Newbuilding Requirements: Offshore Oil & Gas

Market drivers

The key driver for offshore newbuilding demand is the prevailing oil price and the perception of future oil price development vs. actual and expected cost development. With a higher oil price, we get a higher number of profitable offshore fields, more exploration activity and thus higher spending and a higher demand for rigs and ships.

However, there are significant differences in recognised oil analysts' prognosis on the future oil price development. As it is a challenge to predict the future oil price, it is also a challenge to predict the future level of offshore vessel demand or timing of the next peak.

New significant discoveries in one region will usually affect the sentiment to oil companies. New discoveries and high hit rates in areas previously regarded as not promising will be a key driver for increased interest and further exploration activity.

In emerging regions, the infrastructure is often limited, distances may be longer and the rig density is low. Thus, a higher number of support vessels per rig will be needed. Operation in arctic areas will drive this number even further.

Mature regions with predicted lower future production are often interpreted as declining offshore markets. However, lower production is also an important driver for higher exploration activity when there is a sufficient focus on replacing reserves. In addition, there will be higher focus on increasing the production rate per field or well (well intervention). Development of marginal fields and tie-backs will also require subsea vessels. A mature installed base of subsea wells and pipelines will require vessels for inspection, maintenance and repair. Then, at some point, there will be a need for decommissioning and specialist vessels accordingly. Activity in mature areas is often key for driving innovation with the North Sea as a good example.

Countries aiming at getting less dependent on oil or gas import is also an important activity driver. For national oil companies (NOC), there will often be less attention on short term profitability and more attention on long term growth of reserves and production. This will depend on government policy. Still, as NOCs usually share production licences with international companies, the challenge will be to make licences and projects as attractive as possible.

The mix of shallow water, deep water, ultra-deep water activity and effects of increased activity in remote areas is also key. Distances from shore are increasing leading to higher demand for more efficient vessels. With this, there are new requirements and a need for more rigs and ships capable of operating in these areas in the most efficient and safe way.

More cost-efficient vessel designs and systems are also important drivers for newbuild demand as vessels will then have a competitive advantage, obtain higher utilisation and thus be preferred in the market.

The market cycle

Offshore shipping markets are normally very volatile. Oil price development has always been one reason for this, but other reasons are sometimes low market visibility, speculative orders, lack of discipline, the fight for market shares and overreaction from too many of the market players. There is often a trigger point: when fleet utilisation exceeds a certain level the day rates are skyrocketing. If the market believes this will continue, there will be a boom in new orders for the relevant vessel type. However, what is often the case is an order book containing too many vessels at the time when day rates start to drop again. The consequence may be a low number of offshore orders for several years.

The effect of shale oil

One main advantage of shale oil versus offshore is a far shorter lead time from development to production start, reducing the time until a project turns cash positive. A disadvantage of shale oil wells is the higher decline rates compared to offshore, where the typical shale oil well declines 80% in production within the first three years. However, this becomes less of a concern when taking into account the lead times and costs.

Oil market may rebalance already this year, affecting the oil price, but shale will most likely be able to deliver sufficient new volumes. This will put a temporary limit to the oil price recovery in 2017.

However, with higher activity in the short and medium term, marginal costs for shale oil are expected to increase. At the same time, the break-even oil price for offshore projects will be further reduced. This will bring new offshore projects back to a competitive position in 2018 and onwards.

Supply from offshore will be needed for decades. Shale will not be able to close the gap.

Offshore spending

For E&P spending, there was a trend shift in 2013, moving from double to single digit growth. The key reason was the stable oil price vs. very strong growth in costs. On the top of growth in costs, we got a severe oil price slide resulting in aggressive spending cuts. As oil prices sank from around $100/bbl in 2014 to below $30/bbl in Q1 2016, the industry's first option was to cut capital expenditures. It was a matter of survival.

E&P spending declined approximately 25% in 2015, the largest spending cut in history. The 2016 decline will be of corresponding magnitude. Most market observers also see further reduction in 2017. Thus, it will be the first time in history that we see reductions in E&P spending for three consecutive years.

Oil and gas companies are facing challenging years ahead. Oilfield service providers and related industries also face challenging times due to the knock-on effect of reduced E&P spending.

However, the aggressive spending cuts, or investments decline in future production, could seriously disturb the global supply system, paving the way for future oil price and investment hikes later on. The level of discoveries is now very low. Oil demand will increase, not just because of GDP growth, but perhaps more due to of the low oil price itself.

