The outlook for oil tanker new construction

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Abstract

The demand for new oil tankers is driven by a perceived future shipping demand, existing fleet composition and anticipated future supply versus demand imbalance. Through 2010 most of the newbuilding demand is likely to be for replacements forced by regulatory requirements. After 2010, a much younger oil tanker fleet will likely reduce the newbuilding activity over the next several years. ABS has developed and honed an oil tanker shipping and shipbuilding outlook model to provide reasonable projections of future activity levels to facilitate internal planning efforts. A brief summary of some of the outlook projections are included this paper.

1 INTRODUCTION

The current energy demand outlook will drive oil tanker shipping growth, which coupled with the current fleet age profile and regulatory phase out of single hull tankers will continue to fuel ship replacement.
Oil tanker demand is driven primarily by three factors:

- Seaborne trade volume growth.
- Changes in the tonne-mile requirement / trade efficiencies – these include factors such as port congestion, new facilities e.g. the Panama Canal, loading/unloading rates, time charter/spot charter balance, etc.
- Speculative ship ordering – each year ships are ordered without a trade or contract to support them, generally in response to regulatory changes, perceived current and future market conditions, shipbuilding prices, interest rates, liquidity levels, and herding instincts.

The oil tanker supply outlook is in part, predicated on the anticipated delivery of new building additions, and in part on the number of outgoing ships (as a result of scrapping or other fleet removals). The available supply to meet demand also needs to consider ships not in service due to lay up or repairs. A projected shortfall in shipping supply to meet demand in turn drives the shipbuilding demand.

The current prediction for oil tanker fleet growth can be seen in figure 1. Over the next five years the largest proportion of the fleet new construction will be for replacements. After that most new construction additions will be for new demand driven by additional trade volume or logistical reasons.

A brief description of the ABS outlook system used for predictions is given in Annex 1.

2 OIL TANKERS

2.1 General

The oil tanker market is primarily comprised of two elements – crude oil and products. Some pertinent market characteristics can be seen in figures 2 and 3. The scope of products that can be

lifted by single hull products carriers has decreased over the past 5 years as a result of MARPOL Annex I changes and the IBC Code.

The current changes driving shipowners to place new construction orders for oil tankers are principally:

- the regulatory environment e.g. MARPOL single hull tanker phase out
- the introduction of the Common Structural Rules; and
- new demand growth as a result of new trades, facilities and additional volumes e.g. ice class oil tankers, new pipelines, Panama Canal expansion, etc.
- available liquidity & lower interest rates

2.2 Regulation and Rule driven demand

2.2.1 Phase-out

The US Oil Pollution Act 1990, the MARPOL Regs. 13 F, G & H and EU legislation (417/2002) have all mandated the phase-out of single hull tankers with a deadline of 2010. However there exists the provision, with agreement of the flag administration, to extend trading up to 2015 or 25 years whichever is the sooner, subject to certain requirements being satisfied (e.g. periodic Condition Assessment). Many states are providing this exemption. Port states have the right to refuse entry to exempted ships from 2010.

There is evidence that many of these ships are likely to continue trading with the flag exemptions rather than being scrapped. Market conditions will drive this decision for shipowners over the next five years. As the tonnage on order is delivered this will increase transport capacity predictably depressing rates. Currently single hull tankers are able to fix trip and short-term charters with relatively minor delays in obtaining fixtures. With a fully amortized ship delays are less costly than for a new ship with perhaps a debt to be serviced. Ship scrapping is at a record low and as a result of the green movement standards for ship re-cycling are increasing. It looks like we are facing an interesting time over the next few years.

Some owners will consider alternative uses for single hull oil tankers, e.g. change of purpose conversion. Examples of some recent conversions to other uses include:

- Heavy lift ships (2)
- Ore carrier (1)
- FPSO/FSO (22)

A further alternative is to convert to a double hull. A number of single hull ships have converted to double sides or double bottoms. If constructed after 1986 their conversion enables a few additional years of trading (max. to 2015). The volume of ships converted to double sides or double bottoms since 1 Jan 2004 is in the region of 52 ships or 2.9 m t dwt and the volume converted to double hull is 17 or 1.4 m t deadweight (ref: CRSL, 2006 and Intertanko 2006). Given the world fleet of oil tankers (i.e. excluding chemical) stood at close to 4,000 ships as of 31 March 2007 (Ref: LR Fairplay April 2007) it can be concluded that the volume of conversions is relatively insignificant.

