter rates continued to decline as the year unfolded. Current LR timecharter rates are at an all-time low. MR tanker charter rates have stopped sinking for the first time since 2008 and are currently 3% above 2010 levels. However, MR tanker charter rates are, in a historical perspective, still at a low level.

Figure P.1



Sources: Clarksons, Danish Ship Finance

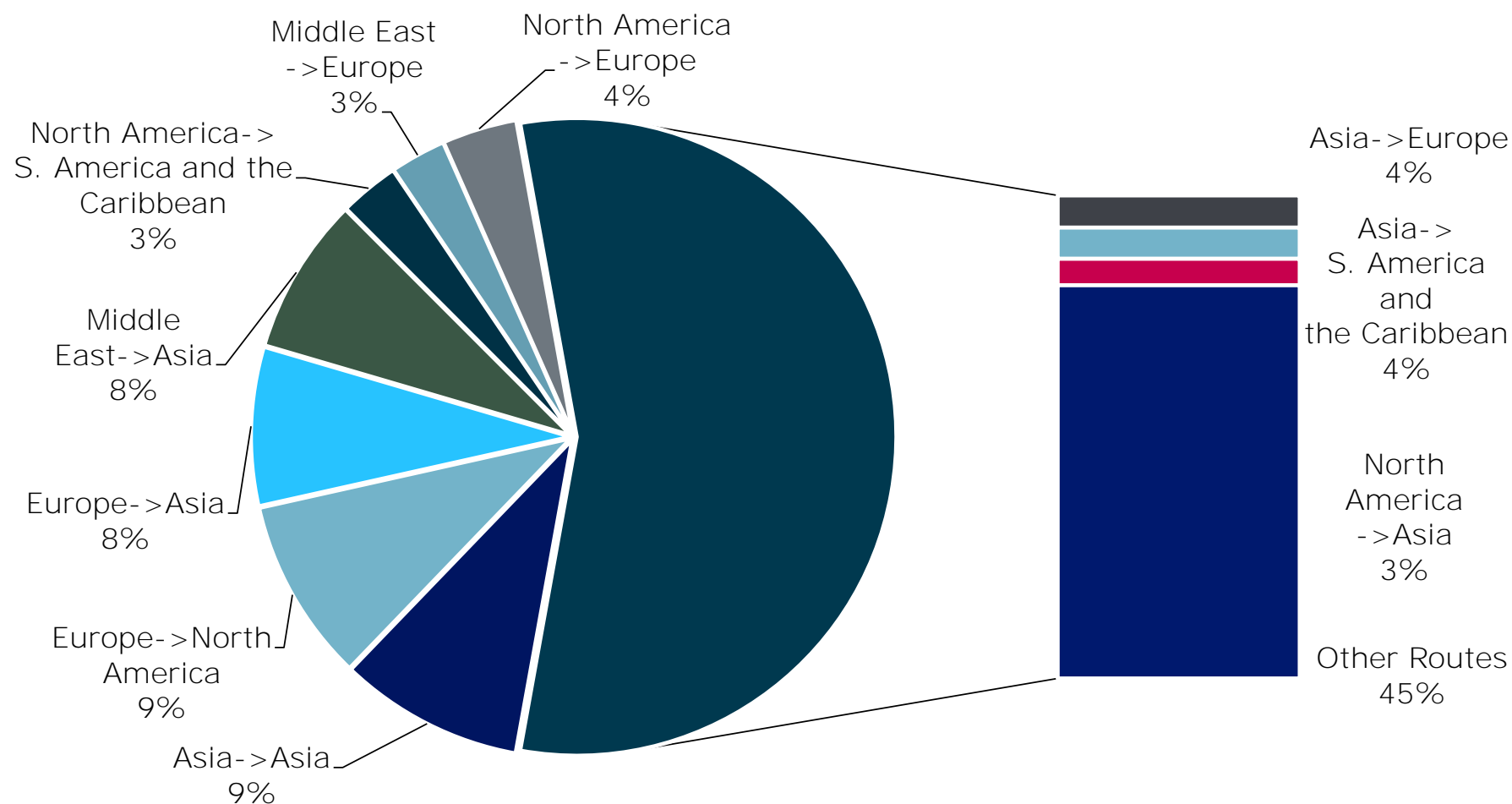
Figure P.2



Sources: Clarksons, Danish Ship Finance

## MAJOR PRODUCT TANKER TRADES

(MEASURED IN BILLION TON-NAUTICAL MILES, 2011)



Sources: IHS Global Insight, Danish Ship Finance

## SUPPLY AND DEMAND

THE CARGO CARRYING CAPACITY OF THE PRODUCT TANKER FLEET GREW 4% IN 2011 WHILE DISTANCE-ADJUSTED DEMAND GREW 5%. HEAVY POSTPONEMENT, CANCELLATIONS AND SCRAPPING ACTIVITY HELPED TO CURB FLEET GROWTH IN 2011. HOWEVER, THE PRODUCT TANKER FLEET STILL HAS NOT ABSORBED YEARS OF HIGH FLEET GROWTH AND, IN PARTICULAR, RECENT INFLOWS OF NEW TONNAGE IN THE LR SEGMENTS.

### THE PRODUCT TANKER FLEET GREW 4% IN 2011

The product tanker fleet grew 4% in 2011 as 6.3 million dwt joined the fleet and 1.8 million dwt exited (fig. 4). Unfortunately, growth was not evenly distributed between segments as MR tankers only grew a modest 2% and LR tankers expanded by 7% in 2011. As the year unfolded, deliveries slowed and only 0.9 million dwt was delivered in the fourth quarter compared to 1.8 million dwt in the third quarter of 2011. Unfortunately for the product tanker market, scrapping activity did not pick up during the same period.

### SIGNIFICANT SLOWDOWN IN MR DELIVERIES

In 2011, only 2.7 million dwt joined the MR tanker fleet - the lowest since 2002. From 2006 to 2010, annual MR tanker deliveries have on average been 5.1 million dwt and fleet growth has followed suit. LR deliveries are 1.2 million dwt below 2010 levels (fig. 4).

### 40% OF SCHEDULED 2011 DELIVERIES BUILT IN 2011

Looking back at 2011, it seems that owners scrambled to postpone or cancel orders and that they were successful to some extent. In April 2011, expected product tanker deliveries were 7.8 million dwt for the rest of 2011 (fig. 5). At end-2011, actual deliveries in that period were 2.9 million dwt, equivalent to 37% of expected deliveries. However, when looking at the orderbook of January 2012 a total of 2.9 million dwt has completely vanished from the orderbook (fig. 5). We interpret this as cancelled orders. Additionally, 2 million dwt have had their delivery dates postponed into 2012 or beyond.

### HALF OF SCHEDULED MR TANKER DELIVERIES CANCELLED IN 2011

In April 2011, a total of 4.5 million dwt of MR tankers was scheduled for delivery for the remaining part of 2011 (fig. 5). However, when looking at the latest orderbook, it would seem that a total of 2.2 million dwt of

Figure P.4

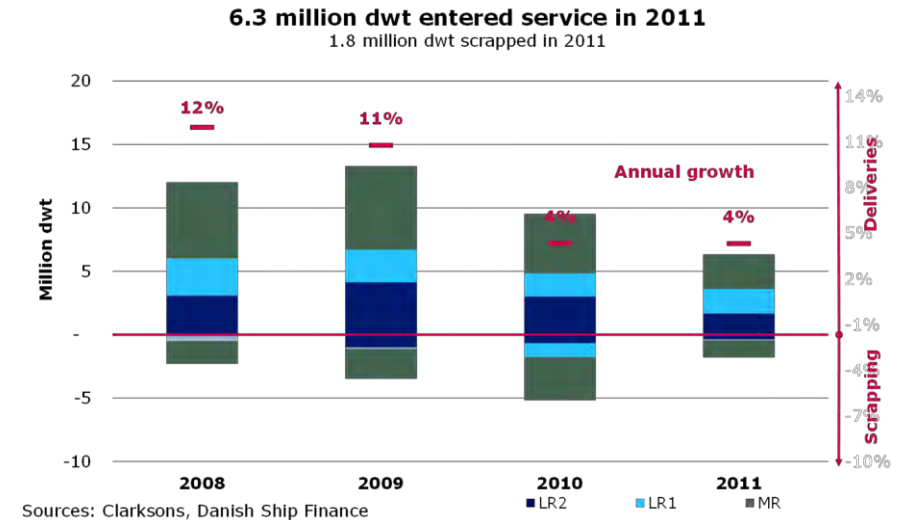
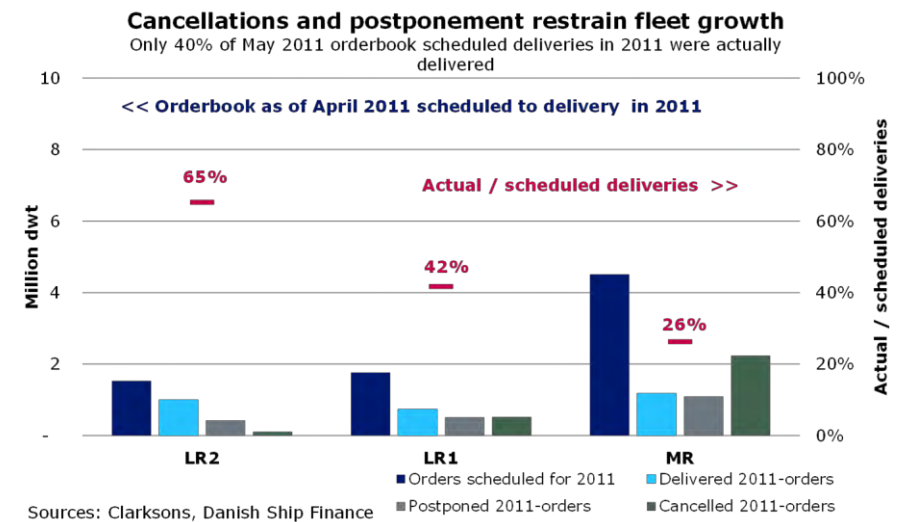


Figure P.5





MR tankers has been cancelled in 2011. Furthermore, 1.1 million dwt has been postponed into 2012 or beyond. Actual MR tanker deliveries are 75% below what was expected in May 2011. The MR segment is still working to absorb years of high deliveries and if all deliveries had been made in 2011, rates would have even been worse hit than was actually the case.

#### MODEST SCRAPPING DESPITE WEAK MARKET SENTIMENT

Despite the weak product tanker market and low rates, scrapping activity failed to take off in 2011. The fleet is relatively young. For instance, 91% of the LR1 fleet is younger than 10 years. A total of 1.8 million dwt was scrapped during 2011. That is the lowest scrapping amount since 2006. Scrapping activity was once again the highest in the MR segment and the lowest in the LR1 and LR2 segments, in which 2% and 1% respectively of the fleet was scrapped (fig. 4).

#### DISTANCE-ADJUSTED PRODUCT TANKER DEMAND UP 5% IN 2011

Distance-adjusted product tanker demand grew by 5% in 2011 (fig. 6). When we last published our Shipping Market Review in May 2011 we forecasted that distance-adjusted demand would increase by 6% in 2011, but increased demand from Asia and South America and the Caribbean was not enough to trump the slump in US oil product demand. However, European distance-adjusted demand surprised on the positive side as diesel imports from the USA increased by more than originally expected. Still, tonne-mile demand actually grew less than import volumes as long-haul imports have mostly been replaced by short-haul imports.

#### SEABORNE OIL PRODUCT TRADE GREW 6% IN 2011

Trade in seaborne oil product commodities expanded by 6% in 2011 (fig. 7). Measured in volume terms, the annual increase amounted to approximately 40 million tonnes. This is approximately the same as in 2010. Total seaborne oil product trade was 3% above the previous high of 2008. Asian and South American and Caribbean imports were the main drivers of the increased volumes. Demand in China, India and South America remained strong.

#### OECD DEMAND FOR OIL PRODUCTS CONTINUES THE DOWNWARD SPIRAL

Demand for oil products in the OECD has been seriously hampered by the global economic crisis. As discussed in detail in the crude tanker section, OECD oil consumption declined 1% in 2011 (fig. T.8).

Figure P.6

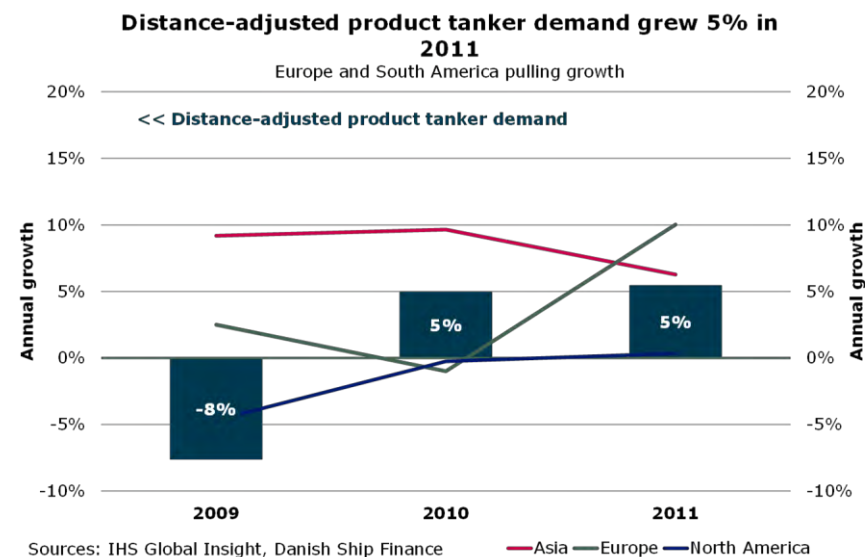
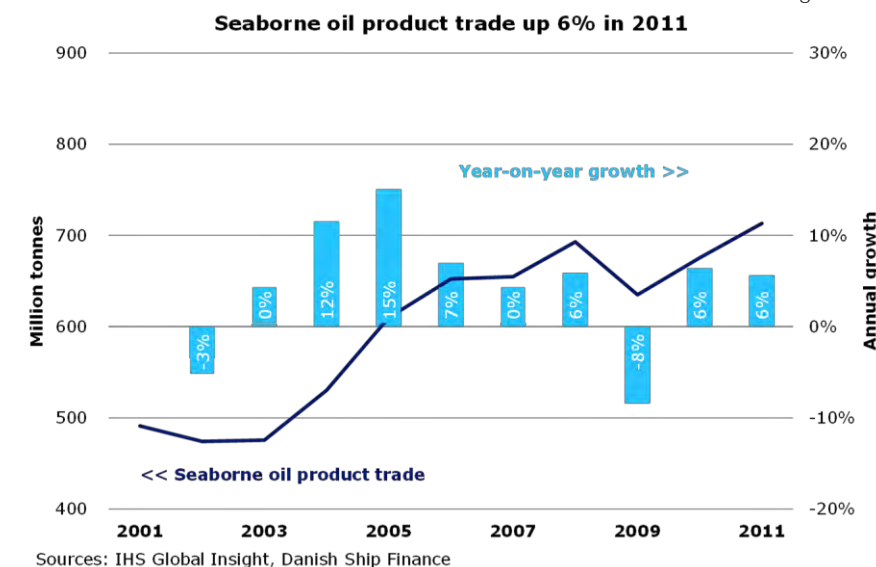


Figure P.7



Accordingly, demand for refined oil products declined in tandem with lower oil consumption. US and European consumption of refined oil products fell by approximately 2–3% over the year. Weak industrial activity and consumption of transportation fuels, especially gasoline accounted for the bulk of this contraction in both regions. This was attributable to a decline in driving mileage resulting from higher fuel prices and gloomy economic prospects.

#### THE USA HAS BECOME A NET EXPORTER OF OIL PRODUCTS

The USA has for the first time in 20 years become a net exporter of refined oil products. The last published data from January 2012 show net exports of 790,000 barrels per day (fig. 8) as a surplus of products have been available for exports as input to refineries has been in an upward trend. At its peak, the US, by comparison, had net imports of 3.1 million barrel per day. In addition, weaker growth in industrial production compared to US trading partners and soft developments in vehicle miles may be part of the reason for this change.

#### US OIL PRODUCT IMPORTS FROM EUROPE CONTINUE TO DECLINE

European exports of gasoline to the USA declined 5% in 2011 as declining vehicle mileage, more fuel-efficient cars and high fuel prices reduced US gasoline consumption significantly (fig. 9). On average, US imports of gasoline and gasoline ingredients fell by 1.3 million barrels per day (5%) in 2011.

#### CHANGED MR TRADING PATTERNS

US gasoline imports from Europe fell during 2011 whereas European exports of gasoline to South America rose. Meanwhile, the USA exported larger volumes of diesel to Europe. These changed trading patterns added almost enough tonne-miles to offset the decline in European gasoline exports to the US.

#### OVERHANG OF SUPPLY STILL DOMINATING PRODUCT TANKER MARKET

Although narrowing, the overall gap between supply and demand remained in place in 2011. The product tanker fleet grew 4% and distance-adjusted demand grew by 5%. However, rates remain low as the product tanker fleet is still working to absorb previous years of high fleet growth.

Figure P.8

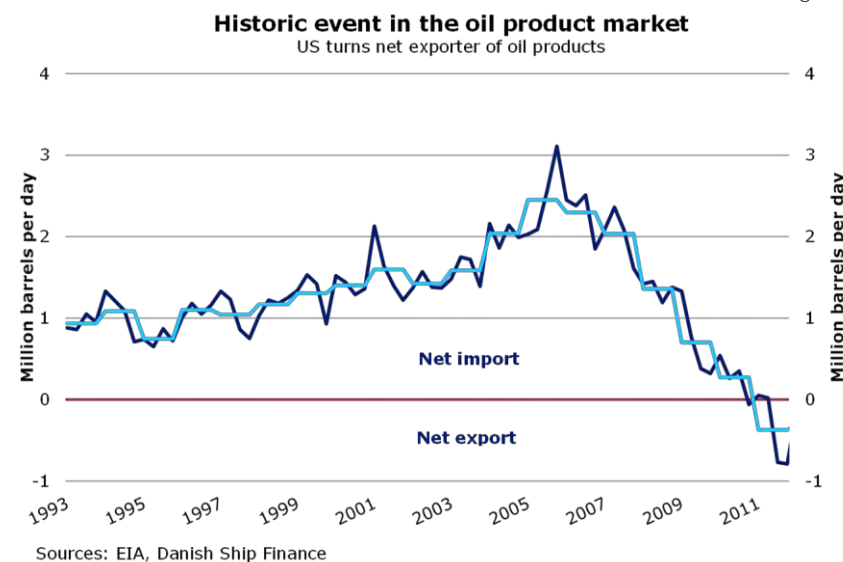
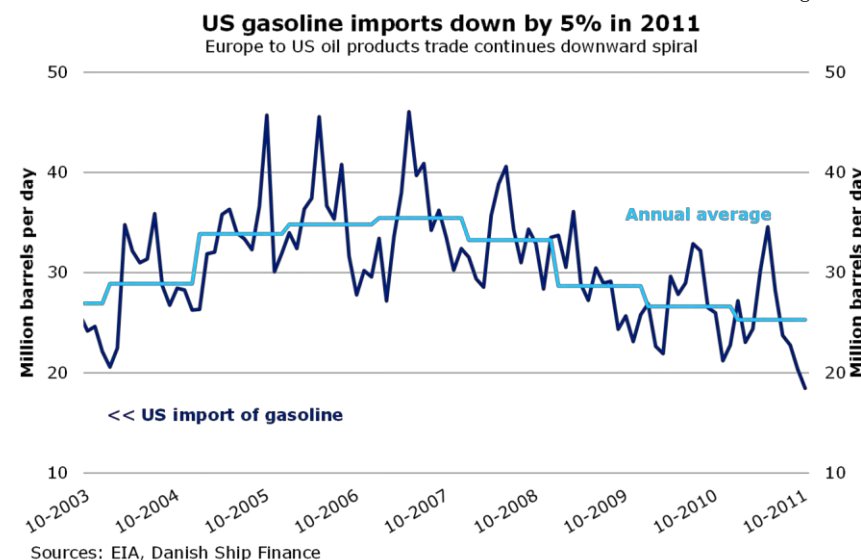


Figure P.9



SHIPOWNERS' APPETITE FOR NEW TONNAGE EVAPORATED AND THE LOW FREIGHT RATES PUSHED DOWN ASSET VALUES IN 2011. NEWBUILDING PRICES WERE FAIRLY UNCHANGED FROM 2010 LEVELS.

#### HISTORICALLY LOW CONTRACTING ACTIVITY IN 2011

As the product tanker market continued to work on absorbing previous years of high fleet growth, it is not surprising to see owners' appetite for new tonnage satiated. A mere 0.6 million dwt of new orders was placed in 2011, against 3.9 million dwt last year. Demand for LR tankers was reduced to a trickle, with only 0.1 million of LR tankers being contracted.