An oil price around $50 per barrel is not regarded as sustainable. It is not only companies who are struggling, but also countries. This is also one reason why to believe in a higher future oil price. If oil stays around $50 a barrel, most countries in the Middle East will run out of cash in five years or less (IMF). That includes OPEC leader Saudi Arabia.

A significant share of the growth in offshore spending we have seen in the past has not been the increased activity, but the cost inflation. Now offshore is becoming more cost efficient. Statoil has made its flagship oil project in Norway's North Sea, Johan Sverdrup, profitable at less than $25 a barrel after slashing costs and lifting production forecasts. In other words, the break-even oil price is down from $40 a barrel in 2014 to below $25 a barrel in 2016.

In the Barents Sea, the break-even price for the offshore field Johan Castberg is now below $35 a barrel, down from $80, with estimated investments on the project in the Arctic frontier play now more than halved at between NOK45 billion and NOK50 billion, compared with an original estimate of around NOK100 billion.

According to Statoil, 80-90% of the cost improvements they have achieved are related to efficiency, doing things differently, not market effects nor deferring activities. As an example, Statoil say they can drill almost 70% more meters per day compared to 2013.

In general oil companies and offshore operators have pushed down costs significantly in the past two years because of simpler concepts, cheaper equipment and more efficient drilling. This will also affect the number of profitable projects going forward.

Most observers see higher oil prices in 2017-2018 and an increase in offshore E&P spending from 2018 and onwards, perhaps with a significant increase in 2019.

The offshore fleet

The global offshore fleet consists of around 10,000 vessels across 30 vessel sub types with anchor handling tugs, platform supply vessels and crewboats representing more than half of this. These supply and service vessels are supporting over 1,000 drilling rigs and floating production units in exploration and production activity. In addition, there are over 1,000 offshore construction, crane, subsea support, pipelaying, inspection, maintenance, repair vessels in many shapes and sizes. Comments in this report will only cover the major categories.

The offshore shipping market outlook

a. Offshore E&P

- Drilling

The rig downturn is both supply and demand driven where we see a severe overcapacity for both shallow- and deepwater units. The day rates have plunged and the 2nd hand prices are extremely low. Rigs are coming off contracts and it is very difficult to secure new work.

Scrapping and cold-stacking will increase further as the owners' choice is costly class surveys or scrapping. Cold-stacking will often be synonymous with scrapping, indeed for veteran rigs. Some rig owners may loose more than 50% of their fleet. Thus, this will change fleet size ranking among rig companies.

On the other side, low rig rates will also help the oil companies to increase activity at some point. When contracts signed at peak levels disappear, the oil companies are left with a totally different cost picture. That could lead to volume effects. However, first the oil companies will need to believe in a higher future oil price. This is the key driver for drilling activity.

Recovery will come eventually and mid-water rigs will most likely recover first. However, the number of new rigs to be ordered the next five years will be very limited.