The ABS outlook includes an estimate of the portion of the single hull ships that will likely be replaced or converted, and further assumes some will phase out earlier than the 2010 deadline.

2.2.2 Common Structural Rules

The CSR became effective 1 April 2006. It is clear shipowners placed many orders prior to the application date relative to the period immediately after. See figure 4.

2.2.3 Coatings

The IMO PSPC became applicable to CSR oil tankers and bulk carriers contracted on or after 8 Dec. 2006. It is clear shipowners placed many orders prior to the application date relative to the period immediately after. See figure 4.

2.2.4 IBC Code and MARPOL Annex II revision

Revisions became applicable from 1 January 2007 which effectively meant that products previously carried in NLS MARPOL Annex I tankers are now required to be carried in a chemical tanker. Also certain chemicals moved up a pollution risk category from Type III to Type II. It is clear from the order book history that many owners perceived a shortage of Type II and III tonnage as a result of the regulation and placed advance speculative orders - many of the companies ordering were new to the chemical trade. Correspondingly this regulation change has had a negative effect upon the variety of cargoes that can be lifted by products tankers.

2.4 New trades

Trade opportunities are constantly changing. Over the next few years the patterns of global oil supply will be changed as result of:

- Numerous pipelines and terminals under development in Russia will provide an anticipated increase in Russian oil export effectively increasing the demand for ice-strengthened oil tankers.
- The Baku-Tiblisi-Ceyhan pipeline in the Eastern Mediterranean opened in June 2006. This affords a new opportunity to owners of VLCC or Suezmax tonnage in the carriage of Caspian Sea crude.
- The Panama Canal expansion. The expanded canal lock dimensions will enable all Aframax tankers and some Suezmax tankers to navigate the canal.

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2.5 Ship type demand

The oil tanker order book increased sharply last year when 34.8 m GT of order were placed in comparison to only 13mGT of new ships delivered. The order book is likely to peak later this year since delivery dates are now well in excess of 2010 for most yards. This means that now deliveries are most likely to outpace new orders over the next few years. About half of all tanker deliveries between now and 2010 are for replacements. After 2010 new orders and deliveries will be re-balanced at a much lower level. Figure 5 show the forecast oil tanker fleet size by segment to 2016. In summary:
The VLCC fleet is projected to grow by 23% through 2016.
The Suezmax fleet is projected to grow by 32% through 2016.
The Aframax fleet is projected to grow by 44% through 2016.
The Panamax fleet is projected to grow by 56% through 2016.
The Products fleet is projected to grow by 39% through 2016.

3 OIL TANKER NEW CONSTRUCTION

Ordering over the past three years has exceeded all previous records. It is expected that the pace of ordering will now moderate. Oil tankers have to date comprised the lion's share of the world order book by tonnage.

With the pending drop off in anticipated in tanker orders coupled with record deliveries, we are approaching a period where the world order book is likely to shrink. It is anticipated that shipyard order books may reduce by as much as 30% over the next decade and for new tanker tonnage a more severe reduction is likely to occur.

Shipbuilding supply continues to grow from governments targeting shipbuilding. These countries include China, Vietnam, India, Russia and Brazil. Most of this new capacity will come on stream when demand for ships has peaked. New shipyard owner's keen to grow their businesses will be pricing competitively. Shipyard consolidation can be expected. Shipowners will be drawn into the bargains likely to be available creating a shipping supply surplus. It is anticipated that after 2010 shipyard order books will remain flat for the remainder of the next decade i.e. rate of orders = rate of deliveries. The 2010 change is mainly as a result of regulatory phase-out compliance and a relatively young fleet. Figure 6 shows the oil tanker order book composition outlook by segment accounting for the above.

