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TANKER FLEET PHASE OUT AND NEWBUILDING DEMAND UNTIL 2015

(Paper by INTERTANKO)

*This document by Mr. Erik Ranheim, Manager Research and Projects, INTERTANKO, was presented at the second session of the Workshop with non-member economies on shipbuilding policies held on 18 and 19 December 2006.*

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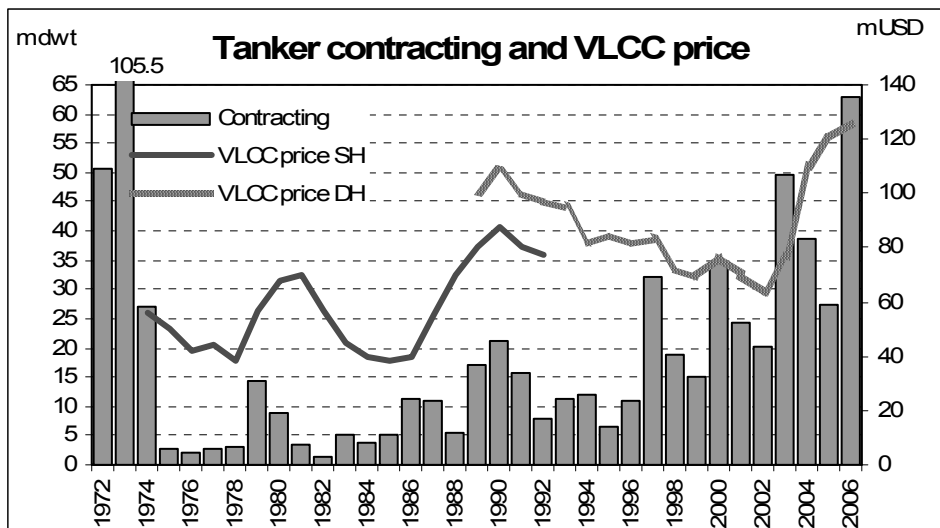
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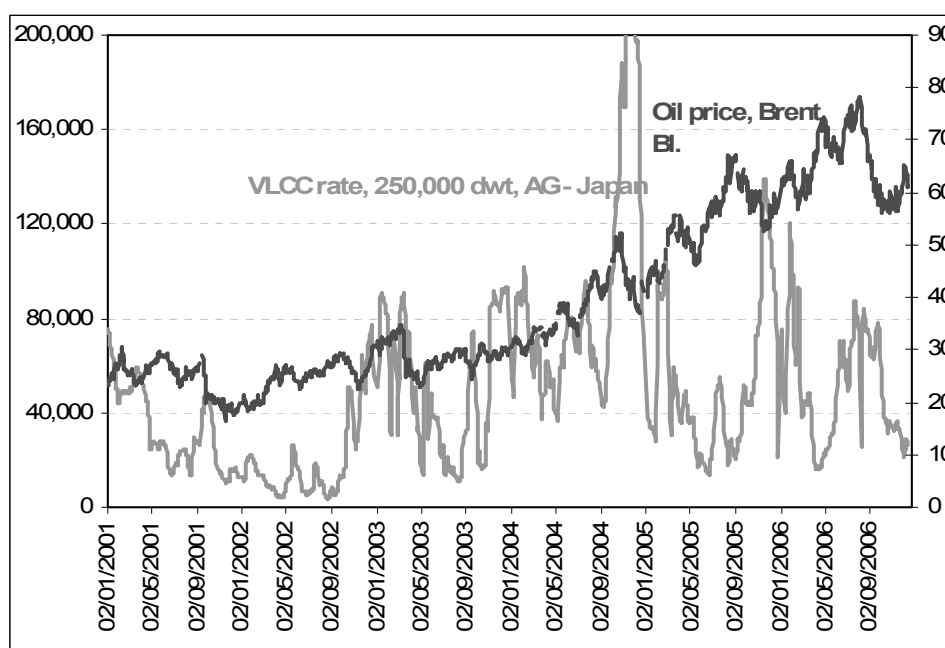
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**TANKER FLEET PHASE OUT AND NEWBUILDING DEMAND UNTIL 2015**

**Background**

1. This year we have witnessed record tanker prices, the highest contracting since 1973 and a record tanker orderbook of some 125 m dwt. Sales for demolition on the other hand have been record low - so far we have only recorded 3.4 m dwt above 10 000 dwt sold for decommissioning and 1.9 m dwt sold for conversion to offshore facilities.