#### DELIVERY TIME SLIPS BELOW TWO YEARS

More tonnage is being delivered than contracted causing average delivery time to fall. Current average delivery time is 1.8 years, down from 2.5 years the year before (fig. 10). Especially, the delivery time for MR tankers has fallen significantly in 2011, average delivery time for MR tankers now being as low as down to approximately 1.7 years.

#### NEWBUILDING PRICES DECLINED 1% IN 2011

Newbuilding prices declined slightly in 2011. In 2011, average newbuilding prices were down by 1%. But while MR tankers increased marginally in 2011, LR tankers dropped 3%. However, year-to-date average newbuilding prices are down 5%. Rising steel prices may have supported newbuilding prices from falling further in 2011.

#### SECONDHAND PRICES SLIGHTLY UP IN 2011

Secondhand prices improved marginally in 2011 but have been declining during the early months of 2012. On average, secondhand prices in 2012 are below the 2010-level. Although currently low, secondhand prices are still above the 2002-level.

Figure P.10

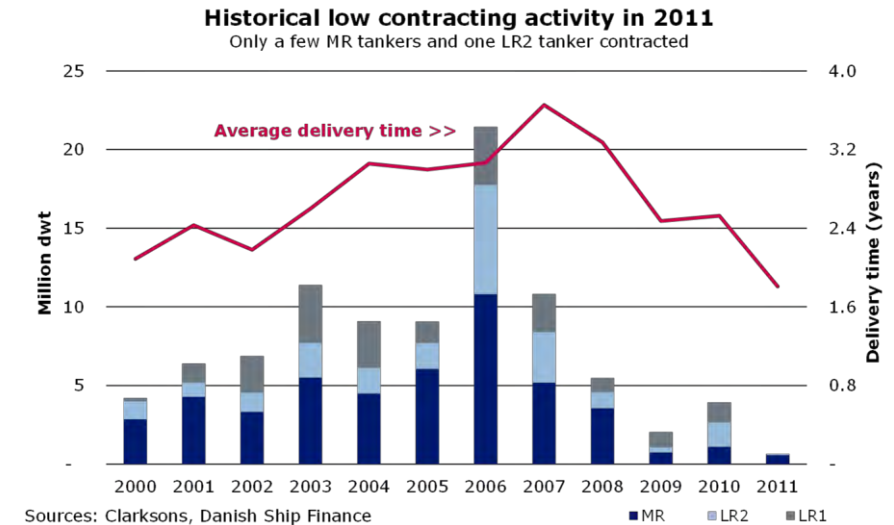
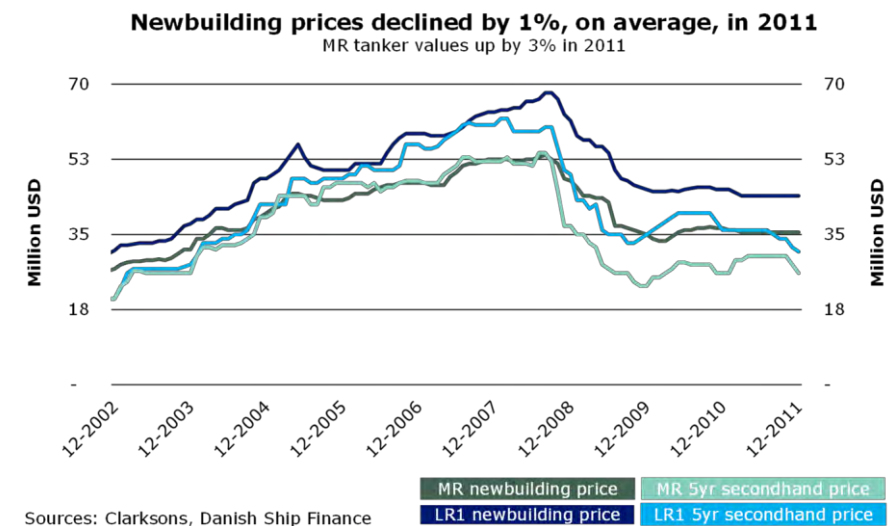


Figure P.11



## OUTLOOK

THE GAP BETWEEN SUPPLY AND DEMAND IS EXPECTED TO NARROW FURTHER IN 2012. HOWEVER, IT REMAINS UNCERTAIN WHETHER DEMAND WILL FULLY ABSORB SUPPLY ALREADY IN 2012.

### DECLINING ORDERBOOK / FLEET RATIO

For the first time since 2005, the orderbook / fleet ratio is declining. Currently, the orderbook represents about 10% of the total fleet. 66% of the orderbook is scheduled for delivery in 2012 and the rest is penned in for 2013 and 2014.

### 2% FLEET GROWTH IN 2012

The product tanker fleet is expected to grow by 2% in 2012 after adjusting for expected scrapping and postponement (fig. 12). We expect that total net additions in 2012 will be approximately 1.9 million dwt. For 2013, the product tanker fleet is expected to expand by another 2.5 million dwt and correspondingly fleet growth will be approximately 2%. However, fleet growth is not evenly distributed between segments. LR2 and LR1 are expected to grow by 4% and 2% in 2012, while MR tankers are expected to increase by only 1%. Obviously, our scenario assumes that no new contracts will be placed with delivery in 2012 and 2013.

### 5.6 MILLION DWT EXPECTED TO REACH THE SEA IN 2012

A total of 6.7 million dwt is scheduled for delivery in 2012. However, we expect that slippage and cancellations will remain an issue in 2012, especially for the larger segments. We expect that 1.1 million dwt will be postponed from 2012 into 2013 with LR2 tankers accounting for more than half. Adding it all together, a total of 5.6 million dwt is expected to join the fleet in 2012. In 2013, 3.8 million dwt is expected to be delivered (fig. 12).

### 3.7 MILLION DWT EXPECTED TO LEAVE THE FLEET IN 2012

A total of 5.6 million dwt would qualify for scrap in 2012, if all vessels above 25 years were to leave the fleet (fig. 13). MR tankers alone amount to 4.1 million dwt and LR2 tankers make up the lion's share of the remaining amount. If they all left the fleet in 2012, fleet growth would in fact be negative especially for the MR tankers. Taking the age distribution, expected fleet growth and market conditions into consideration, we estimate that a total of 3.7 million dwt will be scrapped in 2012, up 83% from 2010-levels. Increasing scrapping activity will primarily occur in the LR segment.

Figure P.12

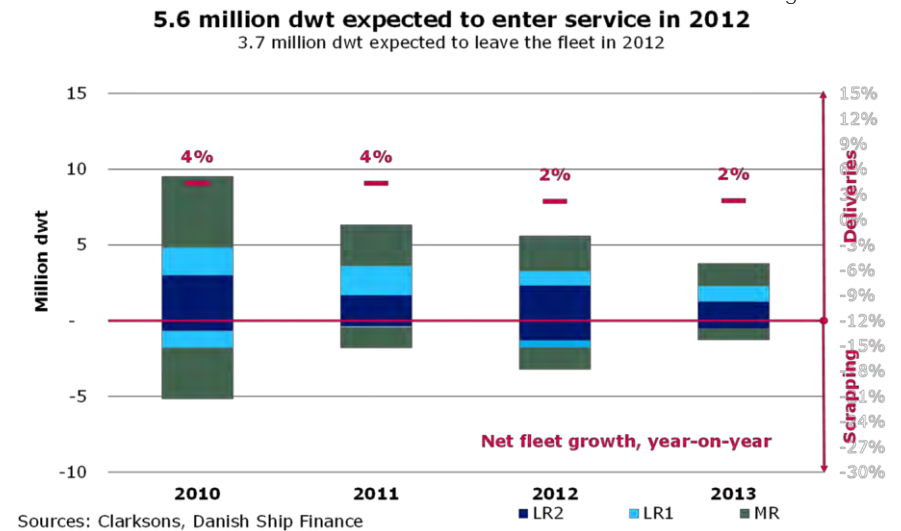


Figure P.13

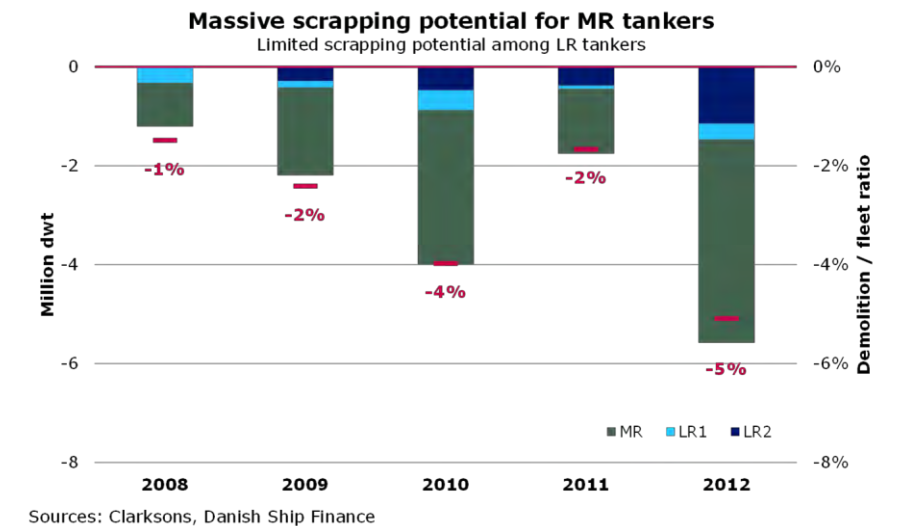




Figure P.14

### DISTANCE-ADJUSTED PRODUCT TANKER DEMAND UP 4% IN 2012

In tandem with lower projections for world growth, distance-adjusted product tanker volumes are expected to increase 4% in 2012 (fig. 14). When we published our latest Shipping Market review in May 2011, demand projections for 2012 was 6%. The outlook has since been revised down by 2 percentage points. The slowdown in distance-adjusted demand is primarily driven by, at best, stagnant OECD economies, especially in Europe.

However, growth in demand for refined products will expectedly be in short haul. The Far East, in particular, is expected to increase demand for refined products, but unfortunately these extra volumes are expected to come from increased Intra-Asian trade and the Middle East. Hence, the tonne-mile effect will be smaller than if demand in the West grew at a similar rate.

### SEABORNE OIL PRODUCTS VOLUMES TO INCREASE BY 5%

Seaborne trade for oil products is expected to increase by 5% whereas distance-adjusted demand is expected to increase by only 4% in 2012 (fig. 15). Asia is expected to see stronger growth in demand in 2012, but unfortunately most of the increase will be sourced from the Middle East (short-haul) (fig. 15). Average travelling distances will actually fall in 2012 as compared with developments in seaborne oil product trade measured in tonnes.

### GLOBAL OIL CONSUMPTION INCREASING BY 1.3 MILLION BARRELS PER DAY

As already discussed in the crude tanker section, global oil consumption is expected to increase by 1.3 million barrels per day in 2012. Non-OECD countries are expected to drive global oil consumption whereas OECD countries are expected to continue the downward spiral. An escalation of the economic situation in Europe might potentially reduce OECD oil consumption beyond current projections.

### EMERGING ECONOMIES DRIVING DEMAND FOR REFINED PRODUCTS

In 2012, emerging economies are expected to drive demand for refined products. Especially Asia, led by China and India, will exhibit double-digit growth figures. Trading in oil products such as diesel, gasoline and naphtha may grow in the coming years. In particular, the Asian petrochemical industry is expected to expand the number of plants, and that will lift demand for naphtha. Indian and Chinese demand for gasoline and diesel is expected to continue to rise in 2012 as car sales

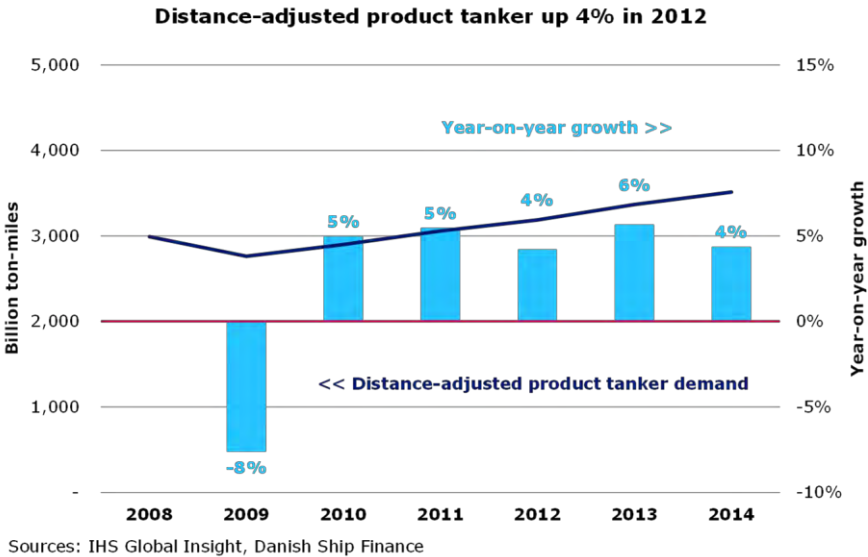
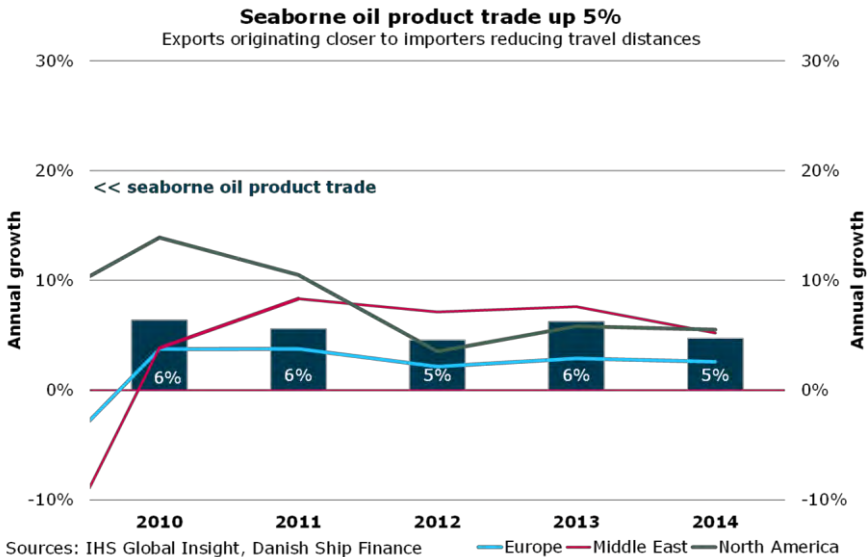


Figure P.15



are growing strongly in both countries and are expected to continue to do so.

### US GASOLINE CONSUMPTION SET TO FALL FURTHER IN 2012

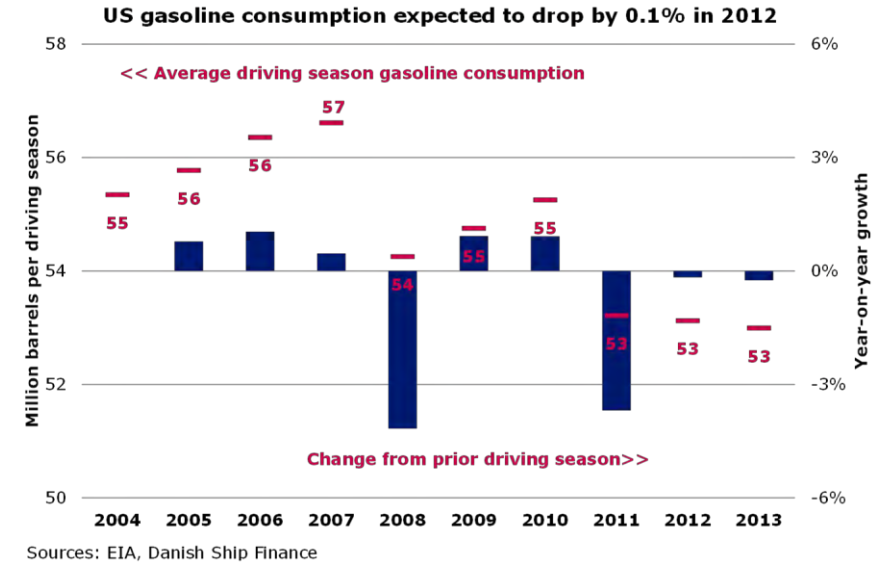
US gasoline consumption is forecasted to decrease this year and next year. In particular, the MR segment will be impacted as European gasoline exports to the USA will continue to decline. US gasoline consumption is expected to shrink by approximately 90,000-130,000 barrels per day (equal to 7% of US finished motor gasoline imports in October 2011) in 2012 and 2013 as more fuel efficient cars and fewer people reaching driving age will lead to reduced consumption (fig. 16).

### REFINERY CLOSURES EXPECTED TO BOOST US IMPORTS

Even as gasoline consumption is expected to decline in 2012 and 2013, imports of oil products such as diesel and gasoline into the USA might increase as refineries on the US East Coast are expected to close down operations. The closure of these refineries will take as much as 30% of refining capacity out of the market. Gasoline consumption is projected to decrease by less than that. Such a decline in refinery capacity may improve US product imports from Europe and potentially also include longer haul exports, from India, for example, thereby benefitting both MR and LR tankers. However, it will depend on how US gasoline consumption develops in 2012 and beyond. Another threat to the improvement in US imports would be if European refineries start shutting down operations due to poor margins.

### RATES AND VALUES EXPECTED TO INFLATE IN 2012 AND 2013

The product tanker market is expected to stay low in 2012 although the overhang of supply from previous years is slowly being absorbed. Product tanker demand may therefore not be able to balance supply and demand for some time yet. For 2013 and beyond, the picture looks slightly better, provided new ordering can be kept at a minimum.



# CHEMICAL TANKERS

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# CHEMICAL TANKERS

*We define chemical tanker as IMO I and IMO II tankers with stainless steel, zinc, epoxy or Marineline coated tanks. We do not distinguish between parcel tankers and chemical tankers, although slightly different market fundamentals apply.*

THE CHEMICAL TANKER MARKET HAD A SLOW START TO 2011, BUT THE YEAR ENDED WITH RISING FREIGHT RATES, BALANCED SUPPLY AND DEMAND GROWTH AND LOW CONTRACTING ACTIVITY. MARKET SENTIMENTS ARE EXPECTED TO IMPROVE IN 2012.

## FREIGHT RATES

CHEMICAL TANKER SPOT RATES INCREASED IN 2011. THE ANNUAL AVERAGES INCREASED TO LEVELS LAST SEEN IN 2008.

The combination of increasing industrial production and inventory build-up, particularly in Asia, supported chemical tanker spot rates significantly in 2011. However bunker prices have also increased remarkably during 2011 and this of course limit owner's profits of higher freight rates.

### ASIAN SPOT RATES SURGED IN 2011

Spot rates out of Houston bound for the Far East increased on average by 22%, while spot rates out of Rotterdam bound for Taiwan increased on average by 5% in 2011. Both surged heavily in December 2011 and surpassed USD 100 per tonne. To our knowledge, USD 100 per tonne is the highest spot rate ever observed on these two trades (fig. 1).

### TRANSATLANTIC SPOT RATES ROSE 20% IN 2011

Transatlantic spot rates rose 20% in 2011. The Houston–Rotterdam rate came close to the record of USD 67 per tonne reaching USD 64 in April. However the rates fell in the third quarter, only to rise again in the final months of 2011. On average, the rates increased by 20% in 2011 and are now back at the pre-crisis level (fig. 2).