4 CONCLUSION

The continued growth in shipbuilding capacity, fueled in part by expanding existing yards, new entrants, and unprecedented levels of ordering over the last three years is building up a probable shipbuilding supply versus demand imbalance which will likely impact shipowners and shipbuilders when that new tonnage is delivered. The void created by the surge of oil tanker deliveries over the next 3 years is unlikely to be fully replaced by other vessel types, creating a challenging period for shipbuilders.

REFERENCES

Clarkson Research Services Limited – Tankers in transition (2006)
Energy Information Agency - International Energy Demand Outlook (2006)
LR Fairplay – CD Register of Ships (April 2007)

ANNEX

1 THE ABS MODEL

The world shipping and shipbuilding forecast model is based on a supply versus demand balance and is comprised of 21 market sectors which collectively provide a reasonable prediction of anticipated future activity levels over the next decade. The model is periodically updated as the world shipping and shipbuilding requirements change. The approach uses macro-economic input to determine seaborne trade demand outlooks and to derive a prediction of the future fleet sizes and newbuilding demand for each ship type.

2 ECONOMIC OUTLOOK

A variety of macro indicators including GDP, and oil & gas consumption outlooks are used with developed correlations to project future shipping demand. The source of the indicators usually derived from well known source such as the US Energy Information Agency, IMF, etc. Economic growth is the primary determinant of industrial production and energy demand. Shipping is a derived demand i.e. it enables the global distribution of raw materials and manufactured goods. The provision of ships to supply this demand creates in turn a demand for shipbuilding.

The projected growth in world GDP over the next decade is higher than the growth rate has been over the past 30 years. World GDP is expected to expand by an average of 4% through to 2020, with marketed energy consumption expanded by 2.2% - more for non-OECD countries as a result of significant investment reforms and less for developed economies (Ref. EIA, 2006).