2. The tanker market, in keeping with other shipping markets, has been enjoying a magnificent run. Earnings were very good in 2001, 2003, 2005 and until November 2006. It has had its best period since the early 1970s. Yet that is no encouraging parallel. The torrid expansion of the early 1970s led to a period of a large surplus of tonnage that lasted until the 1990s.

3. Behind the strong tanker market there has been a resilient world economy. Since 2000 it has, according to the Financial Times, overcome so many obstacles: post-bubble traumas in Japan; the bursting of a global stock market bubble in 2000; the terrorist attacks of September 11, 2001; a U.S. recession; years of stagnation in the eurozone; wars in Afghanistan and Iraq; real oil prices at levels close to those of the late 1970s; and a failure to complete the Doha round of multilateral trade negotiations. Yet, in spite of all this, world economic growth was 4.1% in 2003, 5.3% in 2004 and 4.9% in 2005, measured at purchasing power parity exchange rates. In the International Monetary Fund's latest World Economic Outlook (WEO), it is forecast to reach 5.1% in 2006.

4. The strong tanker market over the prolonged period was not only caused by a robust world economy and high oil demand. Since 1999, it has met with many incidents and dramas affecting tanker supply and demand. Virtually every year there have been special events affecting the market balance, starting with the Erika accident at the end of 1999, which created a differentiated market where new ships obtained a premium over old ones, a strike in Venezuela in 2001, congestion and waiting time in the Strait of Bosphorus, several hurricanes in the Caribbean area, strike and sabotage in Nigeria, VLCCs used for temporary storage and lastly the partial closure of the Prudhoe Bay oil field. Most of the time the market has been nervous with relatively low stocks and a just in time oil company oil delivery policy, both of which have resulted in very volatile freight rates. Over the last years there has been a continuous contango situation with expectations of increasing prices and stock building. The second part of 2006 started with closure of Prudhoe Bay, one of the largest oil fields in the world. However, there were no hurricanes affecting the market and the Prudhoe Bay closure turned out to be less serious than at first anticipated and it was back on stream in October.

5. Tanker freight rates fell for most tanker segments in November this year. Later there have been seasonal improvements for some segments, but lately there have been several rather pessimistic voices

expressing doubts about future market prospects. Demand may not continue to be as strong as it has been over recent years and a great deal of new tonnage will be delivered up until 2009.

### **Phase-out by tanker segment - assumptions**

6. The phase-out figures are based on the list of tankers used by the IMO Group of Experts that evaluated the phase-out effects, which were later corrected by INTERTANKO for sales for decommissioning, conversion and others.

7. The orderbook is mainly based on the Clarkson World Shipyard Monitor. The fleet figures are based on the LRFairplay database. The orderbook for the period until 2009 is assumed to be full.

8. The market is assumed to be fairly balanced at the end of 2006 even if in reality the freight market indicates a moderate surplus of tankers.

9. The phase-out, if not specified otherwise, is assumed to be according to the European Union (EU) position, i.e. all SH (single hull) tankers are assumed to be phased out by 2010 and the DB/DS (double bottom/side) are assumed to continue to trade until the age of 25 years.

10. Newbuilding demand is calculated to obtain market balance by 2015. It is based on the phase-out of all single hull tankers by 2010 with only double bottomed or double sided tankers continuing to trade until the age of 25 years old (the cut-off year is set to be 2015 but they can trade until the age of 25 years old). Since the EU was the first to take the standpoint not to allow SH tankers after 2010, this option is called EU+ on the graph. The MARPOL option assumes that all SH tankers after 2010 continue to trade until the age of 25 years old or 2015. The likelihood is that only a part of the SH tanker fleet will get the option to take advantage of the provisions in MARPOL 13G to trade until the age of 25.