Figure CT.1

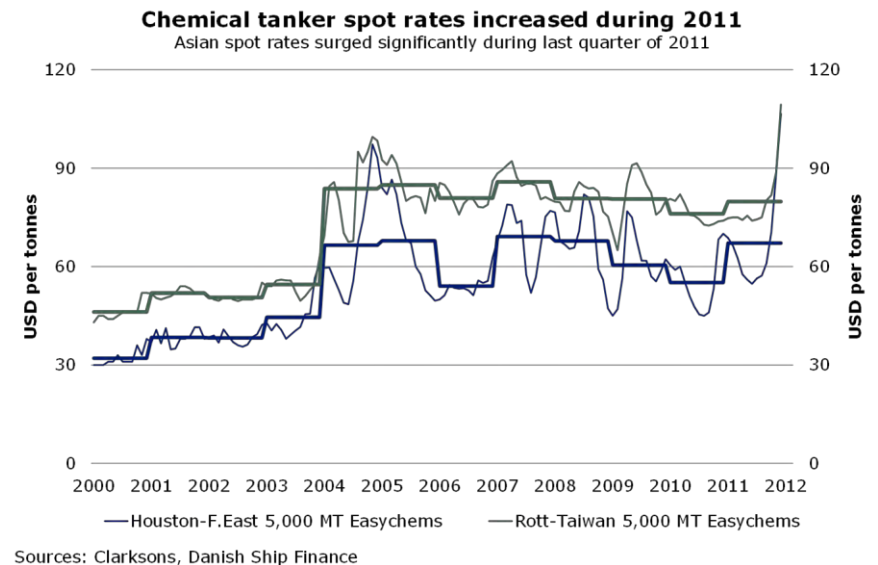
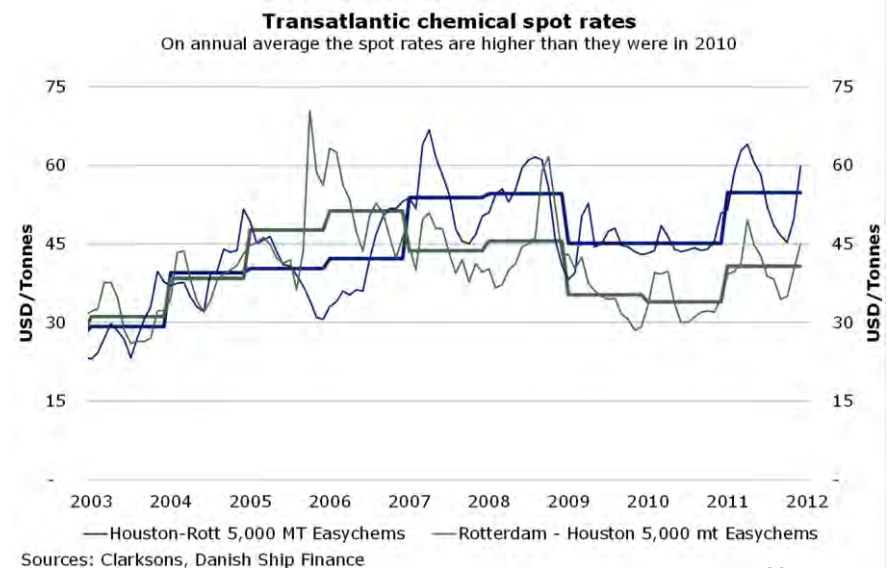
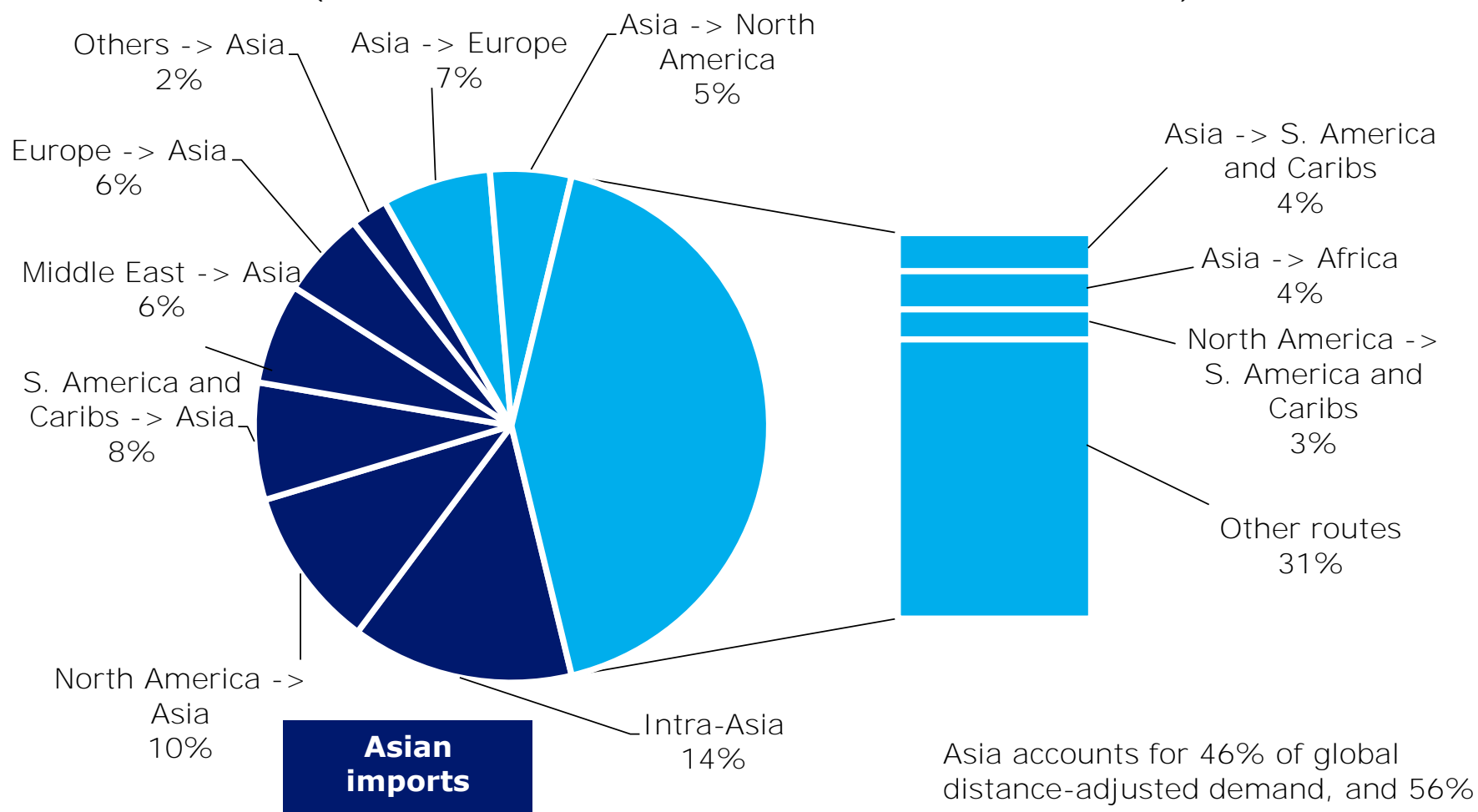


Figure CT.2





## MAJOR CHEMICAL TANKER TRADES IN 2011 (MEASURED IN BILLION TON-NAUTICAL MILES)



Sources: IHS Global Insight; Danish Ship Finance

## SUPPLY AND DEMAND

THE CHEMICAL TANKER FLEET GREW BY 7% IN 2011, WHILE DISTANCE-ADJUSTED DEMAND INCREASED BY 6%. SCRAPPING ACTIVITY REMAINS HIGH BUT WILL LEVEL OFF IN TANDEM WITH LOWER DELIVERIES.

### CHEMICAL FLEET AT 46 MILLION DWT

In January 2012 the chemical tanker<sup>1</sup> fleet consisted of 2,669 vessels with a capacity of 46 million dwt. Measured in dwt, the Deep Sea segment dominates with 55% (25.4m dwt) of the fleet followed by Intermediate at 31% (14.4m dwt). Furthermore 95% (43,6m dwt) of the fleet is IMO II vessels.

### DELIVERIES CONTINUE TO FALL

Annual deliveries have been declining during the last three years. In 2011, 3 million dwt was delivered compared to 4 million dwt in 2010. 1.9 million dwt (65% of the 3 million dwt) belonged to the Deep Sea segment (fig. 4).

### 800,000 DWT SCRAPPED IN 2011

800,000 dwt (2% of the fleet) was scrapped during 2011. In 2010, a record-high 1.5 million dwt was scrapped. Taking the age distribution of the chemical tanker fleet into account, the 2011 demolition activity seems fairly high. Only 4% of the fleet is older than 25 years. In total, the chemical tanker fleet grew by 7% (fig. 4).

### 61% OF EXPECTED DELIVERIES WERE NOT DELIVERED

By April 2011, 4.2 million dwt was expected to enter the fleet in the remaining months of 2011 – of which only 1.6 million dwt (39%) was delivered. 1.5 million (37%) of the scheduled deliveries was postponed to 2012 and 2013 while 1 million dwt (23%) may have been cancelled. The Deep Sea segment had the best delivery performance at 45% with 1 million dwt delivered, while only 15% of scheduled deliveries was delivered in the Short Sea segment (fig. 5).

<sup>1</sup> Our definition: An IMO I or IMO II tanker with stainless steel, zinc, epoxy or Marineline coated tanks.

Figure CT.4

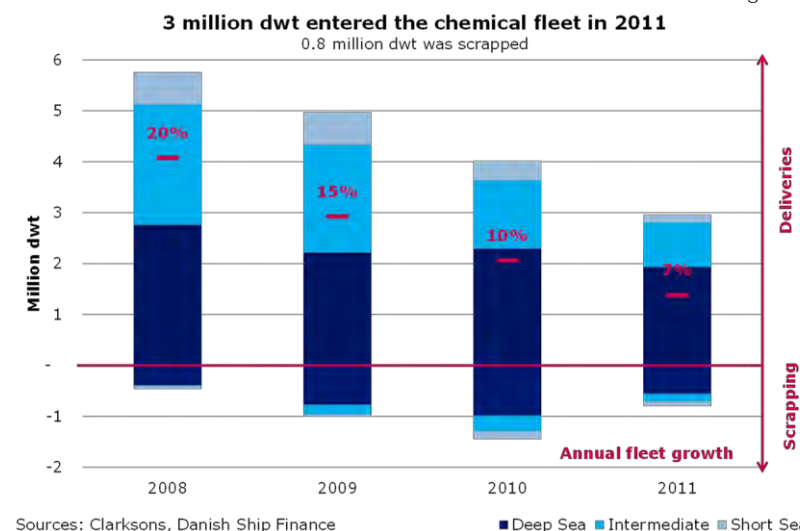
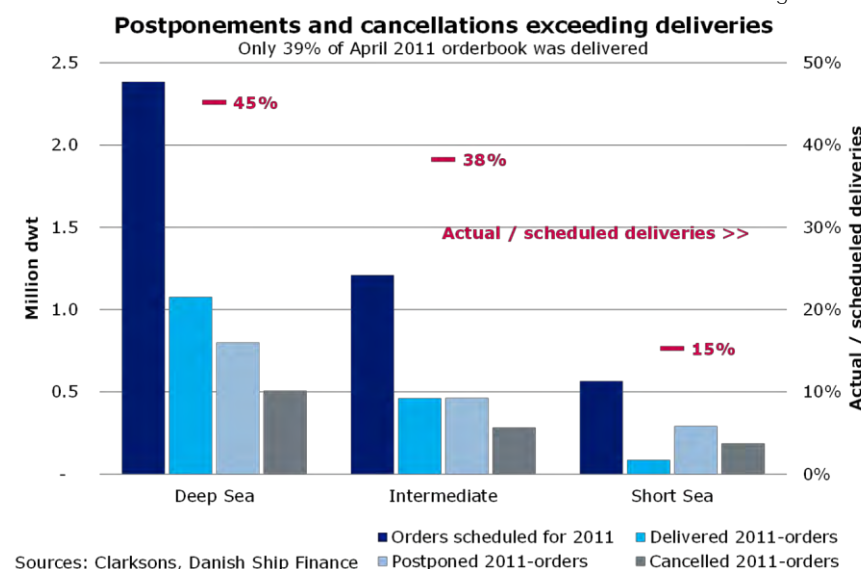


Figure CT.5



### GLOBAL INDUSTRIAL PRODUCTION UP BY 5% IN 2011

The global industrial production increased by 5% from January to November. This is an important economic indicator for chemical tankers, and explains some of the increase in demand. Not surprisingly, the euro area and the USA experienced moderate growth in industrial production at 4% while Asia increased 10%.

### DISTANCE-ADJUSTED CHEMICAL DEMAND INCREASED 6% IN 2011

Distance-adjusted chemical tanker demand increased by 6% in 2011 (fig. 6). Global chemical imports also grew by 6%, which indicates that demand growth derived from more chemicals being transported. Furthermore, the US, South American and European distance-adjusted demand is now 23%, 20% and 10%, respectively, above the crisis year of 2009. In total, chemical imports ended at 188 million tonnes in 2011.

### ASIAN AND CHINESE IMPORTS DRIVING DEMAND

Asia is once again by far the biggest importer of chemicals, accounting for 46% of global distance-adjusted chemical tanker demand (fig. 3). Furthermore, Asian demand is dominated by China, which stood for 40% of Asian distance-adjusted demand. In total, China imported 45 million tonnes and is thus the biggest importer of chemicals in the world. In 2011, Asian distance-adjusted demand for chemicals increased by 7% while the Chinese demand was up by 8%.

### LARGEST DEMAND IS STILL FOR ORGANIC CHEMICALS

Organic chemicals still dominate global demand for chemicals and accounted for 42% of distance-adjusted demand, which increased by 7% during 2011. Animal and vegetable oils were up by 4% while inorganic chemicals rose by 5%. Distance-adjusted demand for inorganic chemicals is now 18% above the crisis level of 2009 (fig. 7).

### SUPPLY AND DEMAND GROWTH BALANCE IN 2011

To sum up there seems to have been close to a balance between supply and demand growth in the chemical tanker segment: the fleet grew by 7% while distance-adjusted chemical tanker demand increased by 6%. However, there has been an overhang of tonnage delivered in previous years, so the market still struggles with an oversupply of tonnage.

Figure CT.6

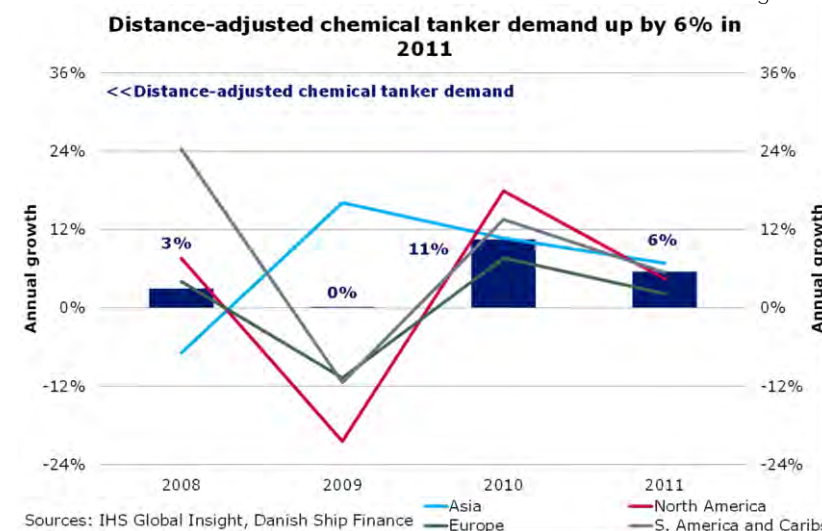
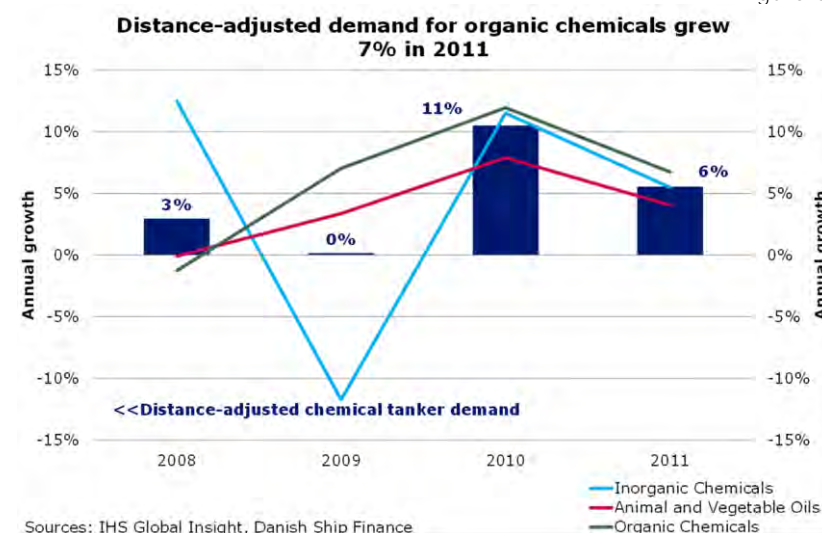


Figure CT.7



## CONTRACTING AND SHIP VALUES

CONTRACTING ACTIVITY IS AT THE LOWEST LEVEL IN MANY YEARS. NEWBUILDING PRICES ARE FALLING ACCORDINGLY. SECONDHAND PRICES IMPROVED SLIGHTLY.

### CONTRACTING ACTIVITY CONTINUES TO FALL

Contracting remains low in the chemical tanker segment and thus only 180,000 dwt (8 vessels) was contracted during 2011. Most of the contracts have been targeted towards the Intermediate segment which accounts for 120,000 dwt (6 vessels) (fig. 8). Only two ship owners (both European) have shown an interest in signing new contracts during 2011. 74% of the chemical fleet is younger than ten years, and only 4% of the fleet is older than 25 years. In combination with a relatively limited number of active players in the market, this may to some extent explain the low level of contracting.

### DELIVERY TIME AROUND TWO YEARS

The average delivery time for chemical tankers is currently estimated at 28 months. This looks like an increase from 2010. However, delivery times are generally declining as more tonnage is being delivered than contracted. For chemical tankers, the accuracy of the delivery time is subject to a very low contracting activity in the past three years. It might therefore be more realistic to assume that the delivery time has been declining since 2007 and are now approaching 2–2.5 years (fig. 8).

### NEWBUILDING PRICES DECLINED 10% IN 2011

Newbuilding prices for a 37,000 dwt, IMO 2, stainless steel chemical tanker fell by USD 6 million (10%) to USD 54 million in 2011 (fig. 9).

### SECONDHAND PRICES LARGELY UNCHANGED IN 2011

Secondhand price for a comparable 10-year chemical tanker was up by USD 3 million (6%) in 2011 to USD 39 million (fig. 9).

Figure CT.8

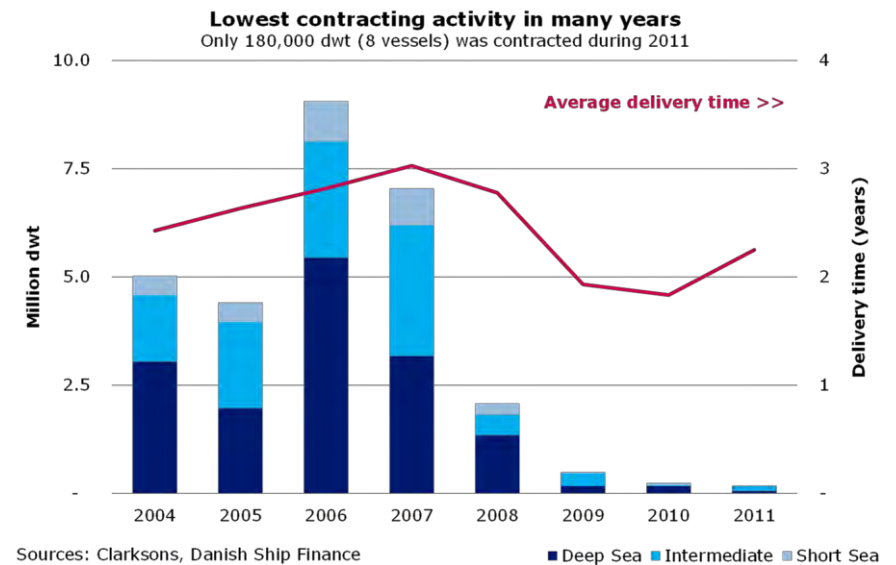
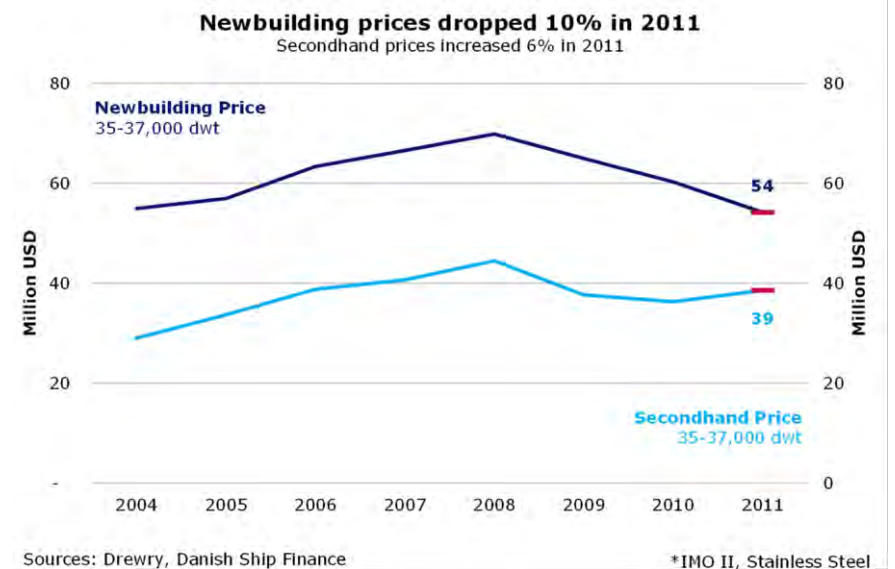


Figure CT.9





## OUTLOOK

THE CHEMICAL FLEET IS EXPECTED TO GROW BY 3% IN 2012 WHILE DISTANCE-ADJUSTED DEMAND IS ESTIMATED TO INCREASE BY 5%. IF CONTRACTING ACTIVITY REMAINS LOW THE GAP BETWEEN SUPPLY AND DEMAND SHOULD NARROW WHICH WOULD BODE WELL FOR THE FUTURE.