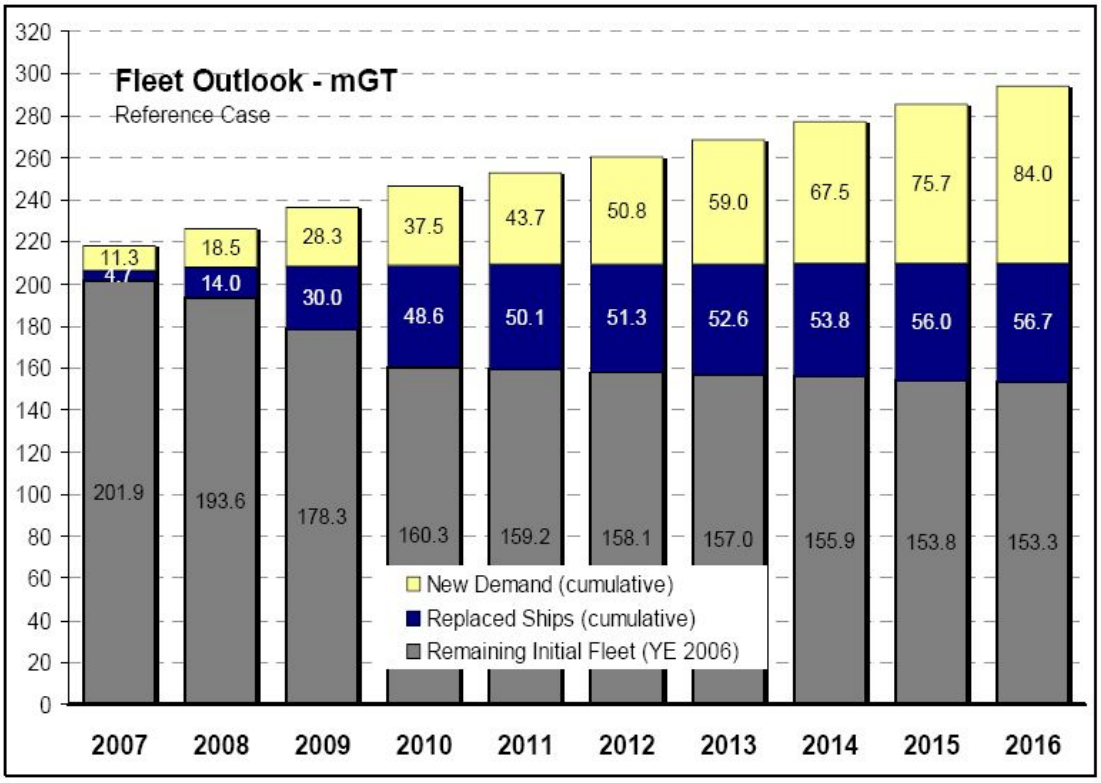

Figure 1 – Oil tanker fleet order book outlook – March 2007- m GT

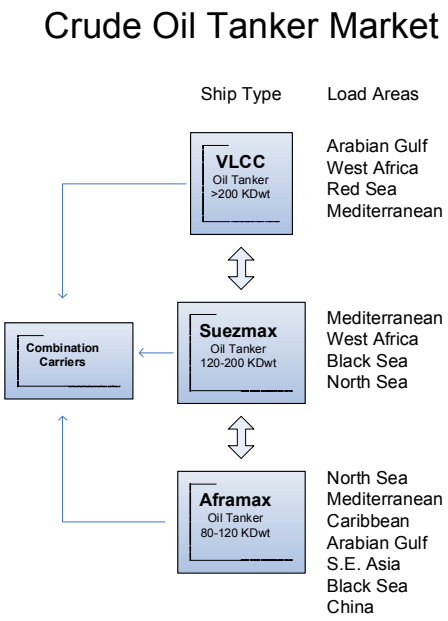

Figure 2 – Crude oil tanker market
Source: Clarkson