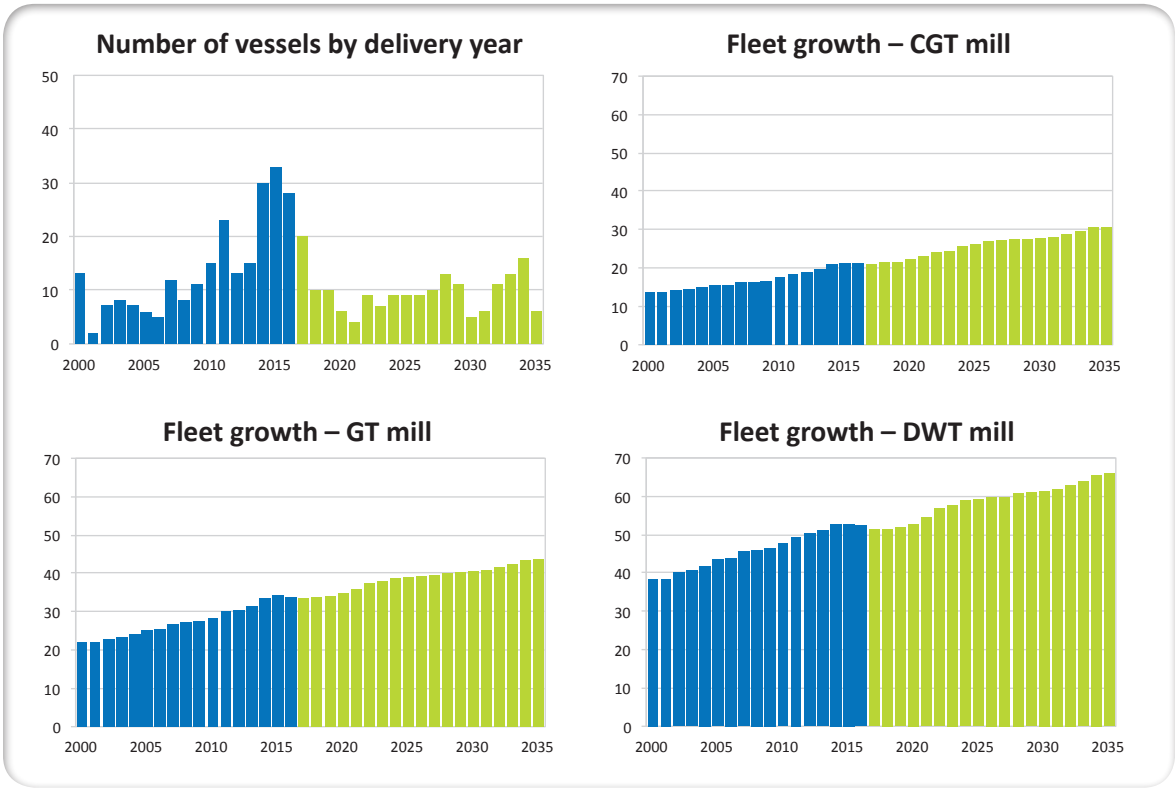
- Floating Production

With budgets being trimmed and with an intense pressure on costs, investment decisions are being deferred. Units are coming off contract and there are more idle FPSOs.

However, the demand for floating production units is expected to increase and drilling is not a "bottle neck" anymore. Costs have dived. There are over 200 projects at different planning stages (IMA), but with wait-and-see tactics on projects. Expected future oil price is what really counts.

The timing for when the projects will materialise is uncertain and there is a possible trend towards conversions rather than newbuilds. Thus, there is a challenge to evaluate number of newbuilds, but improvement is expected from 2018 onwards where Brazil's ability to order new units will be key.

This market is also an important driver for subsea and other offshore support vessels.



Source: SEA Europe

b. Construction & Subsea

- Construction Support Vessels

We have a major build cycle behind us and most of these vessels were ordered on speculation. Now we see that the backlog for the contractors continues to deteriorate as many projects are cancelled or postponed after the oil price slide. This has led to significant oversupply, downturn in charter rates and financial results. This has of course had a severe impact on the ordering of new ships.

There is uncertainty around new awards of new projects, but strong demand growth towards 2020 and beyond is expected where field development will be the key driver. New large projects are not likely to commence before 2018, but another driver is also growth in installed base and inspection, maintenance and repair markets (IMR). In the current market environment, quite much IMR activity has been postponed and will need to come later.

New innovative solutions, combined with low ship prices, could stimulate demand for new vessels even in a market situation with oversupply. As tasks are increasing in scope and complexity, many first-generation vessels will leave the market.

In the past, we have seen new and more cost-efficient technologies being developed in times with low oil price, new solutions which offered profit even in a difficult market. One example is well intervention ships (Riserless Light Well Intervention), reducing the cost of operations in mature subsea fields.

However, in the short term, as the financial situation for offshore ship owners in general is very challenging, the number of newbuilds will be very low.

Adjacent markets, like offshore wind installation and support, will be of increasing importance.

c . Offshore Wind

The main advantage with offshore wind vs. onshore, is that the wind resource is much greater, thus generating more energy from fewer turbines. Offshore wind is suitable for large-scale development near the major demand; large cities.

There are four life cycle phases of an offshore wind farm: pre-installation, installation, operation and decommission. In addition to purpose built installation vessels, there are many other vessel types needed in these phases, but most of these can be found within other commercial segments (e.g. crewboats and cable layers).

Development of offshore projects further from shore with increased turbine capacities is a trend. Greater distance from shore normally leads to deeper waters, where new foundation solutions are required. This will also have an impact on vessel size, requirements and capacities.