### CHEMICAL ORDERBOOK AT 3.9 MILLION DWT

At January 2012 the chemical orderbook contained 3.9 million dwt. With a current fleet of 46 million dwt, the orderbook amounts to 8% of the fleet. In other words, for every twelve ships at sea one vessel will be delivered between 2012 and 2014 (fig. 10).

### 3.3 MILLION DWT SCHEDULED FOR DELIVERY IN 2012

3.3 million dwt (87% of the current orderbook) is scheduled for delivery in 2012. The Deep Sea segment continues to dominate with 2.1 million dwt planned to enter the fleet in 2012 (fig. 10). We apply the 2011 delivery performance to the 2012 schedule. If the segment maintains its delivery performance from 2011 only 1.3 million dwt will be delivered. On the other hand, if the high level of freight rates continues along with rising demand, owners may postpone or cancel less. Therefore we expect that around 2 million dwt of the scheduled deliveries (60%) will be delivered in 2012, 1 million dwt (30%) will be postponed, while the remaining 300,000 dwt may be cancelled (fig. 11).

### FLEET ESTIMATED TO GROW 3% IN 2012

Only 4% (1.8 million dwt) of the fleet is older than 25 years. In 2012, 1.4 million dwt qualifies for scrap if all IMO I vessels above 30 years and all IMO II vessels above 28 years (average scrap age in 2011) are scrapped. However, rising demand combined with the low contracting activity in 2010 and 2011 may make owners more reluctant to scrap vessels or cancel deliveries in 2012. We estimate that 50% (700,000 dwt) of the vessels qualifying for scrap will exit the fleet in 2012. Combining our scenario for deliveries and demolition we expect a fleet growth at 3% in 2012. It is very unlikely that fleet growth will be as high as it was in 2011 and the preceding years (fig. 11).

Figure CT.10

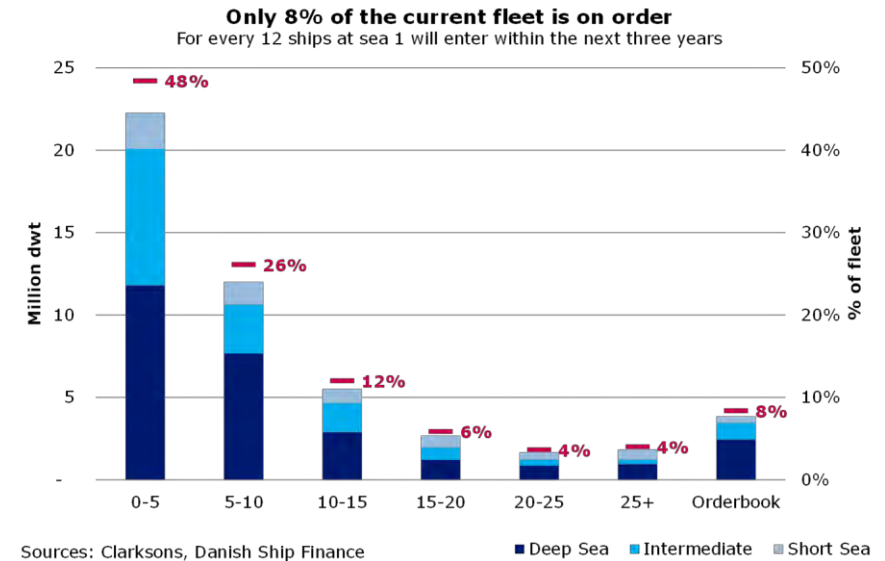
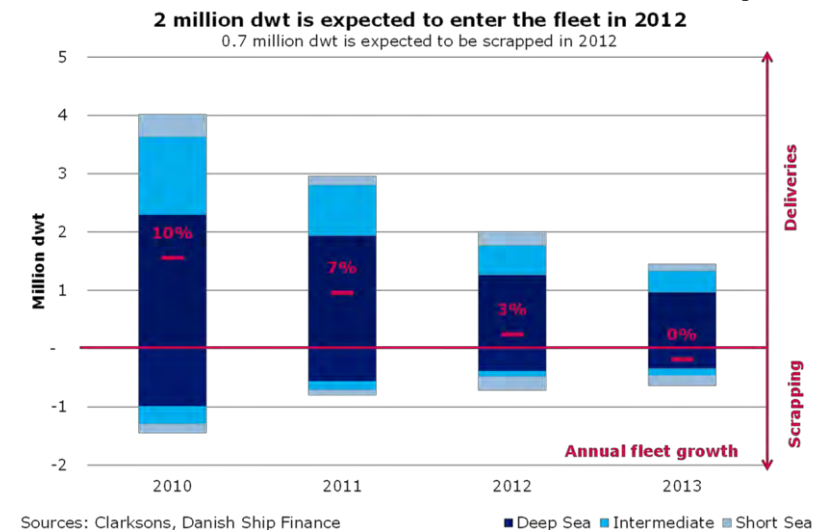


Figure CT.11



### DISTANCE-ADJUSTED DEMAND UP BY 5% IN 2012

Distance-adjusted chemical tanker demand is expected to increase by 5% in 2012, and Asia (China) is still the main demand driver. Thus Asian distance-adjusted demand is estimated to increase by 9%, while European demand will be unchanged. North American and South American demand is only expected to rise by 1% and 3% respectively. Total chemical imports are expected to be around 200 million tonnes in 2012 (+6%) (fig. 12).

Distance-adjusted demand for organic chemicals is estimated to rise by 7% in 2012, while distance-adjusted demand for animal and vegetable oils and inorganic chemicals is expected to increase 4% (fig. 13).

### BASIS FOR FURTHER FREIGHT RATE INCREASES IN 2012

The outlook for chemical tankers is relatively good. The orderbook is small, owners seem to have low appetite for new vessels and distance-adjusted chemical demand is increasing. Even if owners were more reluctant to scrap vessels or cancel deliveries, fleet growth is predicted to stay below 3% in 2012. There will still be a supply overhang in 2012, but we expect that the balance will begin to improve during 2012, since demand is expected to grow 5%. However, it is important that owners maintain discipline and do not return to previous years' high contracting levels.

Figure CT.12

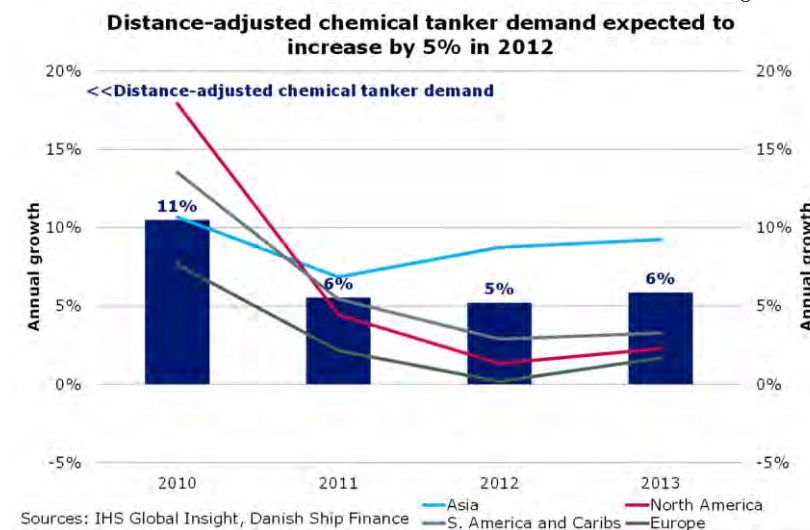
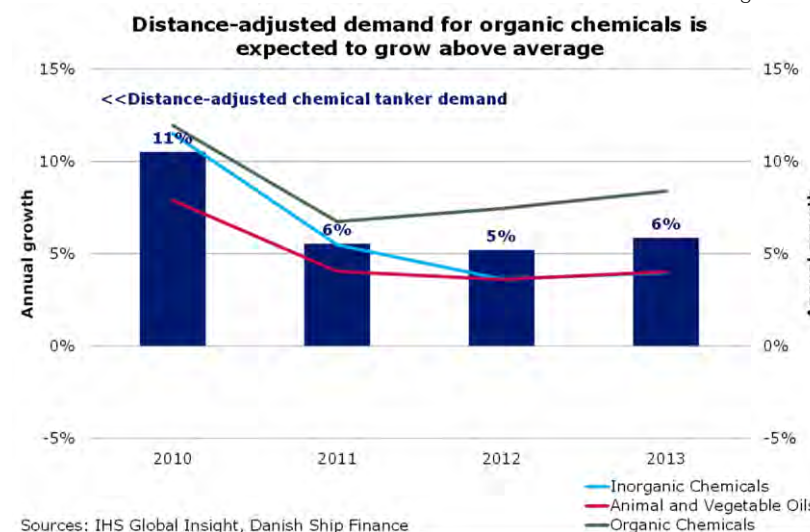


Figure CT.13



The background image shows a dark, stone archway in a hillside. Through the arch, a large ship, likely an LPG tanker, is visible on the sea under a grey, overcast sky. Bare trees are visible on the hillside above the arch.

LPG TANKERS

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# LPG TANKERS

CONDITIONS IN THE LPG TANKER MARKET ARE GRADUALLY IMPROVING. RATES REACHED AN ALL-TIME HIGH IN 2011 AND ASSET VALUES INCREASED SLIGHTLY. THE 2012 OUTLOOK IS PROMISING AS DEMAND WILL EASILY OUTGROW SUPPLY.

## FREIGHT RATES

THE LPG TANKER MARKET IMPROVED IN 2011 ON THE BACK OF IMPROVED LPG DEMAND AND LIMITED FLEET GROWTH, CAUSING THE BALTIC LPG INDEX TO SURGE. TIMECHARTER RATES IMPROVED ACCORDINGLY BUT ARE STILL BELOW 2006 LEVELS.

LPG tanker demand improved in 2011, mainly driven by strong demand growth in the Far East. With virtually no net additions to the fleet and strong growth in seaborne LPG tanker demand, rates soared as the supply-demand gap tightened.

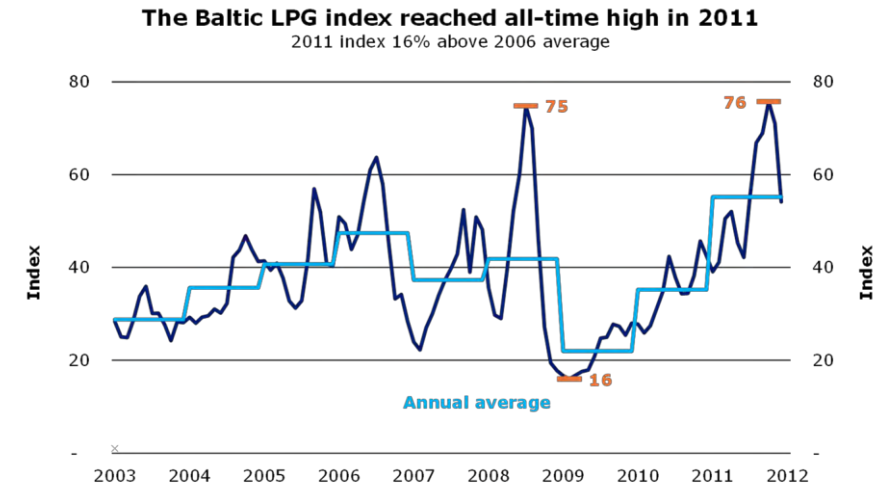
### THE BALTIC LPG INDEX INCREASED 57% IN 2011

After a strong recovery in 2010, rates continued to improve in 2011. On average, the Baltic LPG index stood at USD 55.2 per MT (megaton) in 2011, up 57% from 2010 (fig. 1). The Baltic LPG index, on average, reached an all-time high in 2011 as the annual average of 2006 was surpassed by 16%. The performance was greatly helped by a spike in October 2011 when the index reached a new all-time high of 76. In December 2011, the Baltic LPG index declined 24% to an average of USD 54.1 per MT due to weaker demand in the Far East and plenty of tonnage supply in the Middle East (fig. 1). Later, due to the Christmas holidays and New Year, tonnage demand slowed further. By the end of January 2012, the monthly average stood at 42, up 8% year-on-year.

### TIMECHARTER RATES BACK AT 2007 LEVELS

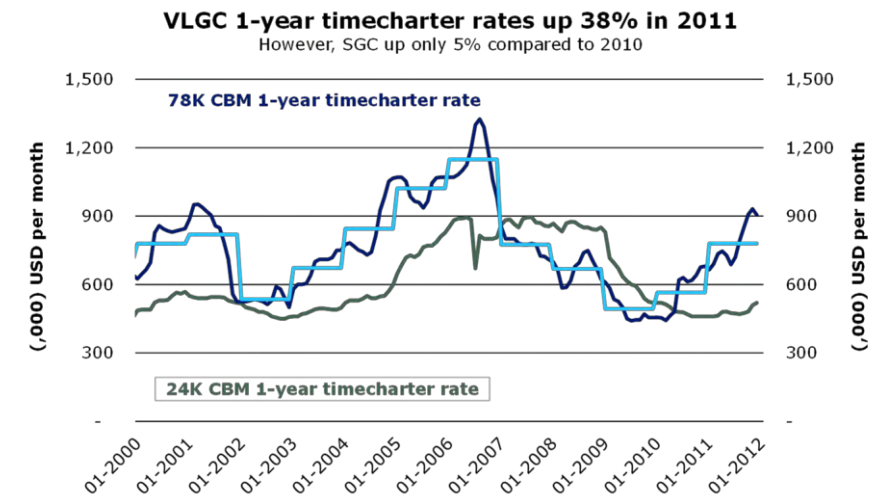
Timecharter rates were increasing throughout 2011. Currently, average timecharter rates are up 21% compared to 2010 levels. However, while smaller vessels only increased 5%, timecharter rates for large vessels soared 38% during 2011 (fig. 2).

Figure LPG.1



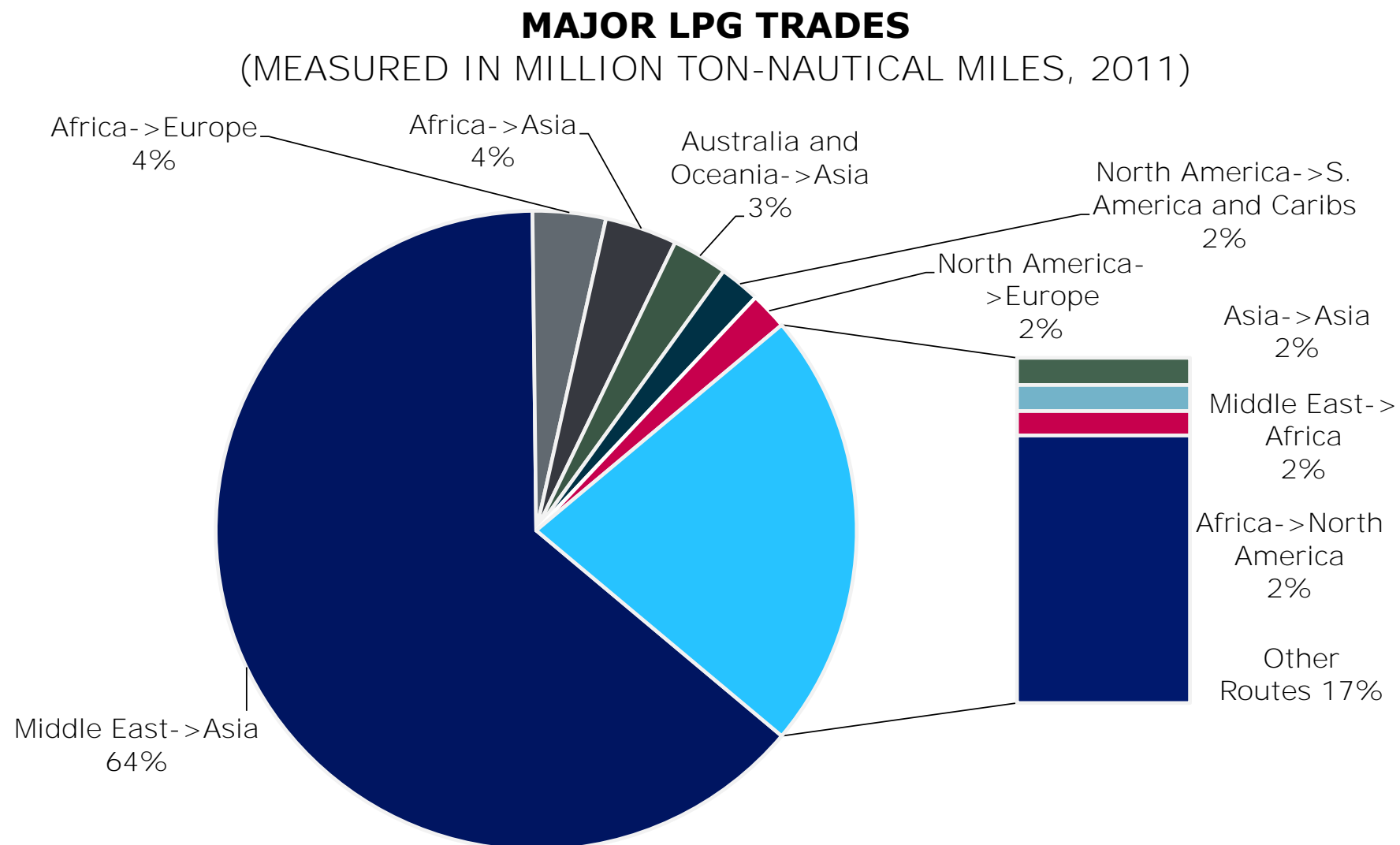
Sources: Reuters EcoWin, Danish Ship Finance

Figure LPG.2



Sources: Clarksons, Danish Ship Finance





Sources: IHS Global Insight, Danish Ship Finance

## SUPPLY AND DEMAND

IN 2011, SEABORNE LPG TRADE INCREASED BY 14% AND DISTANCE-ADJUSTED DEMAND GREW 15% WHILE THE FLEET EXPANDED BY ONLY 1%. IN A SITUATION OF RENEWED CONCERN ABOUT ANOTHER RECESSION, THE LPG MARKET WAS ABLE TO GENERATE REASONABLE EARNINGS IN 2011. THE ABUNDANT SUPPLY OF LPG CARGOES FROM THE MIDDLE EAST AND SUFFICIENT DEMAND FROM ASIA KEPT ESPECIALLY THE LARGER VESSELS OCCUPIED.

### THE LPG TANKER FLEET GREW 1% IN 2011

The LPG tanker fleet grew by a modest 1% in 2011 as 0.6 million Cu. M of new LPG tankers joined the fleet whereas 0.4 million Cu. M. left the fleet (fig. 4). That was the lowest observed fleet growth since 2004, when the LPG tanker fleet expanded by 0.4%. However, fleet growth between the segments varies greatly. The Very Large Gas Carrier (VLGC) segment did not expand at all in 2011 while the Medium Gas Carrier (MGC) fleet grew by 8%.

### FALL IN LPG DELIVERIES

In 2011, 0.6 million Cu. M of new LPG vessels joined the LPG tanker fleet. That is 52% less than delivered in 2010. Total 2011 deliveries is the lowest since 2005 when only 0.4 million Cu. M was delivered (fig. 4). The VLGC segment and the MGC segment made up the bulk of these deliveries in 2011 with 80% of delivered tonnage being in those segments, equally divided between the two.

### FEW CANCELLATIONS AND POSTPONEMENTS IN 2011

As mentioned above, deliveries in 2011 have slowed considerably. Most of the scheduled vessels were delivered in 2011 except for a few small gas carriers that have been postponed by 2–6 months and three orders that were cancelled outright during 2011. In the orderbook as of April 2011, a total of 0.5 million Cu. M was still on order for the remaining part of 2011, with 85% of these deliveries actually being made (fig. 5).