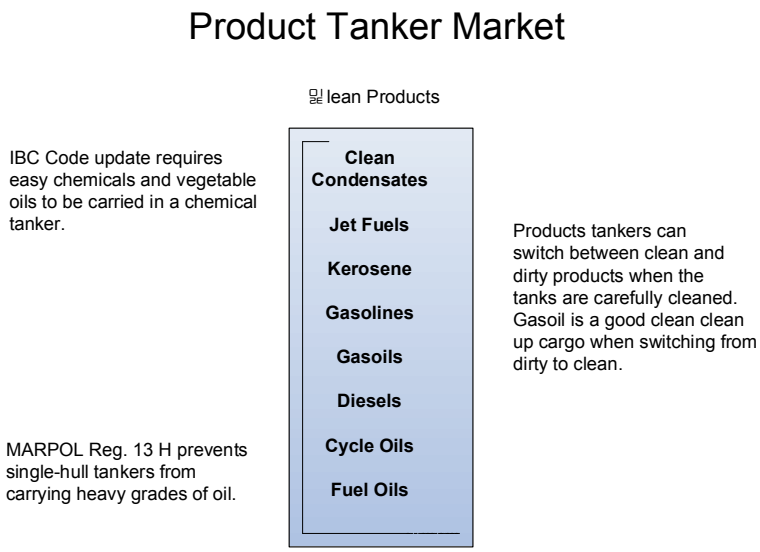

Figure 3 – Product tanker market
Source: Clarkson & ABS

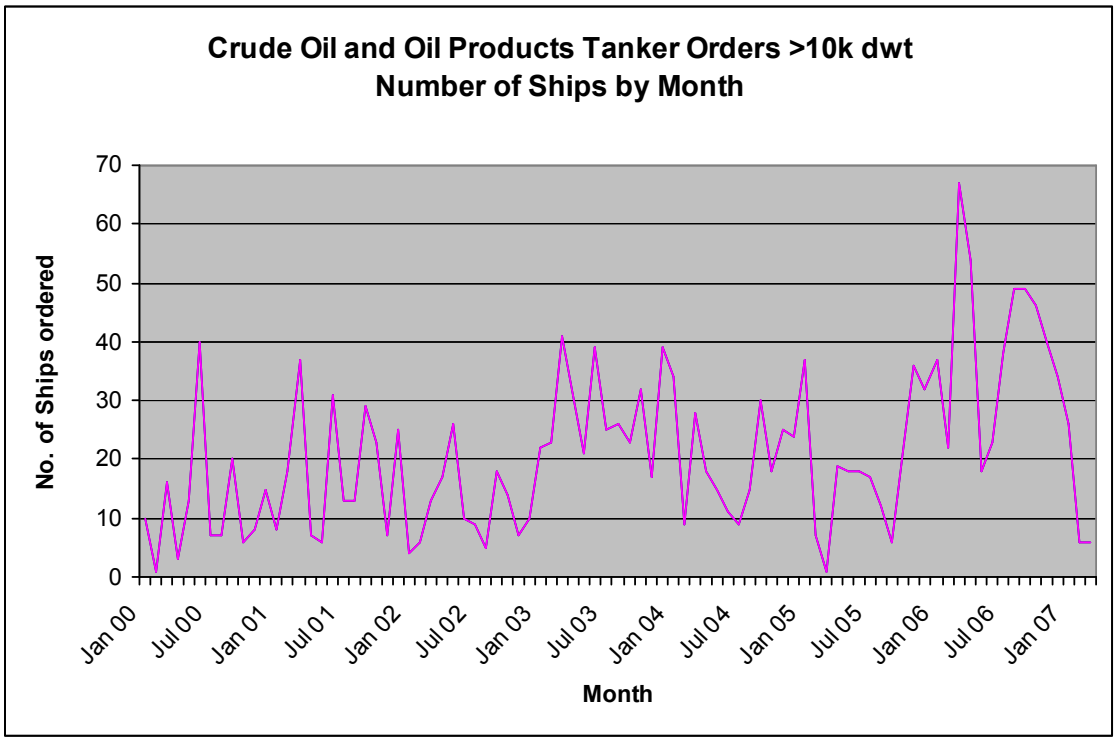

Figure 4 – Oil tanker ordering
Source: LR Fairplay