11. For the product tanker segments no increase in demand is assumed for the segment 10 000 dwt – 39 999 dwt and 6% increase in demand is set for the segment 40,000 dwt – 54 999 dwt and 4% increase in demand is assumed for crude oil tankers. This is considered to be a strong growth and on the high side of what can be expected. When looking at the whole market, a 4.5% increase in tanker demand is assumed.

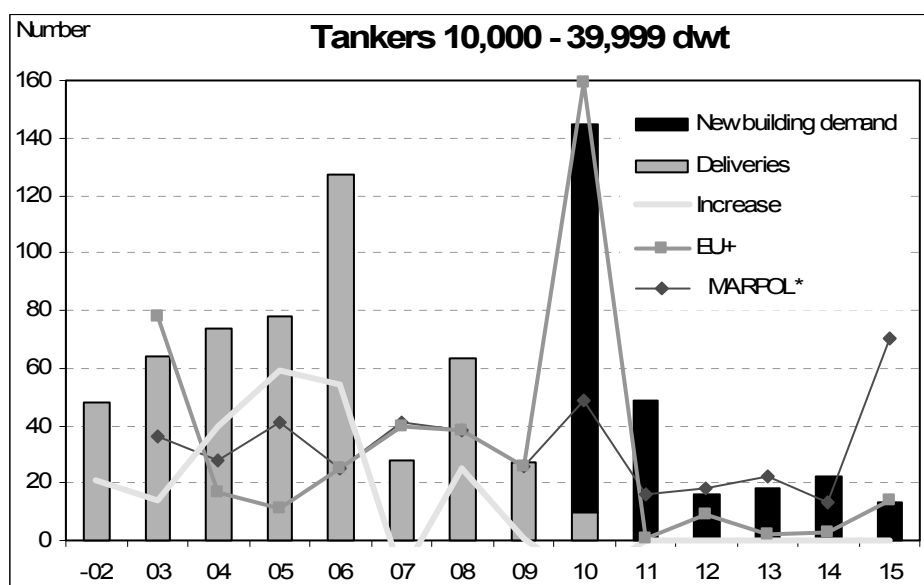
12. The INTERTANKO SH tanker database contains several smaller tankers that should already have been phased out. Since they were in the list of the IMO Group of Experts and no information has been received with regard to sales for decommissioning or conversion, they have been kept in the list. Probably most of these tankers operate in the domestic trades. Fearnleys says in their November report that “these vessels are trading, mainly coastwise, in Nigeria, China, Indonesia, and Mexico, to mention a few areas”. Until 1 January 2007 they can also trade in vegoils. The revised MARPOL Annex II will come into force at this date and vegoils will have to be carried in either double hull IMO Type 3 tankers or IMO Type 2 tankers. This may accelerate the deletion of old tankers employed in such trades.

13. The figures must only be looked upon as indicative as there are uncertainties both with regard to the orderbook and other information.

### **Tankers 10 000 – 39 999 dwt**

14. Chemical/oil tankers (mainly IMO type 3 tankers) are included as there is an overlap between chemical tankers and petroleum tankers and also because the revised Annex II is coming into force on 1<sup>st</sup> January 2007 and the reclassification of products will mean that most MARPOL Annex II products will have to be carried in double hull tankers.

1377 tankers (33.8 m dwt) – 423 Single Hull (including DB/DS) - approximate orderbook 100 tankers (2.8 m dwt) – average 14.3 years old



15. It is likely that a great deal single hull tankers in this segment will continue to trade after 2010 as many of these tankers operate in local as opposed to international markets.