### LOWEST SCRAPPING ACTIVITY SINCE 2006

Shipowners scrapped 0.4 million Cu. M in 2011 (fig. 4). In terms of past scrapping activity this is a five-year low. Actually, there were no demolition sales in the second half of 2011, and only one vessel was scrapped during that period. The lion's share of scrapped vessels in

Figure LPG. 4

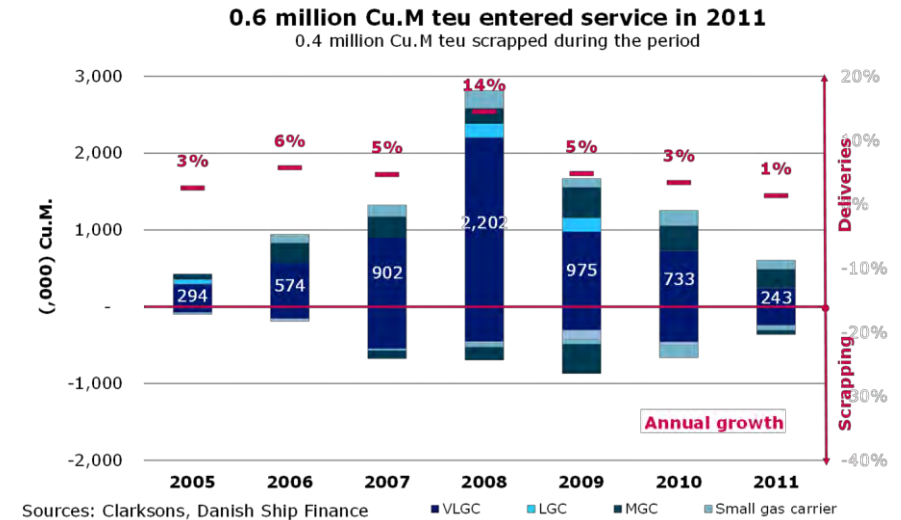
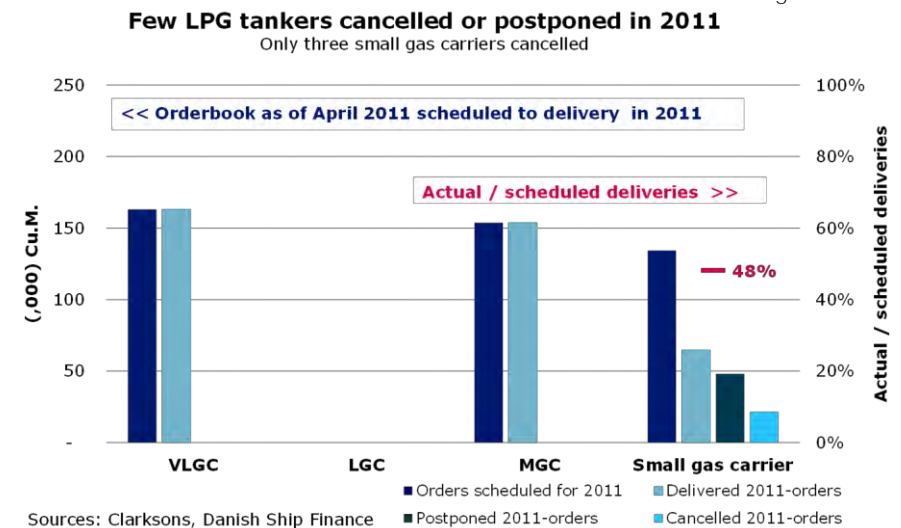


Figure LPG. 5



2011 were VLGCs (66%) with MGCs and small gas carriers, mainly the latter, making up the rest.

#### DISTANCE-ADJUSTED SEABORNE DEMAND INCREASED BY 15% IN 2011

Distance-adjusted LPG tanker demand grew 15% in 2011 (fig. 6). Increased demand, especially in the Far East and on longer distances, was the main driver of the development in seaborne LPG demand. In particular India, Europe, Japan, and China increased import volumes, the latter two adding significant amounts of tonne-miles to the LPG trade as imports travelled longer distances. Total seaborne volumes increased by 14%, whereas longer travel distances added another percentage point to the seaborne LPG demand in 2011.

#### TRANSPORT OF LPG COMMODITIES

Trade in the LPG tanker commodities expanded by 14% in 2011 (fig. 7). Measured in volume terms, the annual increase amounted to approximately 8 million tonnes. However, seaborne LPG trade is still 10% below the historical high of 2008. Trade in LPG gases rose 15% while seaborne petrochemical gases increased by 10% in 2011.

#### PETROCHEMICAL GASES HIT BY THE ECONOMIC TURMOIL

Demand for petrochemical gases increased 600,000 tonnes (10%) in 2011. As the year progressed, demand growth slowed as the economic turmoil, particularly in Europe, impacted the petrochemical industry. In particular, ethylene imports into Europe declined during the second half, both within 2011 and year on year.

#### MIDDLE EAST EXPORTS DRIVING LPG GROWTH

Contrary to other shipping sectors, the LPG trade is partly driven by the available supply. In 2011, LPG supply for exports in the Middle East increased by 16% which brings LPG exports from the Middle East almost back to 2007 levels (fig. 8). LPG exports rose from the Middle East thanks to increased production (Saudi Arabia stepped up crude oil production when Libyan output dropped) and lower refinery demand. Especially Saudi Arabia increased LPG exports in 2011.

#### ASIAN IMPORTS UP 18% IN 2011

Rising supply from the Middle East were met by increased demand from Asia, in particular, driven by strong demand in the Far East (fig. 8). Japanese LPG imports rose 14% (1.5 million tonnes) in 2011 mainly

Figure LPG.6

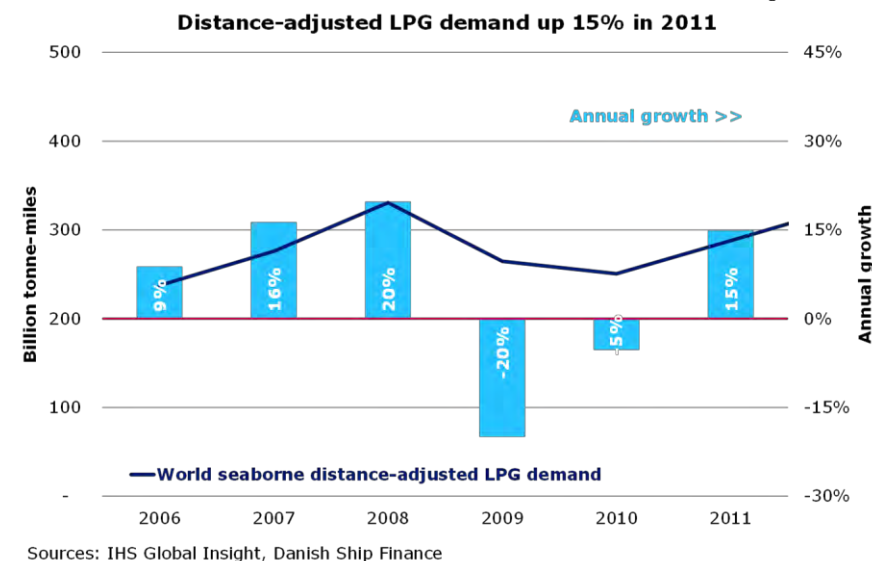
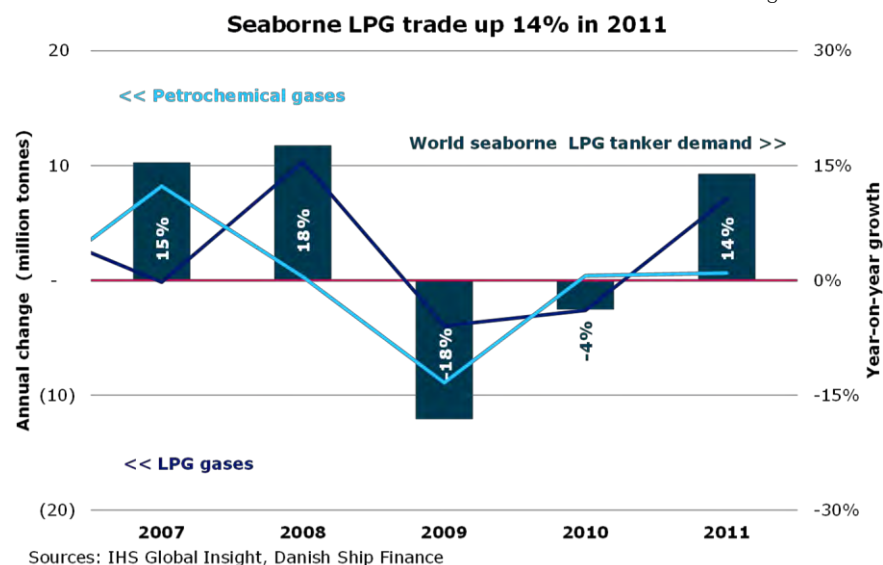


Figure LPG.7



driven by increased propane consumption and stock piling. South Korean imports grew 12% in 2011, touching 5.2 million tonnes.

#### CHINESE LPG IMPORTS SHOWED STRONG GROWTH IN 2011

Chinese LPG imports grew 21% in 2011 to 3.2 million tonnes. Lower international prices and refinery maintenance shutdowns made imports more attractive. On the other hand, increased domestic production and competition from natural gas kept LPG imports from rising even further.

#### INDIAN LPG IMPORTS UP 16% IN 2011

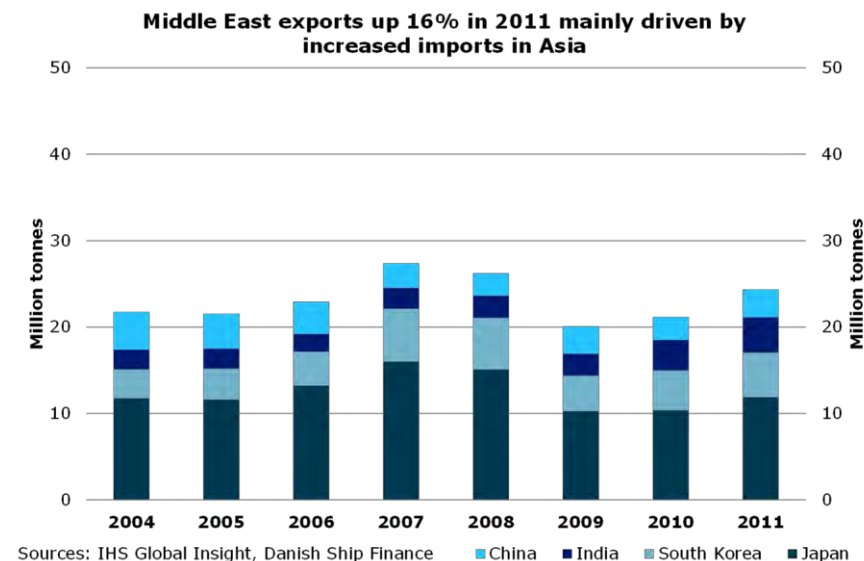
Despite growing domestic LPG production, India imported 4.1 million tonnes in 2011, up 16% on 2010. This increase was largely caused by an increase in demand for auto gas and cooking fuel. However, India contributes very little to distance-adjusted demand as the Middle East provides more than 90% of India's LPG imports.

#### TIGHT SUPPLY/DEMAND BALANCE IN 2011

2011 was an owners' market. The Baltic LPG index reached a new all-time high and is still, on average, 16% higher than the previous highs of 2006. Smaller vessels doing Intra-Europe trades also gained in 2011, but were supported even more by port congestion during the second half of 2011.

During most of 2011, there was an abundant supply of LPG from the Middle East to keep the larger segments well employed and there was a sufficient pull from the Asian economies, the Far East countries in particular being large importers. Overall, the larger vessels performed the best in 2011.

Figure LPG.8





## CONTRACTING AND SHIPVALUES

A SURGE IN FREIGHT RATES WAS NOT ENOUGH TO RENEW SHIPOWNERS' APPETITE FOR NEW TONNAGE IN 2011. NEWBUILDING PRICES WERE ON AVERAGE 1% HIGHER THAN IN 2010. SECONDHAND PRICES WERE UP SLIGHTLY IN 2011.

### CONTRACTING ACTIVITY DECLINED IN 2011

The surge in freight rates did not encourage shipowners to place many new orders in 2011. One explanation could be the lesson learned from the weak markets of 2009 and 2010 when freight rates suffered due to an oversupply of tonnage. A total of 560,000 Cu. M (17 vessels) was placed in 2011 whereas 800,000 Cu. M was contracted in 2010, a decline of 29% (fig. 9). Most new contracts were in the VLGC segment which accounted for 74% of all orders placed in 2011. In terms of historical contracting activity this is as low as in 2002 and 2009, when 400,000 Cu. M and 100,000 Cu. M respectively were contracted.

### AVERAGE DELIVERY TIMES OF SLIGHTLY OVER TWO YEARS

Scheduled delivery times for LPG tankers were more than two years in 2011, slightly down compared to 2010, the lowest observation in eight years (fig. 9). In particular, delivery times for small gas carriers dropped significantly in 2011. The average delivery time for small gas carriers is now down to about two years.

### STABLE NEWBUILDING PRICES IN 2011

Spare yard capacity and shrinking orderbooks kept newbuilding prices subdued in 2011. Newbuilding prices were almost unchanged for the year and ended with a minor increase of 1% in 2011 (fig. 10). Newbuilding prices are on average only slightly higher than the historical low of 2004.

### SECONDHAND PRICES SLIGHTLY UP IN 2011

The secondhand market experienced a slight improvement in 2011 as market sentiments improved. In total, secondhand prices were up by 4% in 2011 and secondhand prices are, on average, still 34% lower than the historical high of 2006 (fig. 10). The larger vessels increased the most in 2011, while the smaller segments were fairly stable.

Figure LPG.9

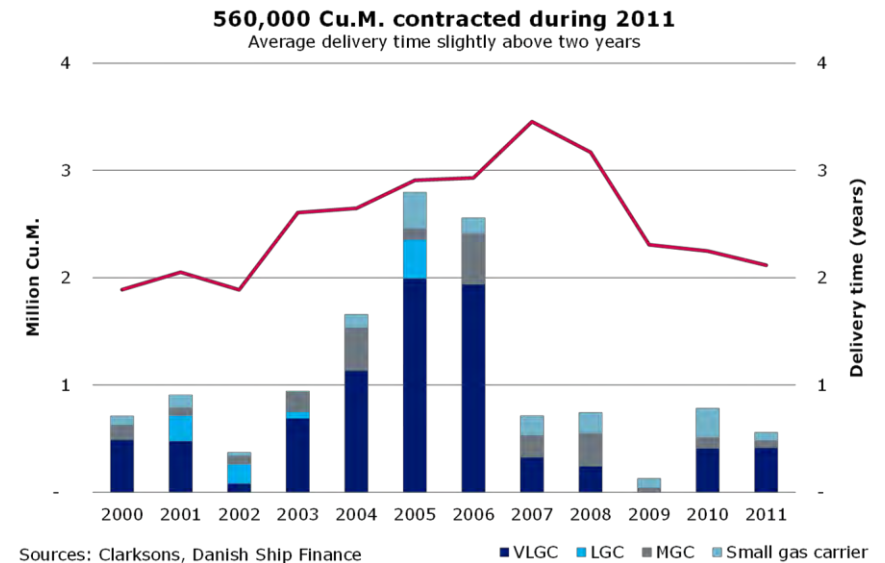
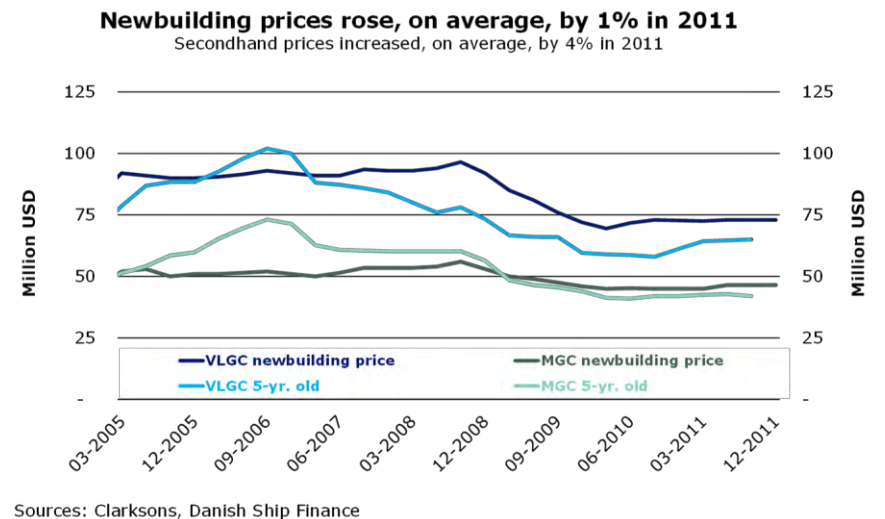


Figure LPG.10



## OUTLOOK

THE OUTLOOK FOR LPG TANKERS IS PROMISING. RATES WILL BE DRIVEN BY SEABORNE DEMAND GROWTH WHICH IS PROJECTED TO SURPASS FLEET GROWTH. THE LPG TANKER FLEET IS EXPECTED TO INCREASE BY 1% IN 2012 AND DISTANCE-ADJUSTED DEMAND IS EXPECTED TO GROW BY 13%. WE EXPECT FREIGHT RATES TO IMPROVE IN THE MEDIUM AND LONG TERM.

### ORDERBOOK / FLEET RATIO AT 9%

By January 2012, the fleet consisted of 18.1 million Cu. M and the global orderbook stood at 1.6 million Cu. M, resulting in an orderbook fleet ratio of 9% (fig. 11). However, the orderbook / fleet ratio varies widely between the segments. The orderbook / fleet ratio is 16% for small gas carriers, 10% for VLGC's while for MGC it is 4%. In the Large Gas Carrier (LGC) segment, no new vessels are currently on order. The orderbook / fleet ratio of 9% is at its lowest since 2000, albeit this time with a larger nominal orderbook.

### 0.6 MILLION CU. M SCHEDULED FOR DELIVERY IN 2012

Approximately 40% of the orderbook is scheduled for delivery in 2012 (fig.12). This is slightly lower than the capacity delivered in 2011, and we have to go as far back as 2005 to find an equally low inflow of capacity. This capacity corresponds to a fleet growth of 3% before scrapping. We do not expect postponement or cancellations to have a very big impact in either 2012 or 2013.

### HUGE SCRAPPING POTENTIAL IN THE LPG TANKER FLEET

The LPG tanker fleet has a huge scrapping potential as 19% of the fleet is older than 20 years and 5% is older than 25 years. Especially, the smaller segments (MGC and small gas carriers) have a large scrapping potential as approximately 10% of the fleet is older than 25 years and more than 20% is older than 20 years. The scrapping potential among the larger segments is not as high, but 18% of the fleet is older than 20 years. However, we do not expect to see scrapping activity to skyrocket in the near future as improved market sentiments will restrain shipowners from increasing scrapping activity by too much.

Figure LPG.11

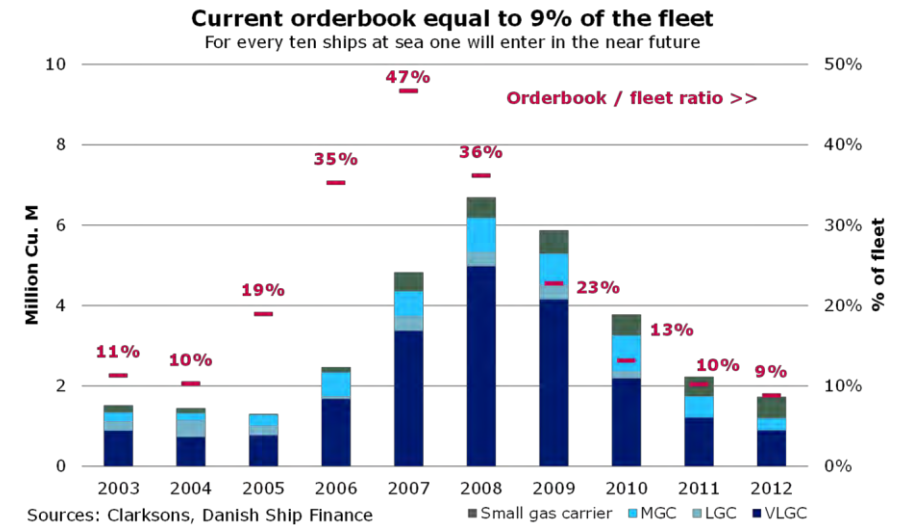
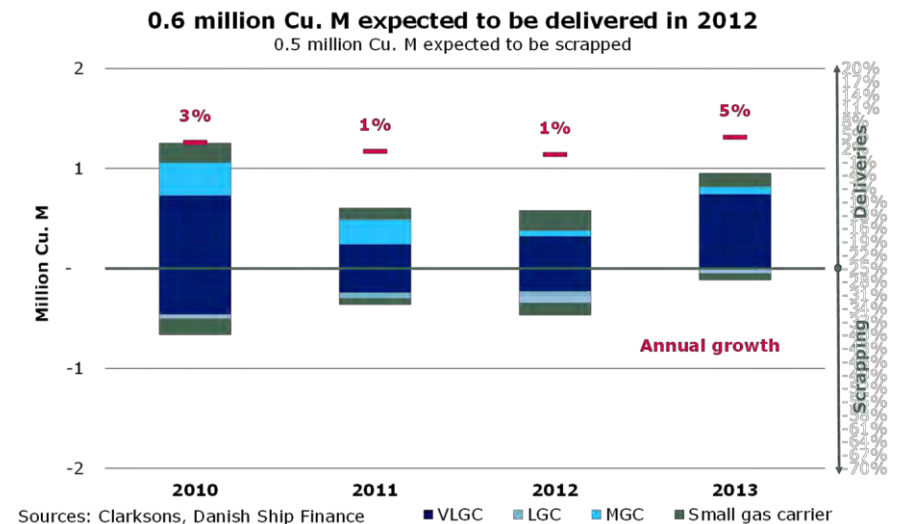


Figure LPG.12



### LIMITED SCRAPPING IN 2012

If all vessels older than 30 years (average scrap age in 2011) are to leave the fleet, 0.5 Cu. M (3% of the fleet) will be scrapped in 2012 (fig. 12). That is 30% more than the capacity scrapped in 2011. In 2012, scrapping activity will most likely be in the VLGC and small gas carrier segments as they have the oldest age profiles.