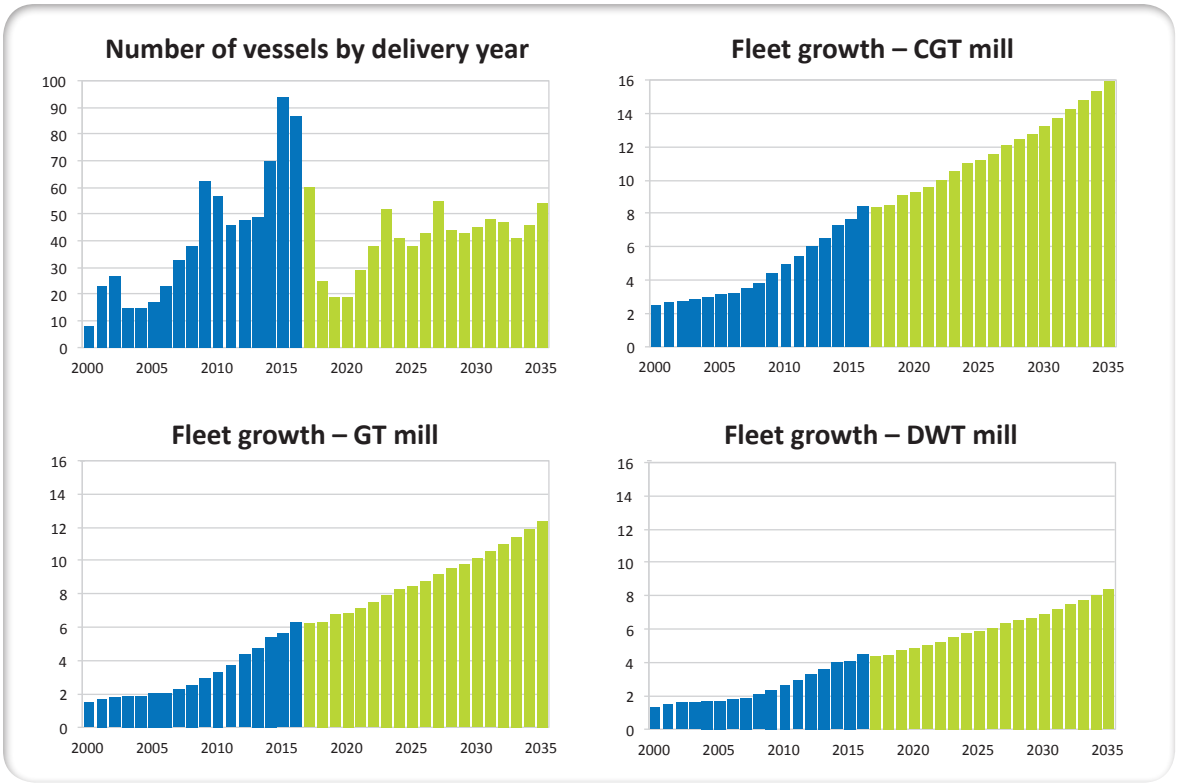
Costs have reduced significantly in recent years, predominantly due to the larger sizes of turbines installed with lower operational expenditures once wind farms become operational.

Strong growth in offshore wind markets is expected both in short and longterm. The average annual growth rate for new installations in the next decade is expected to be above 15%. In Europe, a tripling of capacity between 2020 and 2030 is expected.

As quite many vessels are too small to handle operations in deeper waters, the offshore wind industry is most likely going to meet a shortage of installation vessels. However, we are not talking about many vessels per year in the short and medium term.

The market for offshore wind support or service operation vessels is also growing. Around 2-4 vessels have been ordered per year since 2013 (> 80 m), but this will most likely increase going forward towards 2020 and beyond.

Due to low oil prices and the severe downturn in offshore markets, the utilisation and day rates for subsea support vessels are very low and many vessels are laid-up. As offshore wind support is an adjacent market to these, ordering of new vessels is likely to be negatively affected in the short and medium term.



Source: SEA Europe

d. Offshore Supply & Service

Demand for platform supply vessels (PSV) and anchor handling tug supply vessels (AHTS) mainly derives from drilling activity, field development work, and production facility support.

- Platform supply vessels

We have seen a dramatic fleet increase for large PSVs and the market did have earlier an amazing ability to absorb new tonnage. However, those days were over in 2014.

A significant fall in contracting was expected, but then the oil price slide in 2014 put further pressure on the market. Dayrates are now very low and a significant number of vessels are laid up.

There is still also a significant orderbook where the big majority orders were placed at yards in China in 2012-2014. However, quite many of these PSVs will never be completed or make it to the market. Perhaps more than one third of the orderbook will be in this category. Many vessels are in fact built, completed in 2014-2015, but not delivered to owners who are struggling financially, some bankrupt. Thus, the vessel status is “On Order” in most public vessel registers, while the real status should rather be “Scrapped” or “Cancelled”. Many completed vessels are already in poor condition due to no inspection or maintenance, no ventilation, mold and rust. The condition will get worse in the course of the next few years and most ships will of course be very hard to sell.

Charterers can now hire high-quality tonnage at a very low price. Thus, the outlook is best for new and efficient vessels. Older tonnage will often be ignored and vessels will be scrapped or removed from the market.

Consolidation may improve future ordering discipline and allow some more scrapping but it will not be enough to address the current supply overhang. A lot of scrapping is needed.