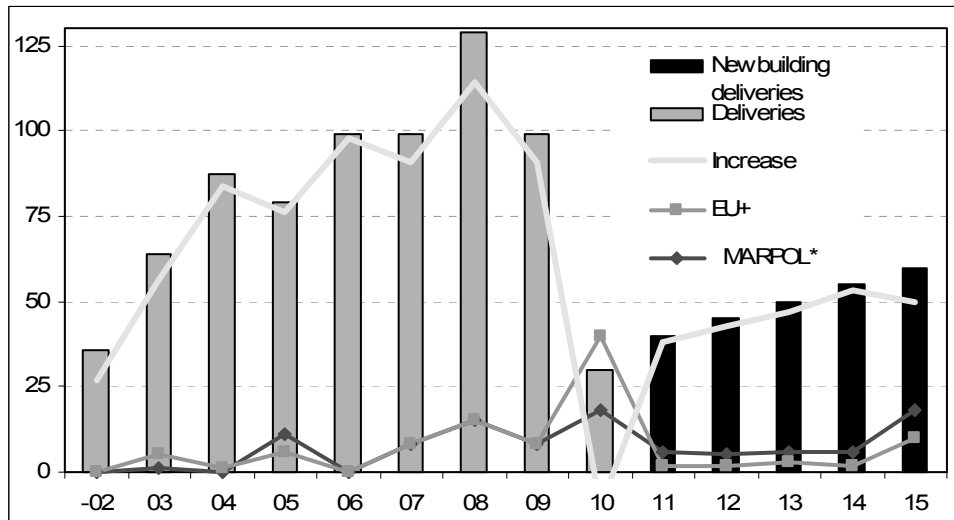
16. There are relatively few deliveries of oil tankers in this segment as owners now order product tankers above 40 000 dwt. As the new generation of product tankers are larger, it is assumed that there will not any increase in demand for this segment. If all SH tankers have to be removed by 2010 under these assumptions, as many as 135 additional tankers have to be ordered for 2010 delivery to balance the market. However, for this segment delivery in 2009 and even earlier would probably be possible. Even if the provision to allow SH tankers to trade after 2010 is not being taken advantage of and no demand increase demand is assumed, there does not have to be any delivery squeeze. In this scenario, the newbuilding demand 2010-2015 will be moderate as it will only be replacement demand of the DB/DS tankers that are phased out.

17. Due to the fragmentation of the fleet with several tanker types and many local markets the figures presented for this segment are considered to be the most uncertain ones, and the demand for the previous typical product tanker of some 30 000 dwt is replaced by demand for tankers above 40 000 dwt. However, there are a number of smaller tankers below 20 000 dwt that need to be replaced.

18. In this size segment there is in addition a large orderbook for chemical tankers.

**Tankers 40 000 – 54 999 dwt**

750 tankers (34.3 m dwt) – Single Hull (including DB/DS) 102 (4.5 m dwt) - approximate orderbook 361 end 2006 (17.2 m dwt) tankers – average age 8.4 years old



19. The size of product tankers has moved up from tankers of around 30,000 dwt to tankers between 40 000 dwt and 55 000 dwt. The orderbook in this size range is some than 50% of the fleet and the orderbook is almost four times the size of the single hull fleet.

20. Product tanker demand has been strong over the last few years and may also continue to be strong, in particular after 2009/2010 as new, large refineries in the Middle East and India may mean that ore products will be moved over longer distances at the expense of crude oil.

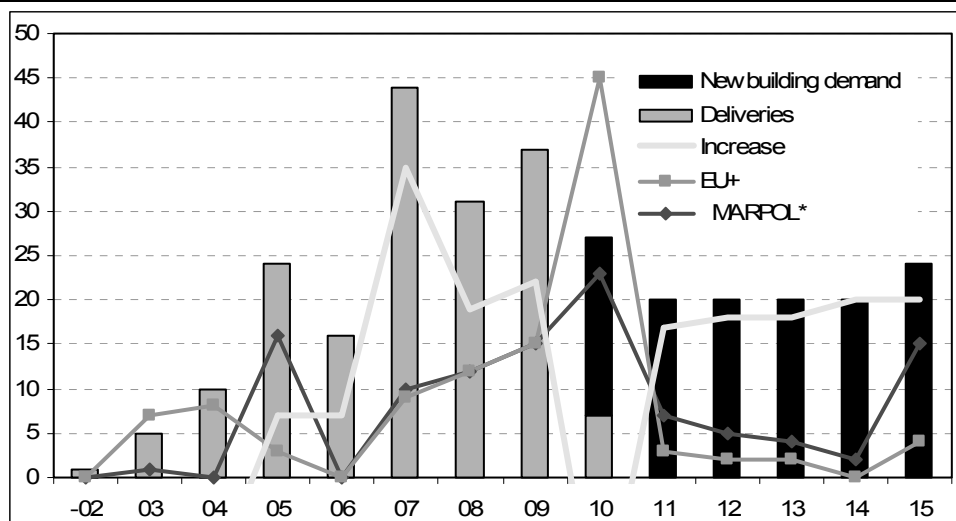
21. Phase-out is having a rather small impact on this segment compared to the demand increase, because of relatively few single hull tankers.