### LIMITED FLEET GROWTH IN 2012

Taking expected scrapping and the orders scheduled for delivery in 2012 into account, we expect total net additions to the fleet to be about 0.1 million Cu. M (1% of the fleet). For 2013, the LPG fleet is expected to expand by another 0.8 million Cu. M. If these net additions are fairly accurate this corresponds to fleet growth of 1% in 2012 and fleet growth of 5% in 2013 (fig. 12). However, this scenario assumes that no new contracts will be placed for delivery in 2012 or 2013. One might suspect that owners will try to take delivery sooner than originally planned if market sentiments improve by more than we anticipate. This might be feasible if shipyards continue to accept postponement of delivery in other ship segments. One might consider whether owners will take advantage of the improved market sentiments and therefore start ordering new vessels in 2012 and 2013. Clearly this is a possibility but we do expect the memories of the weak markets in 2009 and 2010 to restrain some owners' appetite for new orders in the nearby future.

### DISTANCE-ADJUSTED LPG DEMAND UP 13% IN 2012

In 2012, aggregated distance-adjusted LPG tanker demand is expected to increase by 13% (fig. 13). The higher distance-adjusted demand is expected to come from Asian imports sourced from the Middle East. Especially, the Far East is expected to exhibit strong growth figures going forward. Distance-adjusted Asian imports are expected to increase by 16% in 2012. The increase in distance-adjusted Asian demand accounts for 82% of the total increase in distance-adjusted demand in 2012.

### SEABORNE LPG TANKER VOLUMES UP 12% IN 2012

Seaborne LPG trade volumes are expected to stay strong during 2012 and 2013. Total LPG trade volumes are expected to grow by 12% and 11% in 2012 and 2013 respectively (fig. 14). Asia is projected to be the largest and fastest growing import region in the coming years. Japan is expected to be the single largest importer measured in tonnes whereas

Figure LPG.13

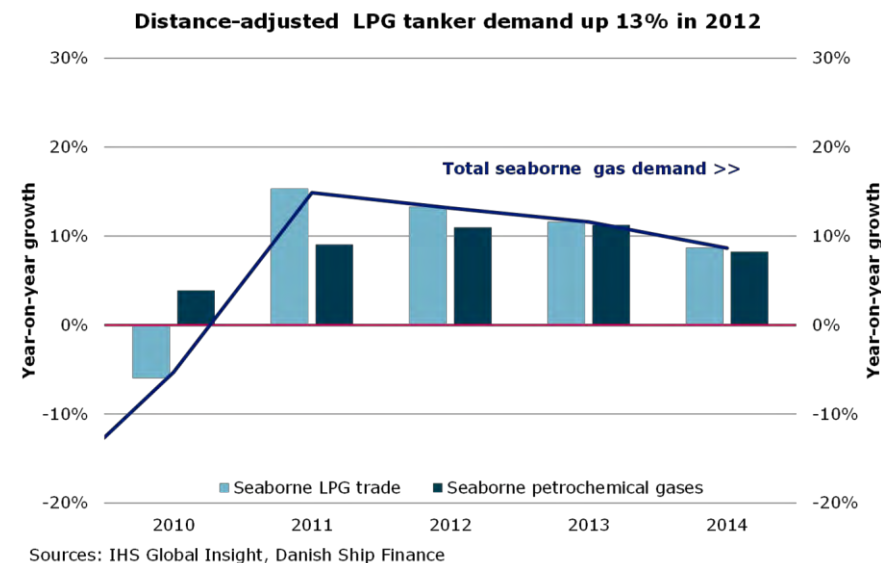
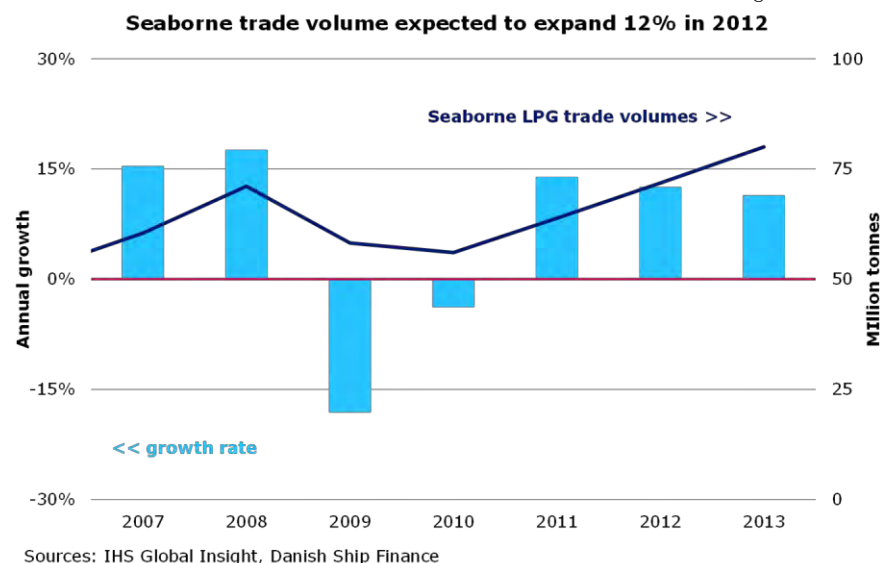


Figure LPG.14



China and Taiwan are competing to be the fastest growing importer in the next few years (fig. 15).

#### LPG SUPPLY EXPECTED TO BE SOURCED FROM THE MIDDLE EAST

The larger LPG volumes are expected to originate from the Middle East. We expect the Middle East will increase export volumes by 15% (6 million tonnes) in 2012 (fig. 15). Since LPG is a by-product of oil distillation and natural gas activities, the production of LPG is highly dependent on these two factors. The Middle East is expected to increase refinery processes and natural gas activity in 2012 and beyond, thereby, increasing LPG production in the region and increasing potential LPG exports (fig. 15). However, Middle East exports might be a disappointment if the extra LPG supply is used for domestic upstream facilities instead of being exported to other regions.

#### HEALTH AND ENVIRONMENTAL ISSUES COULD BOLSTER LPG DEMAND

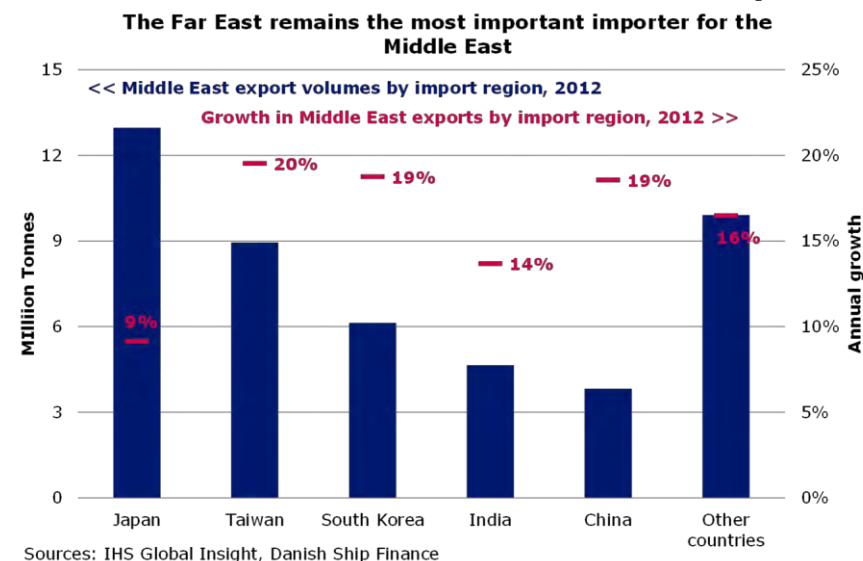
Other than being a feedstock for the petrochemical industry, future demand for LPG is expected to come from environmentally-friendly alternatives, such as LPG powered vehicles. For example, both China and South Korea have adopted such a strategy for reducing smog in their major cities, and India is expected to do the same in the near future.

Additionally, in India, LPG is increasingly used for cooking and heating as it has fewer adverse health effects than wood firing in houses. Currently, the Indian government is considering granting LPG subsidies to every household in the country which would certainly bolster LPG demand. Both health and environmental factors will provide great upside potential for future LPG demand.

#### RATES SET TO REMAIN FIRM IN 2012

The current outlook for LPG tanker demand seems likely to support higher freight rates in 2012. A mix of several factors, including growing appetite for LPG in the Asian economies, will lift imports. This will provide an impetus for LPG tanker demand. In addition, a situation of abundant LPG exports from the Middle East will keep vessels occupied in the region, supporting freight rates. In spite of all the talk about difficult conditions for the global economy, market sentiment is expected to remain firm in the medium and long term, largely on the back of tight vessel supply and high demand. However, the larger vessels are expected to see the highest increases in 2012.

Figure LPG.15





DRY BULK

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DANMARKS  
SKIBSKREDIT

# DRY BULK

CONDITIONS IN THE DRY BULK MARKET ARE DETERIORATING. THE GROWING OVERSUPPLY OF TONNAGE IS KEEPING RATES DOWN.

## FREIGHT RATES

THE YEAR 2012 BEGAN WITH DECLINING FREIGHT RATES. IN FEBRUARY 2012 THE BALTIC DRY STOOD AT INDEX 703, DOWN SOME 60% FROM A TEMPORARY SPIKE IN THE SECOND HALF OF 2011.

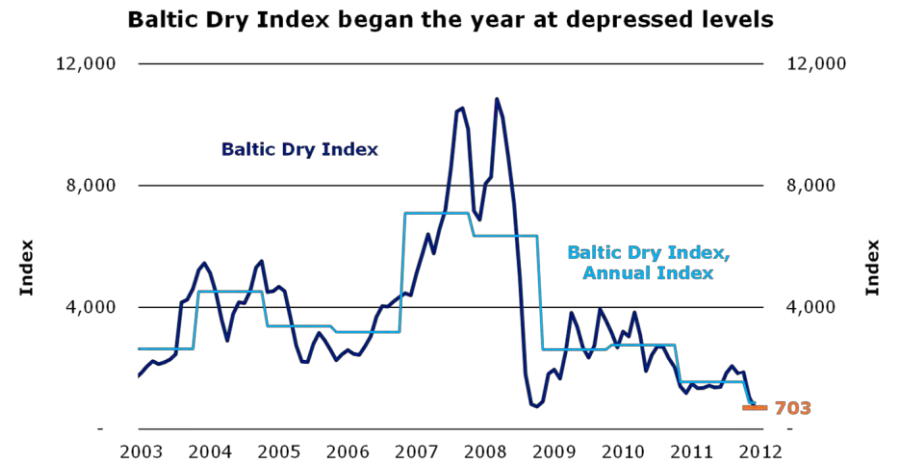
### THE BALTIC DRY INDEX STARTED THE YEAR AT DEPRESSED LEVELS

In 2011, the Baltic Dry Index fell 44% from an annual average of 2,761 in 2010 to 1,548 in 2011. The second half of 2011 saw a temporary spike in the index as Chinese steel producers stockpiled iron ore. In 2012, the Baltic Dry Index began the year with a sharp decline. By the end of February 2012, the daily observations of the index had fallen below 700. The monthly average stood at 703, down 40% year-on-year. Such levels have not been seen since late 2008 when the credit crisis was at its worst. By then, rates dropped because demand more or less evaporated overnight as the credit crisis took its toll on the world economy. Today, however, the low freight rates are mainly weighed down by a large supply of new Dry Bulk vessels.

### FIXTURE PERIODS DROP WHILE CHARTER RATES REMAIN DEPRESSED

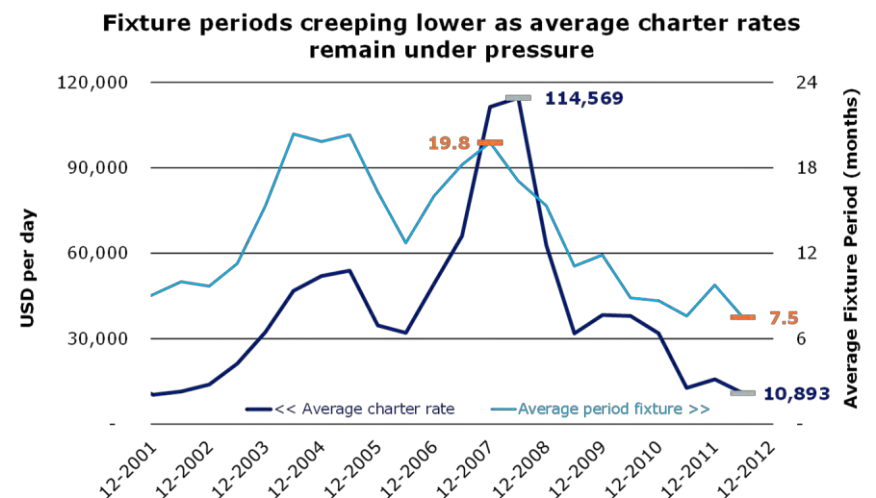
In 2011, average charter rates dropped 60% from USD 35,000 per day in 2010 to USD 14,000 per day in 2011. The second half of 2011 saw average charter rates increasing slightly to USD 15,700 per day but fell back to USD 10,900 per day in February 2012. Operators went for shorter charter periods in the first fixings of 2012 as charter rates fell. The average fixture period stood at 7.5 months in January 2012. This was down from almost 9 months in 2011 (fig. 2). Altogether the current market conditions will eventually force more capacity out of the market.

Figure DB.1



Sources: Reuters EcoWin, Danish Ship Finance

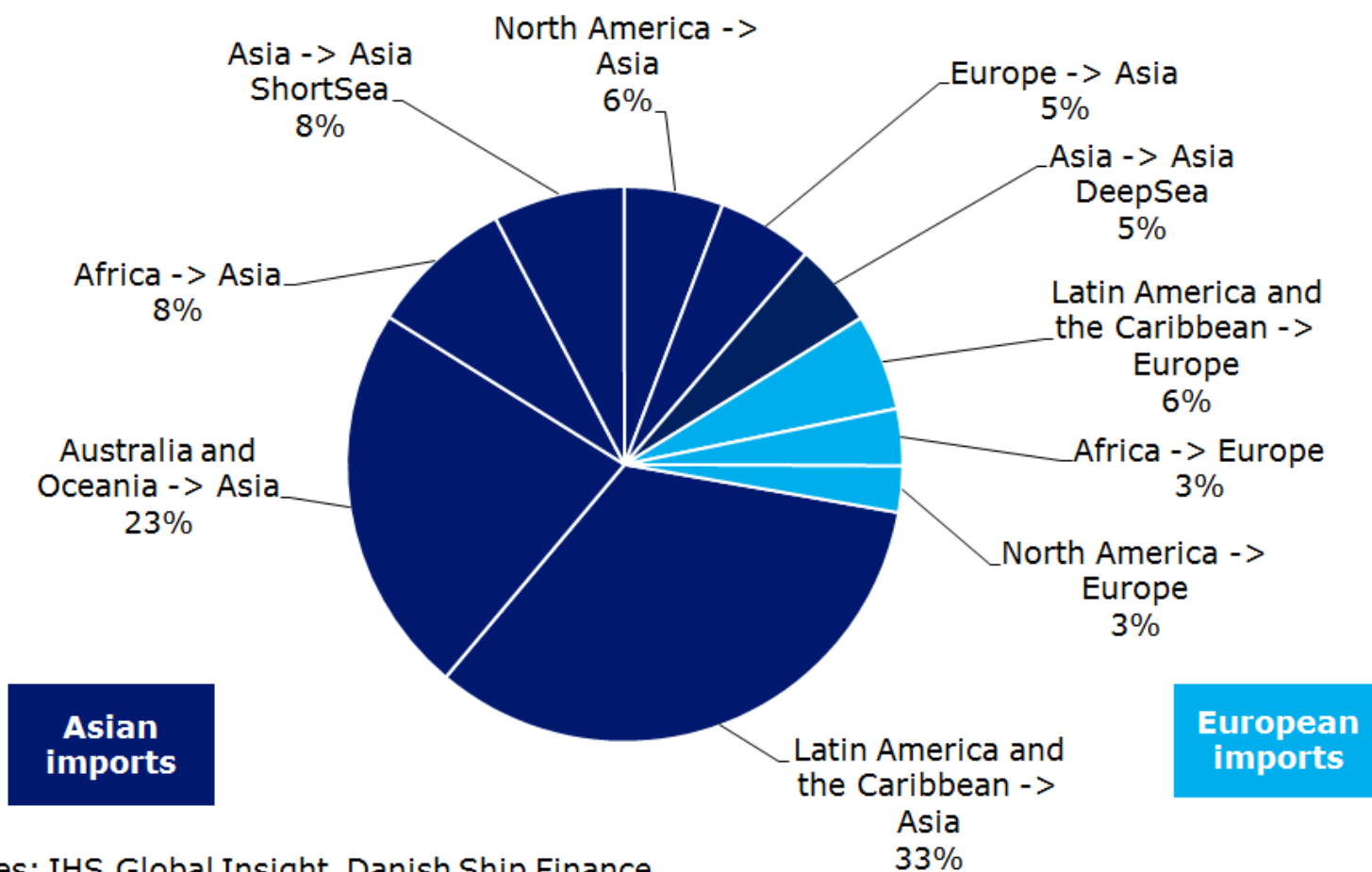
Figure DB.2



Sources: Clarksons, Danish Ship Finance

# ASIAN DEMAND DOMINATES CAPE SIZE DEMAND

## TOP 10 FRONT-HAUL CAPE SIZE ROUTES



Sources: IHS Global Insight, Danish Ship Finance

## SUPPLY AND DEMAND

DRY BULK CAPACITY INCREASED BY 14% IN 2011 WHILE DISTANCE-ADJUSTED DEMAND GREW 8%. HEAVY POSTPONEMENT AND SCRAPPING ACTIVITY HELPED CURB FLEET GROWTH.

### 98 MILLION DWT ADDED IN 2011

In 2011, 96 million dwt of new Dry Bulk vessels joined the fleet. Another 2 million dwt was converted from Tankers to Dry Bulk vessels. In total 98 million dwt was added to the Dry Bulk fleet during 2011 (85 million dwt in 2010), an increase of 16% from 2010. The Capesize segment accounted for the largest share of delivered tonnage. 48% of delivered tonnage – or 248 vessels - were Capesizes (fig. 4).

### A RECORD 23 MILLION DWT WAS SCRAPPED DURING 2011

Scrapping activity took off during 2011 driven by continuously low rates, shorter fixing periods and the astonishing influx of new tonnage. A total of 23 million dwt was scrapped during 2011 (7 million dwt in 2010). That is, 4% of the entire fleet was scrapped in 2011. Scrapping activity was the highest in the Capesize and Handysize segments with 5% and 7% of the respective fleets being scrapped (fig. 4).

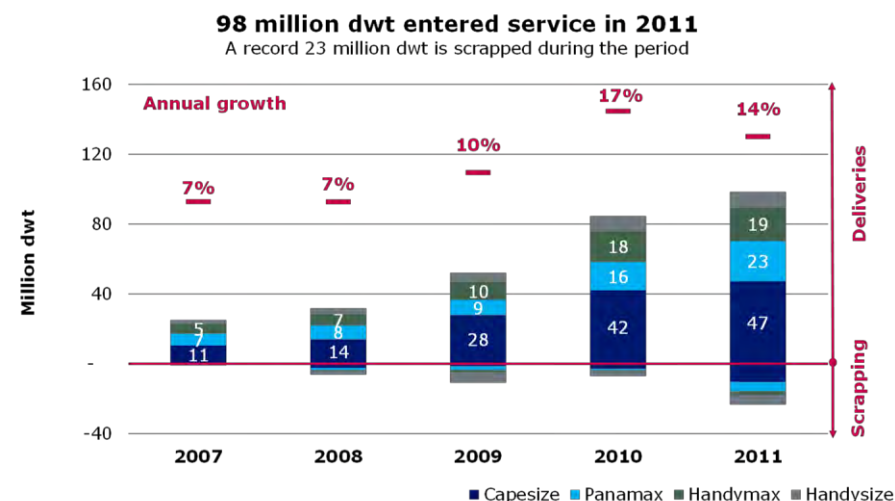
### 55% OF SCHEDULED 2011 DELIVERIES BUILT IN 2011

Many owners scrambled to either cancel or postpone their orders in 2011. In the orderbook as of April 2011 a total of 102 million dwt was still on order for delivery in 2011. By January 2012 a total of 14 million dwt of orders had been cancelled. Another 29 million dwt had had their scheduled delivery postponed into 2012 or beyond. Only 56 million dwt of the April 2011-orderbook scheduled for delivery in 2011 actually reached the oceans in 2011. That is a delivery performance of only 55% since April 2011 (fig. 5).