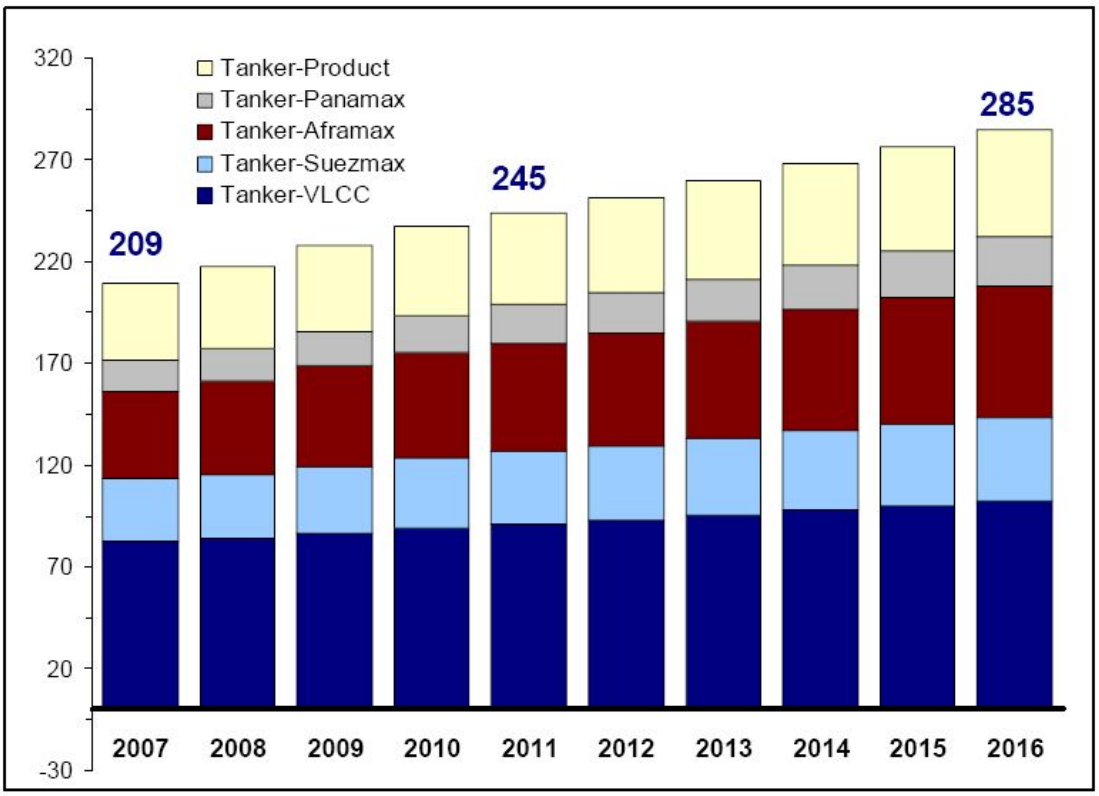

Figure 5 – Oil tanker fleet outlook by segment – March 2007- m GT

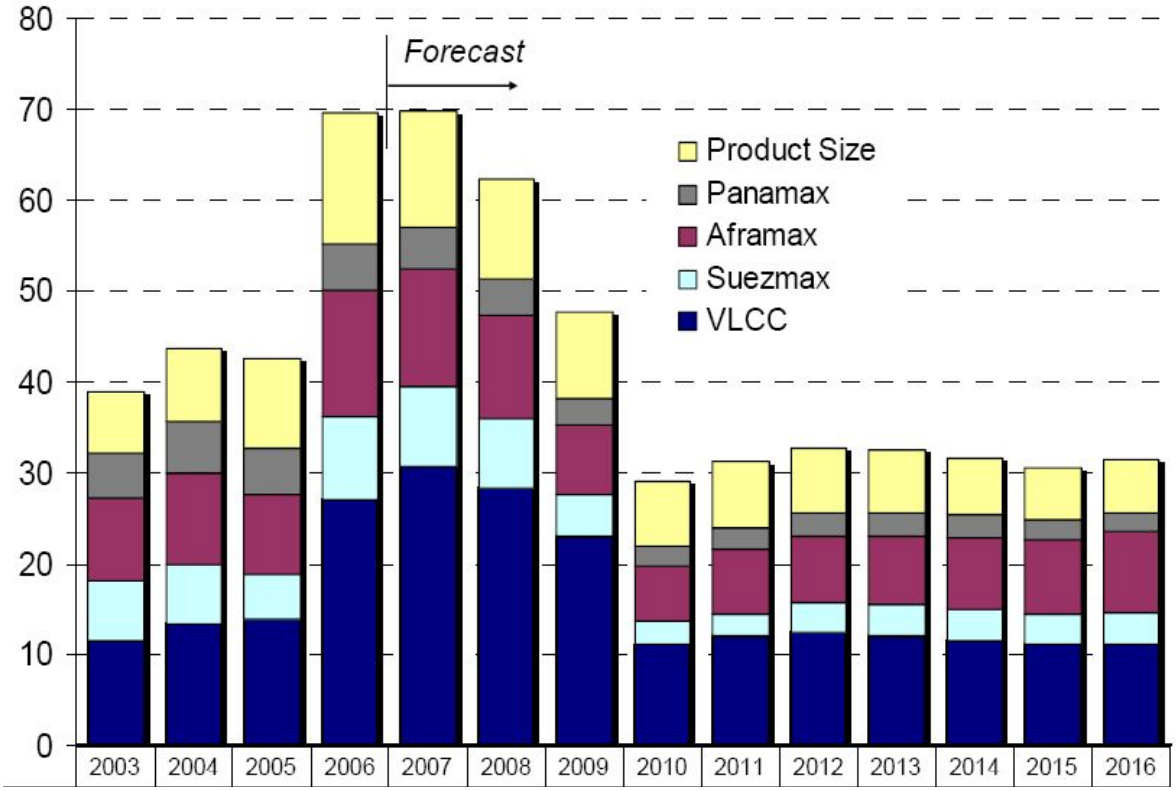

Figure 6 – Oil tanker fleet order book outlook by segment – March 2007- m GT