22. The many deliveries in 2007-2009 will probably create a surplus in this segment. Some 30-55 tankers need to be delivered in the period 2011 – 2015, if a 6% demand increase is assumed for this segment.

23. A scenario may, however, be created in which demand will increase more than 6% after 2010 with long haul exports from India and the Middle East to Europe and the U.S.

### Panamaxes - Tankers 55 000 – 79 999 dwt

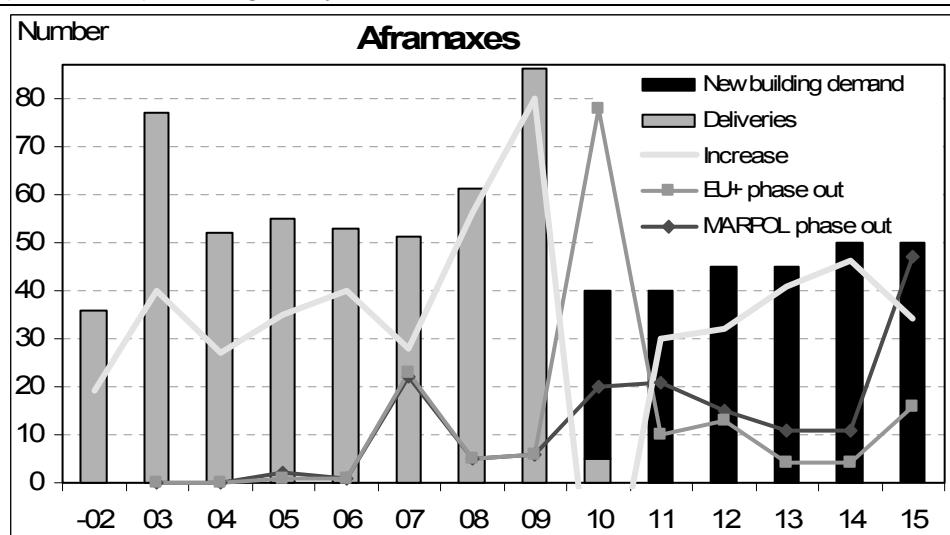
240 tankers (14.6 m dwt) – 110 Single Hull (including DB/DS) (7.0 m dwt) - approximate orderbook end 2006  
145 tankers (8.7 m dwt) – average 14.0 years old



24. The panamax segment is the oldest and the segment with the lowest number of tankers. The size of the orderbook is bigger than the size of the single hull fleet and the need for additional deliveries for the period 2010-2015 to maintain market balance, assuming a 6% trade increase, is some 20 panamax per year. Also in this segment a surplus will probably build up during the period 2007-2009.