### DRY BULK FLEET EXPANDING BY 14% IN 2011

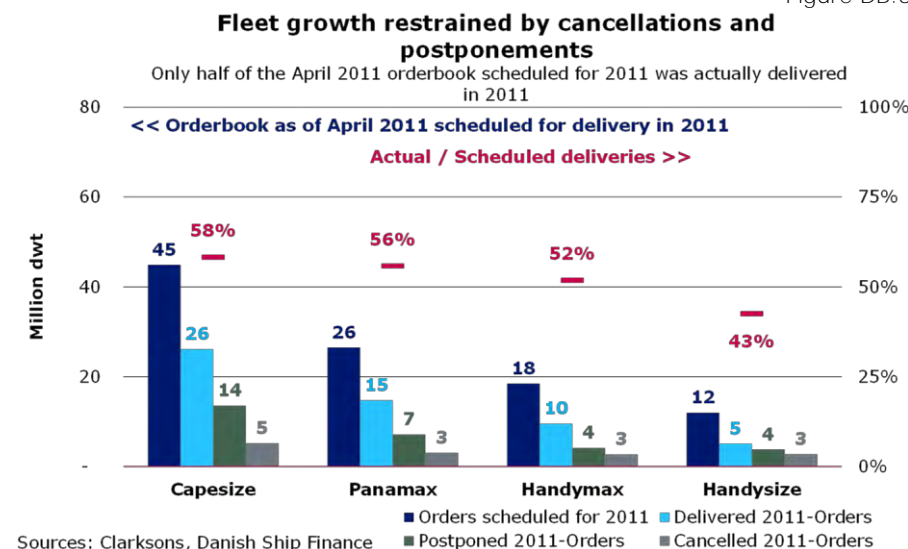
The remarkable levels of postponement and cancellations in combination with the record high scrapping activity helped to curb fleet growth despite the astonishing amount of new tonnage reaching the seas. The fleet grew 14% in 2011 (75 million dwt). That is down from 17% fleet growth in 2010 (78 million dwt), but still more than what was absorbed by demand growth during the same period. By end of December 2011, the total Dry Bulk fleet amounted to 611 million dwt – up by more than 50% since the eve of the financial crisis in 2008.

Figure DB.4



Sources: Clarksons, Danish Ship Finance

Figure DB.5



Sources: Clarksons, Danish Ship Finance



Figure DB.6

### SEABORNE DRY BULK TRADE GREW 7% IN 2011

Trade in seaborne Dry Bulk commodities expanded by 7% in 2011. Measured by volume, this was an increase of 247 million tonnes, or slightly less than the growth rate of 2010 when trade expanded by 9% (287 million tonnes). Growth at a rate of 7% in 2011 seems to indicate a return to the historical growth trend following the financial crisis (fig. 6).

### CHINA CONTINUES TO DIVERSIFY SUPPLIERS OF DRY BULK COMMODITIES

Chinese importers are increasingly diversifying their sources of commodities. This has led to heavy investments in production facilities and infrastructure all over the world, especially in other developing countries. These investments have helped to increase the share of Chinese imports originating from other developing countries. Latin America and the Caribbean saw 15% growth in their exports to China. Africa has also benefitted from the Chinese quest for raw materials. African exports to China were up by 15% in 2011, mainly driven by exports from counties in southern and western Africa. Russian and Ukrainian exports helped to pull 13% growth in European exports to China (fig. 7).

### IRON ORE TRADE EXPANDED 8% IN 2011

Iron ore trade expanded 8% (99 million tonnes) in 2011 down from 11% growth (126 million tonnes) in 2010 (fig. 6). With a total of 1,373 million tonnes of iron ore transported by sea in 2011, iron ore remains the largest seaborne commodity and the largest contributor to total seaborne trade growth in 2011. Growth was mainly driven by Chinese demand. China remains the single most important iron ore importer, accounting for 74% of the entire growth in the iron ore trade in 2011. The corresponding supply of iron ore to feed world demand was mainly driven by an 11% increase (37 million tonnes) in Brazilian iron ore exports followed by Australian exports which was up by 6% (26 million tonnes) in 2011.

### TRADE IN COAL AND COKE INCREASED 10% IN 2011

Trade in coal and coke grew by 10% (92 million tonnes) in 2011 (fig. 6). This was slightly higher than the growth in 2010 (80 million tonnes) and mainly driven by demand from Asian countries. Particularly India has increased its imports of coal and coke. Indian imports rose by 25% (26 million tonnes) in 2011. But also Japanese

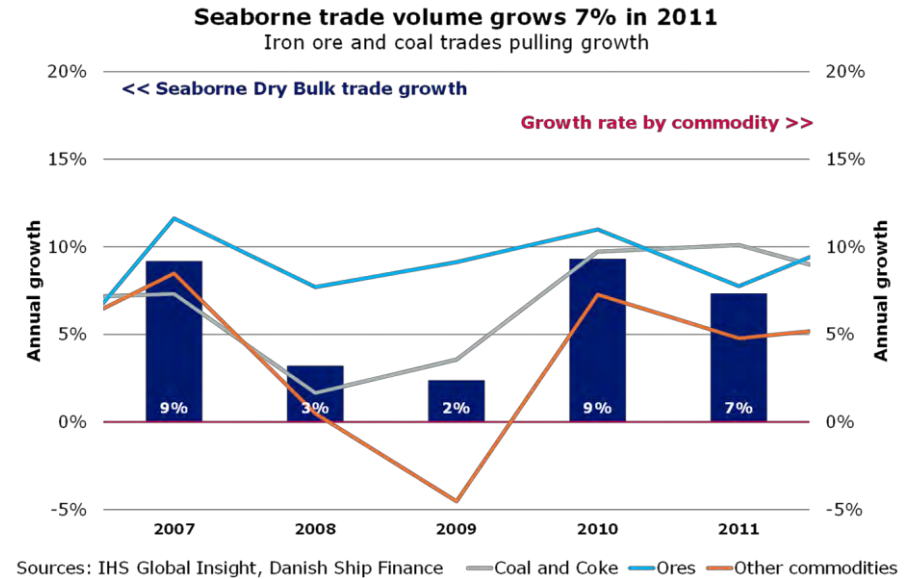
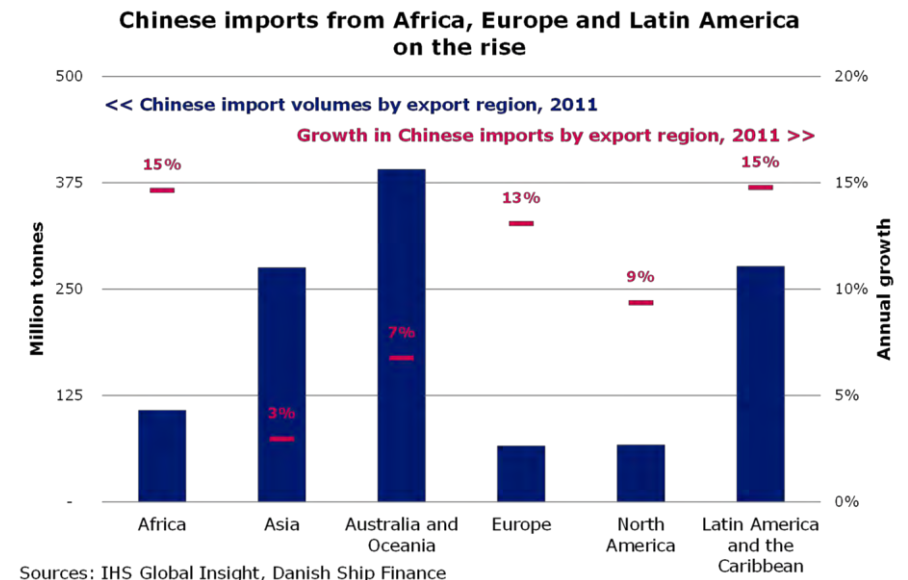


Figure DB.7



imports of steam coal are up again following the devastating tsunami in early 2011. The added demand was mainly fed by an increase in supplies from Indonesia. Indonesian exports of coal and coke were up 14% in 2011 (37 million tonnes). Weather-related disruptions to Australian production of coal and coke in early 2011 meant that exports from Australia grew by a modest 4% (11 million tonnes) in 2011.

#### AVERAGE TRADING DISTANCES INCREASED IN 2011

The fact that a larger share of iron ore to Asia was supplied by Brazil meant that iron ore imports on average were carried over longer distances. On the other hand, coal trading from Indonesia to India was the main driver of coal trades in 2011. This meant that coal on average travelled shorter distances in 2011. Taking changes in trade patterns into account, the average trading distances increased in 2011. Distance-adjusted front-haul demand grew 8% in 2011 compared to 10% in 2010. China led the distance-adjusted front-haul demand growth with an increase of 11% in 2011. European and Japanese distance-adjusted front-haul demand increased only 5% in 2011 (fig. 8).

#### GROWING PORT CONGESTION IN THE SECOND HALF OF 2011

Port congestion is once again on the rise. The number of vessels at anchorage off the main Dry Bulk ports has increased since the beginning of May 2011. Congestion problems deteriorated heavily from November and into January 2012 partly because of weather-related disruptions. The other major explanation for the increased congestion is simply the fact that more vessels are scrambling for the same trades. Most of the vessels waiting are located off Chinese ports, where a general lack of port capacity is making matters worse. At January 2012, approximately 14% of the Capesize fleet was waiting at anchor at terminals around the world, and approximately 8% of the total Dry Bulk fleet was occupied by port congestion (fig. 9).

#### IMBALANCE BETWEEN SUPPLY AND DEMAND WORSENING

To sum up, the imbalance between supply and demand for Dry Bulk tonnage continued to deteriorate in 2011. This imbalance is the primary factor pulling rates downwards. Lately, a high degree of port congestion has cushioned rates to some extent.

Figure DB.8

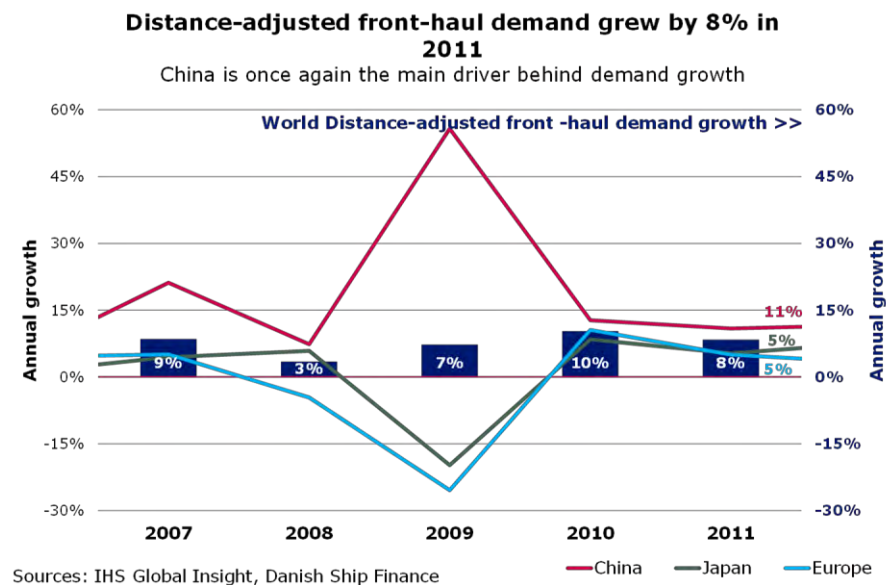
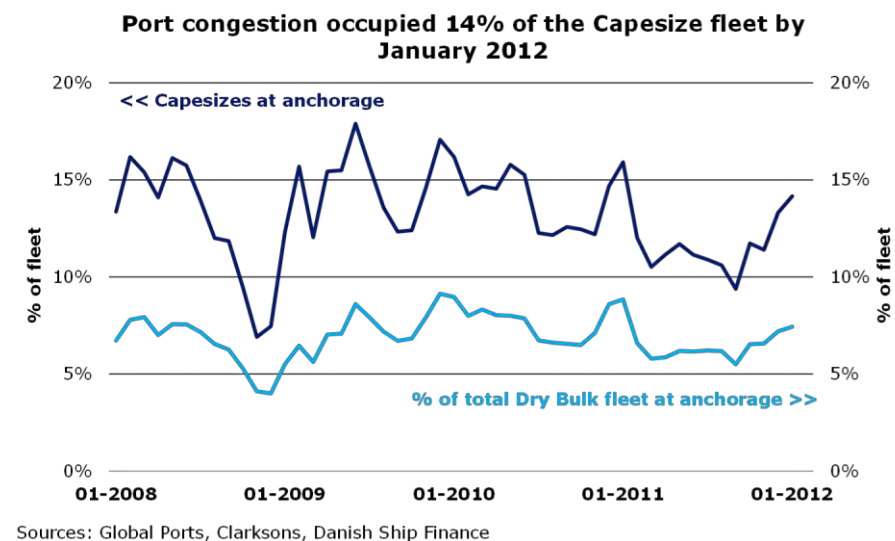


Figure DB.9



## CONTRACTING AND SHIPVALUES

THE DETERIORATING OUTLOOK FOR THE DRY BULK MARKET HAS PUSHED DOWN SHIP VALUESSIGNIFICANTLY. SHIPOWNERS ARE FACING THE HARD TRUTHS AND ARE CONTRACTING FEWER VESSELS.

### CONTRACTING DROPPED SIGNIFICANTLY IN 2011

A small upswing in freight rates in the second half of 2009 and the first half of 2010 lured shipowners to order a significant amount of new tonnage, 85 million dwt in all. Seen in retrospect, however, the appetite for new tonnage in 2010 was premature. Facing continuously low rates and large overcapacity, shipowners have significantly reduced their appetite for new tonnage in 2011. Only 25 million dwt was contracted during 2011. This is the lowest level of contracting seen since 2002. Contracts were directed relatively more in favour of Panamax and Handymax vessels in 2011 than previously (fig. 10).

### AVERAGE DELIVERY TIME REMAINS LOW

The scheduled average delivery time was slightly above two years in 2011, unchanged from 2010. The low level of average delivery time is the result of an increase in spare capacity at yards (fig. 10).

### NEWBUILDING PRICES DROPPED 13% DURING 2011

The declining orderbook and the prospects of spare capacity at yards in the near future have pushed newbuilding prices lower. The average newbuilding price on a Dry Bulk vessel was down 13% year-on-year in January 2012. The decline in newbuilding prices was tilted more towards smaller Panamax vessels as well as Handymax vessels which dropped some 16-18% year-on-year in January. Capesize vessels dropped 13% on average while Handysize vessels saw declines of some 10% (fig. 11).

### SECONDHAND PRICES FELL 16% DURING 2011

The low rates and the declining newbuilding prices have triggered a drop in the secondhand market. The average price for a 5-year Dry Bulk vessel stood at USD 500 per dwt in January. That is down 16% year-on-year (fig. 11). Generally, older vessels have dropped more than younger vessels. And larger vessels have dropped more than smaller vessels.

Figure DB.10

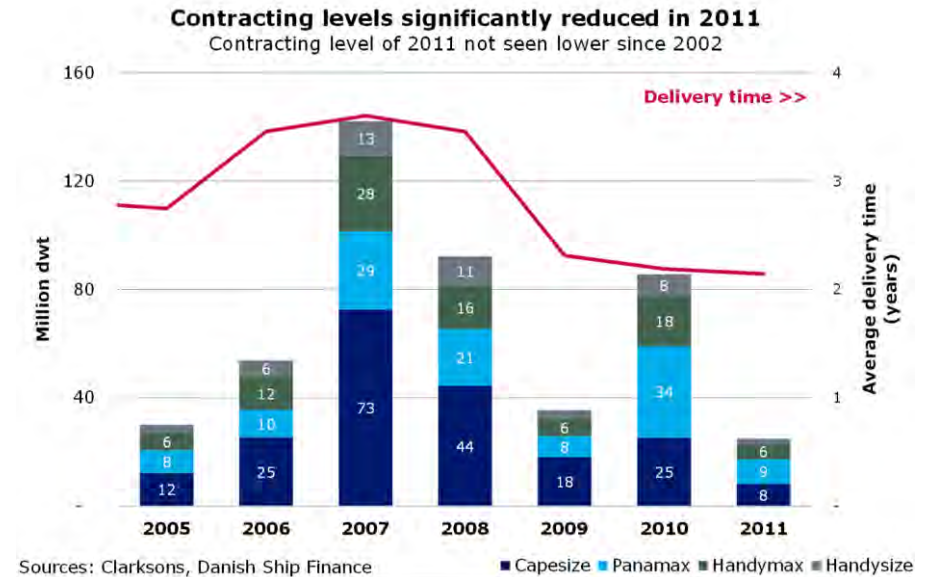
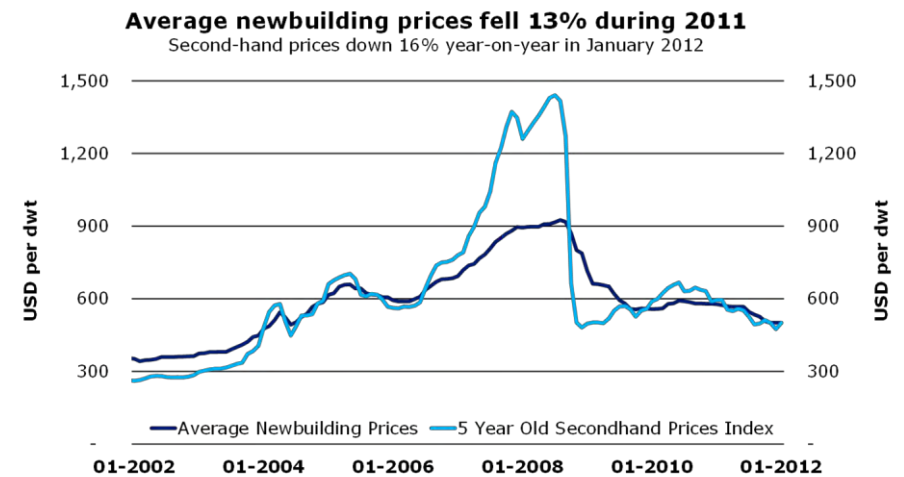


Figure DB.11



## OUTLOOK

FREIGHT RATES WILL REMAIN LOW IN THE SHORT AND MEDIUM TERM. RATES WILL CONTINUE TO BE SUPPLY-DRIVEN AS FLEET GROWTH SURPASSES SEABORNE TRADE GROWTH. THE DRY BULK FLEET IS ESTIMATED TO INCREASE BY 10% IN 2012 AND DISTANCE-ADJUSTED DRY BULK TRADE IS EXPECTED TO INCREASE BY 9%. HEAVY SCRAPPING ACTIVITY NEEDED TO CURB FLEET GROWTH.

### ONE NEW VESSEL SCHEDULED FOR EVERY THREE AT SEA

By January 2012, the aggregate orderbook contained a total of 201 million dwt. With a current fleet of 611 million dwt, a new vessel is scheduled for every three vessels at sea. Most of the orderbook by far is scheduled to enter the fleet over the next two years (fig. 12).

### 139 MILLION DWT SCHEDULED FOR DELIVERY IN 2012

69% (139 million dwt) of the orderbook is scheduled to enter the fleet in 2012. If no vessels were scrapped during 2012, this would result in fleet growth of 23% in 2012. 43% (60 million dwt) of the deliveries scheduled for 2012 are Capesize vessels and another 29% are Panamax vessels. The remainder is mainly Handymax vessels. Assuming that all vessels are delivered the Capesize fleet will grow by 24% before scrapping in 2012, the Panamax fleet will grow 27% and the Handymax and Handysize fleets will grow 19% and 16% respectively.

### SCRAPPING ACTIVITY EXPECTED TO REMAIN HIGH IN 2012

With the prospects of persistently low rates for at least another year and taking the large oversupply of Dry Bulk capacity into account, we expect the current high level of scrapping will continue throughout 2012. Having analysed the age structure of the current fleet as well as the age structure of the vessels demolished in previous years, we do not find it unreasonable to assume that scrapping can go as high as 26 million dwt in 2012. This would be the equivalent of 4% of the current fleet. Obviously this estimation is subject to uncertainty, and if vessels are scrapped at an older age than previously, less tonnage will be scrapped than we estimate. However, the price of scrap metal is currently relatively high by historical standards and this may motivate shipowners to scrap relatively young vessels in 2012 (fig. 13).