### Aframaxes - Tankers 80 000 – 119 999 dwt

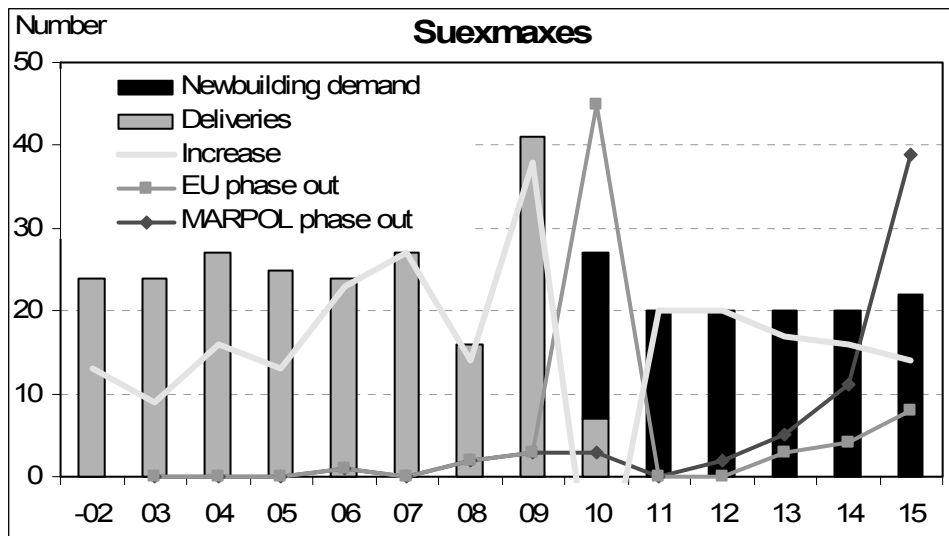
700 tankers (72 m dwt) – 161 Single Hull (including DB/DS) (15.1 m dwt) - approximate orderbook  
222 tankers (22.3 m dwt) – average 9.2 years old



25. The SH Aframaxes are on average 93,619 dwt and the ones on order are on average 109 839 dwt, therefore, the need for newbuildings is somewhat overestimated as it are based on numbers. Assuming a future demand increase of 4% annually, the need for newbuildings in the period 2010 to 2015 is estimated to be some 40 to 50 units per year, compared to delivery of close to 90 tankers in this segment in 2009. The phase-out peak in 2010 of 78 tankers is smaller than the number to be delivered in 2009, and it is assumed that the year 2010 will start with a surplus of tonnage.

**Suezmaxes - Tankers 120 000 – 199 999 dwt**

350 tankers (53 m dwt) – 66 (9.7 m dwt) Single Hull (including DB/DS) - approximate orderbook end 2006  
 98 tankers (14.5 m dwt) – average 8.4 years old

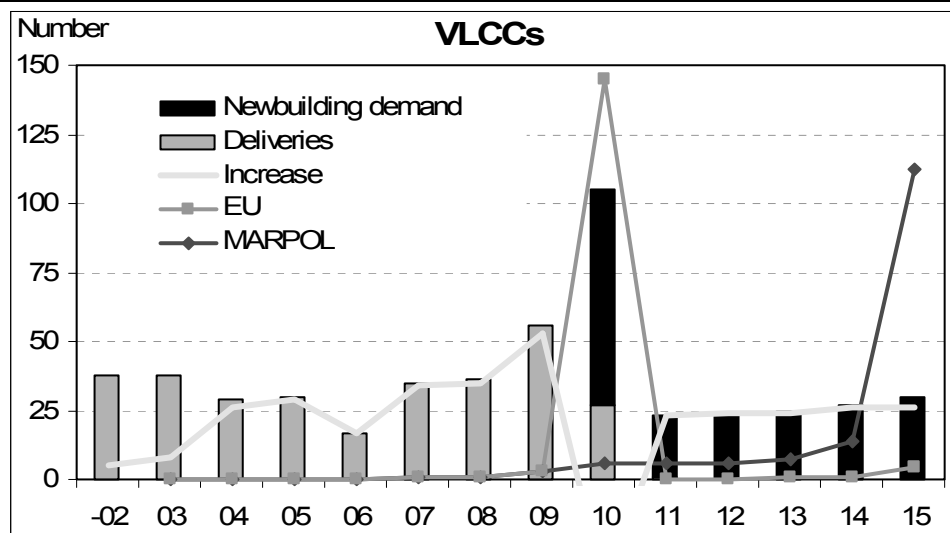


26. The average size of the suemax orders is 159 010 dwt, 9% bigger than that for the single hull ones (147 087 dwt). Additionally some 20 suemaxes will need to be ordered for delivery each year until 2015 to maintain market balance, assuming a 4% increase in demand. The suemax fleet is very young and only 40 of the existing ones were built before 1990. In 2010, 31 of the remaining 66 SH suemaxes (including DB/DS) will be 20 years or less. If all suemaxes continue to trade until the age of 25, there will be 39 suemaxes left in 2015, of which 8 will be DB or DS.



### VLCCs - Tankers above 200 000 dwt

485 tankers (142 m dwt) – 156 (42 m dwt) Single Hull (including DB/DS) - approximate orderbook  
 162 tankers (50 m dwt) – average age 8.4 years old

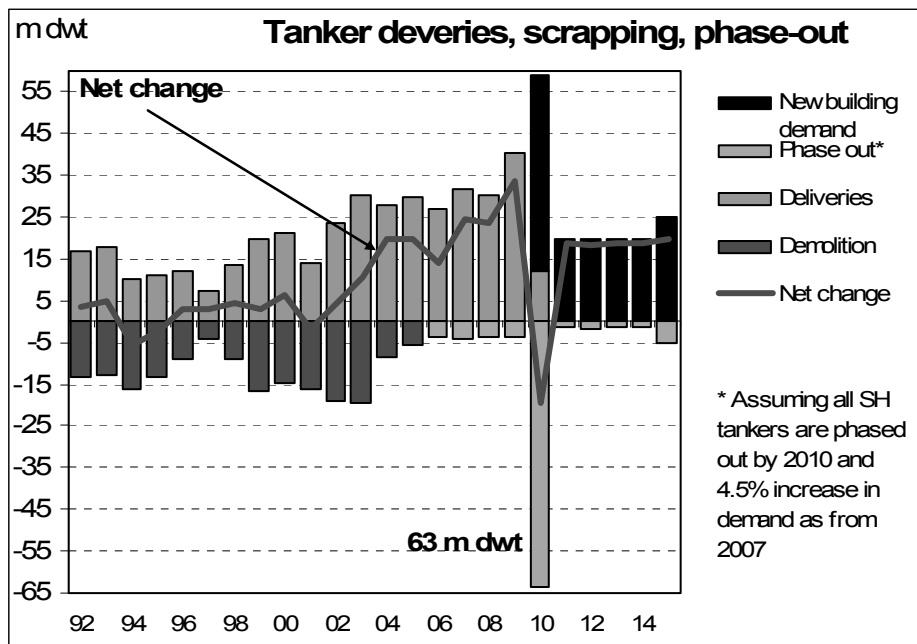


27. The VLCC segment is the one with the most skewed age distribution. To replace one old SH tanker by one new DH tanker an additional 78 VLCCs have to be ordered for delivery in 2010 to maintain market balance, assuming a 4% annual increase in demand from 2007 and onwards. However, as the average tanker on order is 305 267 dwt and the average SH tanker on order is 272 166 dwt, this number is somewhat overestimated. Delivering more than 100 VLCCs in 2010 is considered to be completely unrealistic and some SH VLCCs will, therefore, have to continue to trade beyond 2010. There will be 103 SH VLCCs left in 2010 that are 20 years or younger.

28. In 2006 7 SH VLCCs have been sold for conversions to offshore facilities and such sales will probably continue in the years to come.

29. It is important to realize that the US has a different phase out scheme that exempt LOOP and lightering areas until 2015 and these are the main discharge areas for VLCCs. Japan and Singapore also allow Single hull tankers until 2015 and most Middle East countries have not ratified MARPOL. Saudi Arabia ratified recently, but has not stated their position on the MARPOL 13G/F provisions.

**Phase-out by dwt for all segments**



30. The above graph shows deliveries until 2010, newbuilding demand 2010-2015, demolition until 2006 and phase-out 2006-2015. The newbuilding demand is based on a 4.5% increase in tanker demand as from 2007. The additional 47 m dwt required to balance the orderbook in 2010 will mean delivery of close to 60 m dwt of tanker tonnage this year, which probably is unrealistic. However, only some 20 dwt will be needed to be delivered annually to balance the market for the period 2011-2015. According to this scenario, only a moderate number of SH tankers needs to continue to trade beyond 2010 to avoid any supply squeeze. However if demand increase is set to increase by 3%, market will balance if the total amount of deliveries in 2010 will be about the same as in 2009.

31. Irrespective of the market development, it is likely that part of the SH fleet will take advantage of the provisions given in MARPOL to continue to trade until the age of 25 years old.