Figure DB.12

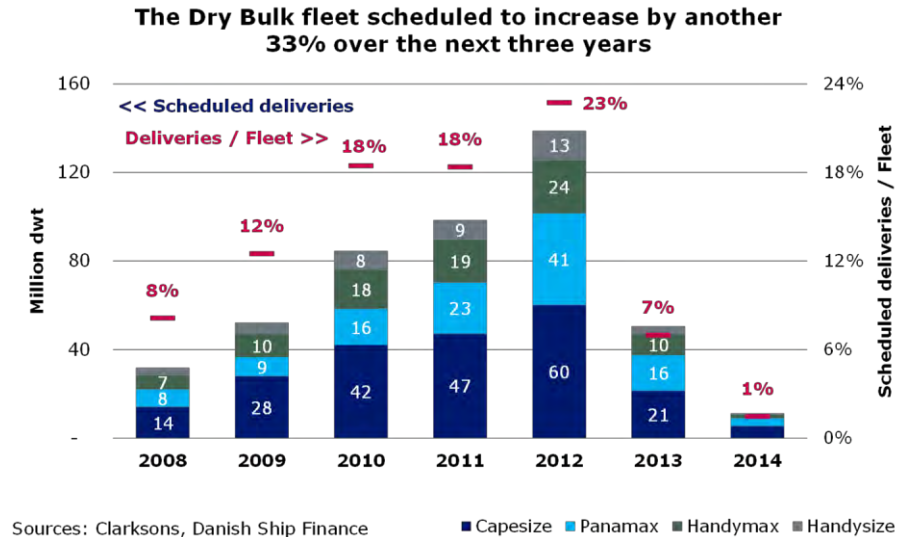
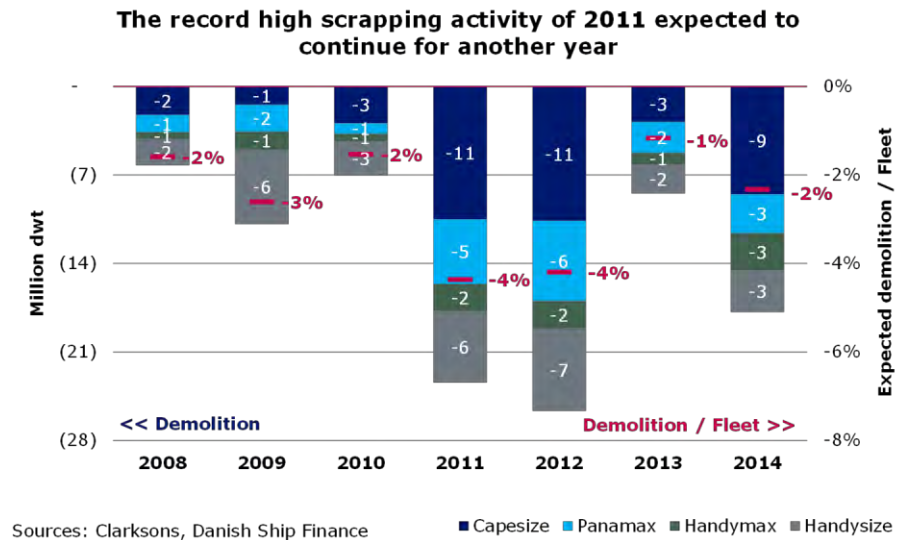


Figure DB.13





### CANCELLATIONS MAY REDUCE ORDERBOOK IN 2012

As noted earlier, cancellations reduced the orderbook by some 13% in 2011. Since current market conditions are not expected to improve the financial positions of shipowners in general, we assume that cancellations will continue to curtail the orderbook in 2012 and 2013. Assuming the same cancellation ratio in 2012 and 2013 as seen in 2011, cancellations will reduce deliveries by some 17 million dwt in 2012 and by 6 million dwt in 2013 (fig. 14).

### POSTPONEMENTS WILL SMOOTH FLEET GROWTH OVER THE COMING YEARS

Assuming the postponement activity of 2011 will continue in 2012 and 2013, we estimate that some 38 million dwt will be postponed from 2012 into 2013 and 25 million dwt will be postponed from 2013 into 2014. This will cushion the drop in scheduled deliveries and thereby smooth out fleet growth over the next couple of years (fig. 14).

### 10% FLEET GROWTH IN 2012

Taking the estimated levels of scrapping, postponements and cancellations into account we estimate that the net fleet will increase 10% (84 million dwt) in 2012 and 7% (56 million dwt) in 2013. This scenario assumes no new contracting taking place with scheduled delivery before the end of 2013 (fig. 14).

### SEABORNE TRADE VOLUMES EXPECTED TO EXPAND 8% IN 2012

Seaborne Dry Bulk trade is expected to remain strong in 2012 and 2013. Total Dry Bulk trade is expected to expand by 8% and 9% in 2012 and 2013 respectively. The main driver behind the growth is once again the iron ore and coal trades, while trade in other commodities is expected to decline in 2012. China is projected to be the largest and fastest growing importer in the years ahead. Taking the current level of uncertainty in the global economy into account, trade growth may fall short of the current forecast if uncertainty transforms into an economic slowdown.

### CHINESE DRY BULK IMPORTS EXPECTED TO INCREASE 11% IN 2012

Chinese Dry Bulk imports are expected to grow by 11% in 2012. Australia will remain the largest supplier of Dry Bulk commodities to the Chinese market with projected exports to China of 426 million dwt in 2012. However, although Australian exports to China are expected to grow by a healthy 9%, emerging markets are expected to increase their market share in 2012. Latin America and the

Figure DB.14

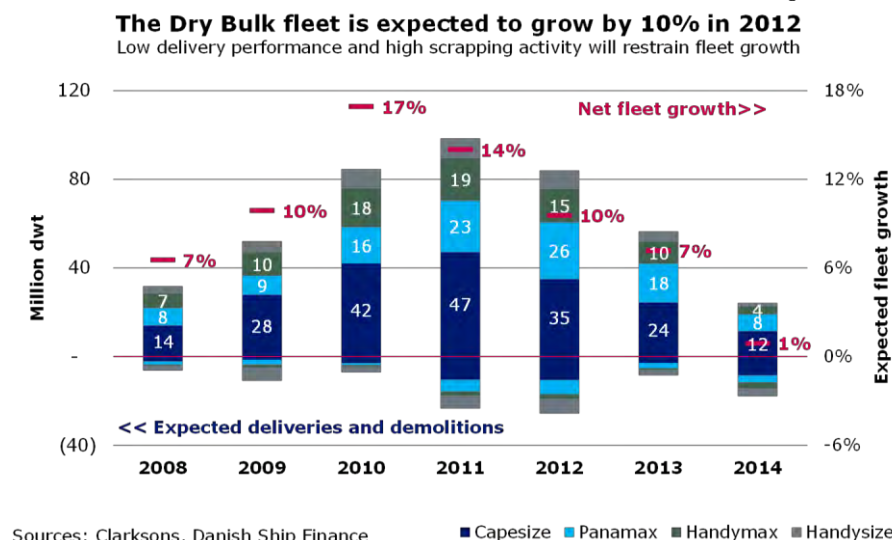
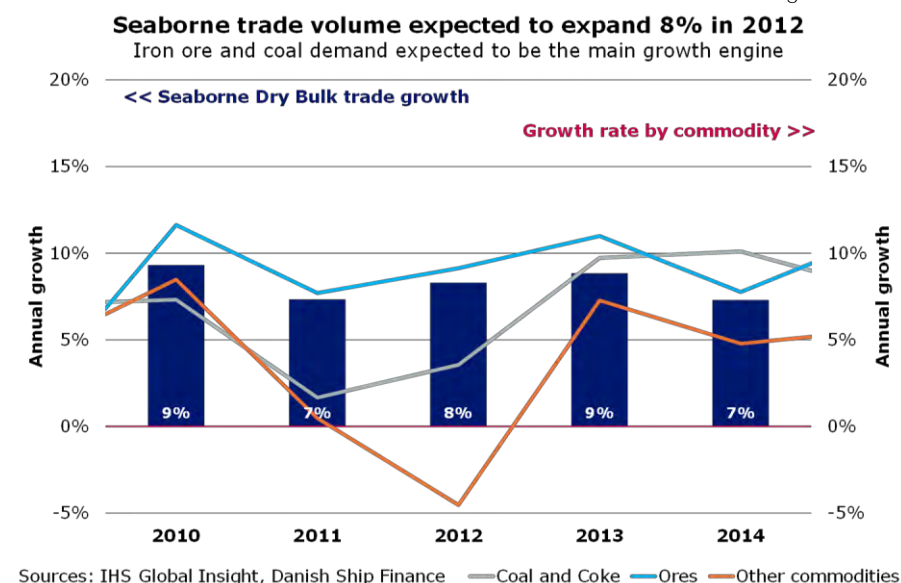


Figure DB.15



Caribbean countries are expected to grow their exports to China by 13% mainly driven by Brazilian iron ore exports. African exports to China are projected to increase 12%. The low freight rates will continue to support imports of raw materials at the expense of domestic suppliers. This will support Chinese coal imports from Indonesia and as a result, imports from Asia are expected to rise by 11% (fig. 16).

#### DISTANCE-ADJUSTED TRADE VOLUMES SET TO INCREASE 9% IN 2012

The longer trading distances resulting from the increase in emerging market exports to China will continue to support distance-adjusted trade volumes in 2012 and 2013. The distance-adjusted seaborne Dry Bulk trade is projected to increase by 9% in 2012 and 10% in 2013. Chinese distance-adjusted imports are expected to grow by almost 12% while Japanese demand is expected to rebound to 8% growth in 2012 and 2013 following the slowdown caused by the earthquake and tsunami of early 2011. On the other hand, European imports are projected to drop to only 3% as the continuing troubles in the sovereign debt market weigh in on the region's economic growth (fig. 17).

#### RATES WILL REMAIN LOW IN 2012

The current outlook for the Dry Bulk market seems unlikely to foster higher rates in any near future. Temporary spikes in rates will occur throughout the year, but we expect they will be smaller and short-lived compared to previous spikes. Although world trade is projected to expand at a reasonable pace in both 2012 and 2013, the overwhelming amount of new capacity scheduled to reach the seas in 2012 and 2013 will keep dragging spot rates towards operating costs. The low rates will inevitably force more tonnage out of the market, but even if scrapping activity continues at the record high level of 2011 this will not be enough to restore balance in the market in either 2012 or 2013. If contracting activity is kept at a minimum over the next couple of years, however, there might be room for an improvement in rates come 2014.

Figure DB.16

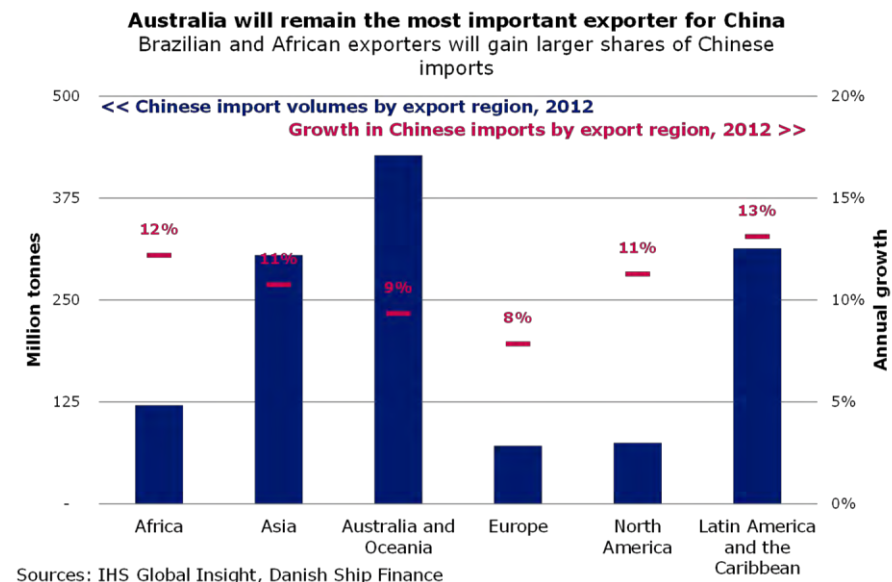
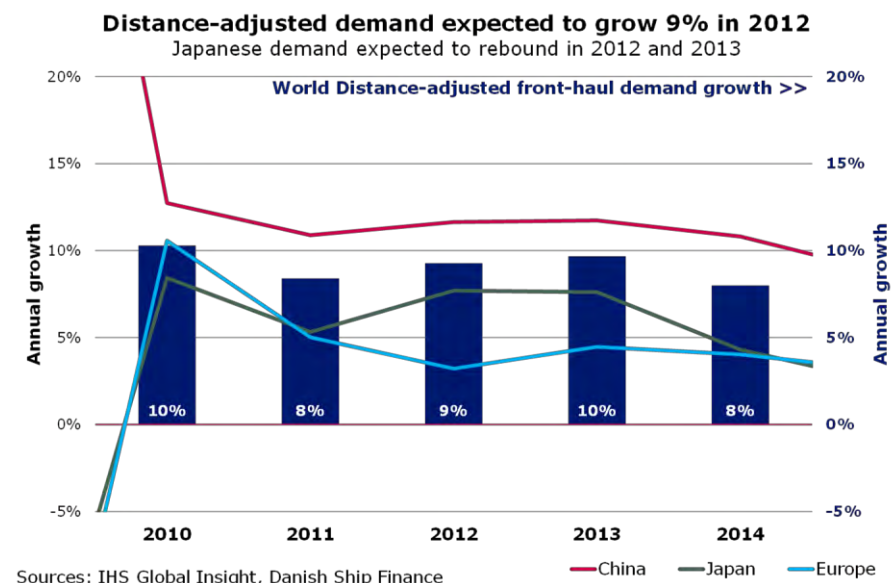


Figure DB. 17





## GLOSSARY

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# GLOSSARY

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<b>Aframax:</b>	Crude oil tanker or product tanker too large to pass through the Panama Canal and of less than 120,000 dwt.	<b>Cgt:</b>	Compensated Gross Tonnage. International unit of measure that facilitates a comparison of different shipyards' production regardless of the types of vessel produced.
<b>AHTS:</b>	Anchor Handling Tug Supply. Offshore vessel used for jobs such as the relocation of oil rigs and anchors of the oil rigs.	<b>Clarksons:</b>	British ship brokering and research company. <a href="http://www.clarksons.net">www.clarksons.net</a>
<b>ARM:</b>	Adjustable Rate Mortgage. Mortgage loan with a variable interest rate that is reset on a regular basis.	<b>Clean products:</b>	Refers to light, refined oil products such as jet fuel, gasoline and naphtha.
<b>Back-haul:</b>	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'.	<b>CoA:</b>	Contract of Affreightment. Contract between a shipping company and a shipper concerning the freight of a predetermined volume of goods within a given period of time and/or at given intervals.
<b>Barrel:</b>	A volumetric unit measure for crude oil and petroleum products equivalent to 42 U.S. gallons, or approximately 159 litres.	<b>CSR:</b>	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 to a higher standard, thus enabling the ships to trade for longer periods of time.
<b>BHP:</b>	Break Horse Power. The amount of engine horsepower.	<b>Deepsea:</b>	Refers to trading routes longer than 3,000 nautical miles.
<b>Brent:</b>	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.	<b>Dirty products:</b>	Refers to heavy oils such as crude oil or refined oil products such as fuel oil, diesel oil or bunker oil.
<b>Bulk vessel:</b>	Description of vessels transporting large cargo quantities, including coal, iron ore, steel, corn, gravel, oil, gas, etc.	<b>Drewry:</b>	Drewry Shipping Consultants Ltd. British shipping and transport research company. <a href="http://www.drewry.co.uk">www.drewry.co.uk</a>
<b>Bunker:</b>	Fuel for vessels.	<b>Dwt:</b>	Dead Weight Tons. Indication of a vessel's cargo carrying capacity (including bunkers, ballast, water and food supplies, crew and passengers).
<b>Call on OPEC:</b>	Defined as total global petroleum demand less non-OPEC supply less OPEC natural gas liquid supply.		
<b>Capesize:</b>	Dry bulk carrier of more than approximately 80,000 dwt; too large to pass through the Panama Canal.		
<b>Cu.M:</b>	Cubic Meter.		
<b>Ceu:</b>	Car equivalent unit. Unit of measure indicating the car-carrying capacity of a vessel.		



# GLOSSARY

<b>Dynamic Positioning:</b>	Special instruments on board that in conjunction with bow thrusters and main propellers enable a ship to position itself in a fixed position in relation to the seabed.		
<b>EIA:</b>	Energy Information Administration. A subsidiary of the US Department of Energy. <a href="http://www.eia.doe.gov">www.eia.doe.gov</a>	<b>IEA:</b>	International Energy Agency. A subsidiary of the OECD. <a href="http://www.iea.org">www.iea.org</a>
<b>E&amp;P:</b>	Exploration and Production.	<b>IHS Global Insight:</b>	American economic consulting company. <a href="http://www.globalinsight.com">www.globalinsight.com</a>
<b>Fearnleys:</b>	Norwegian ship brokering and research company. <a href="http://www.fearnleys.no">www.fearnleys.no</a>	<b>Imarex:</b>	International Maritime Exchange. <a href="http://www.imarex.com">www.imarex.com</a>
<b>Feeder:</b>	Small container carrier.	<b>IMO:</b>	International Maritime Organization. An organisation under the UN.
<b>FPSO:</b>	Floating Production Storage Off-loading unit. Vessel used in the offshore industry to process and store oil from an underwater (sub-sea) installation.	<b>IMO I-III:</b>	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.
<b>Front-haul:</b>	The leg of the trade route that has the highest cargo volumes is often called 'front-haul' whereas the return leg is often referred to as 'back-haul'.	<b>Chemical tanker:</b>	Tanker with coated or stainless steel tanks (IMO I-III).
<b>Geared:</b>	Indicates that a vessel is equipped with a crane or other lifting device.	<b>LGC:</b>	Large Gas Carrier. LPG ship with capacity between 40,000 and 60,000 Cu.M.
<b>Gearless:</b>	Indicates that a vessel is not equipped with a crane or other lifting device.	<b>LPG vessels:</b>	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.
<b>Gt:</b>	Gross Tons. Unit of 100 cubic feet or 2,831 cubic meters, used in arriving at the calculation of gross tonnage.	<b>LR1, product tanker:</b>	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.
<b>Handy, tank:</b>	Crude oil tanker, product tanker or chemical tanker of between 10,000 and 25,000 dwt.	<b>LR2, product tanker:</b>	Long Range 2. Product tanker too large to pass through the Panama Canal and larger than approximately 80,000 dwt.
<b>Handymax, dry cargo:</b>	Dry bulk carrier of between approximately 40,000 and 60,000 dwt.	<b>Medium, tanker (MR):</b>	Medium Range. Product tanker of between 25,000 and 50,000 dwt.
<b>Handysize, dry cargo:</b>	Dry bulk carrier of between approximately 10,000 and 40,000 dwt.	<b>MGC:</b>	Medium Gas Carrier. LPG ship with capacity between 20,000 and 40,000 Cu.M.
<b>Head-haul:</b>	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.		

# GLOSSARY

<b>Multi-Purpose:</b>	Dry bulk carrier with multiple applications, mainly as a feeder vessel or for special cargo.	<b>Suezmax:</b>	Crude oil tanker with the maximum dimensions for passing through the Suez Canal (approximately 120,000—200,000 dwt.).
<b>Nautical Mile:</b>	Distance unit measure of 1,852 meters, or 6,076.12 ft.	<b>TCE:</b>	Time Charter Equivalent.
<b>Offshore vessel:</b>	Vessel serving the offshore oil industry.	<b>Teu:</b>	Twenty Foot Equivalent Unit. Container with a length of 20 feet (about 6 metres) which forms the basis of describing the capacity of a container vessel.
<b>OPEC:</b>	Organisation of Petroleum Exporting Countries.	<b>Teu-knots:</b>	Unit of measure that takes account of the speed of the ships when estimating the actual supply of ships within a segment.
<b>Panamax, container:</b>	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.	<b>Teu-nautical mile:</b>	Unit of measure indicating the volume of cargo, measured in teu, and how far it has been transported, measured in nautical miles.
<b>Panamax, tanker:</b>	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.	<b>Ton-nautical mile:</b>	Unit of measure indicating the volume of cargo, measured in ton, and how far it has been transported, measured in nautical miles.
<b>Panamax, dry cargo:</b>	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.	<b>Tonnage:</b>	Synonymous with "vessel".
<b>PCC:</b>	Pure Car Carrier. Car carrier built exclusively to transport passenger cars.	<b>ULCC:</b>	Ultra Large Crude Carrier. Crude oil tanker above 320,000 dwt.
<b>Post-Panamax:</b>	Container vessel of approximately 4,000+ teu that is too large to pass through the Panama Canal.	<b>VLCC:</b>	Very Large Crude Carrier. Crude oil tanker of between approximately 200,000 and 320,000 dwt.
<b>Product tanker:</b>	Tanker vessel with coated tanks used to transport refined oil products.	<b>VLGC:</b>	Very Large Gas Carrier. LPG ship with capacity above 60,000 Cu.M.
<b>PSV:</b>	Platform Supply Vessel. Offshore vessel serving the offshore oil installations.		
<b>Ro-Ro:</b>	Roll On – Roll Off. Common description of vessels on which the cargo is rolled on board and ashore.		
<b>Shortsea:</b>	Refers to trading routes shorter than 3,000 nautical miles.		
<b>Small gas carrier:</b>	LPG ship smaller than 20,000 Cu.M.		
<b>SSY:</b>	Simpson Spence & Young, British ship brokering and research company. <a href="http://www.ssy.co.uk">www.ssy.co.uk</a>		

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FOR FURTHER INFORMATION

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