The PSV market will continue to be poor in the next few years. Future demand for PSVs will continue to grow, but it will take time to reach a market balance.

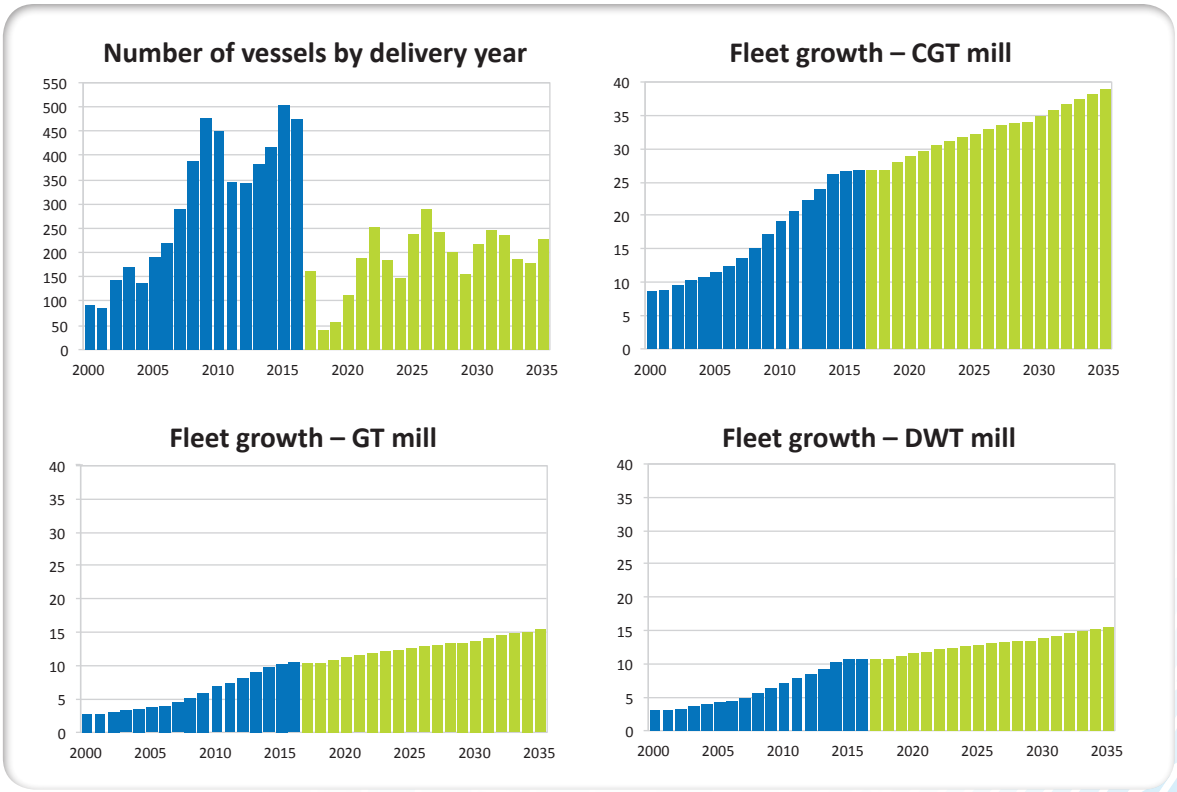
- Anchor handling tug supply vessels

Moored rigs are the key driver for anchor handling tug supply vessels; not only the number of rigs (semis and jack-ups), but the number of rig moves. FPSOs will also play a more important role as market driver in the future. Some light construction work is also a part of the picture.

The oversupply is not as severe as for PSVs, but AHTS are more exposed to exploration activity than PSVs and exploration activity is typically the most affected area when oil companies cut costs. With less exploration drilling and lower number of rigs, the AHTS market has been affected accordingly. Currently, utilisation and day rates are low with many vessels laid up.

The newbuilding activity for AHTS > 8.000 bhp was very low in 2008-2013. It picked up in 2014, but not to the very high levels we have seen in the PSV market. However, most owners are exposed in both markets and they are suffering losses accordingly.

Also in the AHTS market we see many vessels on order, but for the same reasons as for PSVs it remains uncertain whether all will make it to the market. Very few vessels will be ordered in the short term.



Source: SEA Europe

Summary

Due to the oil price slide, there is a dramatic slowdown in all offshore markets. After an all time high ordering activity, the downturn is both supply and demand driven. It can easily be called the worst offshore market of the past three decades. Day rates are down to break-even levels or even lower. Fleet utilisation is probably down to around 50%.

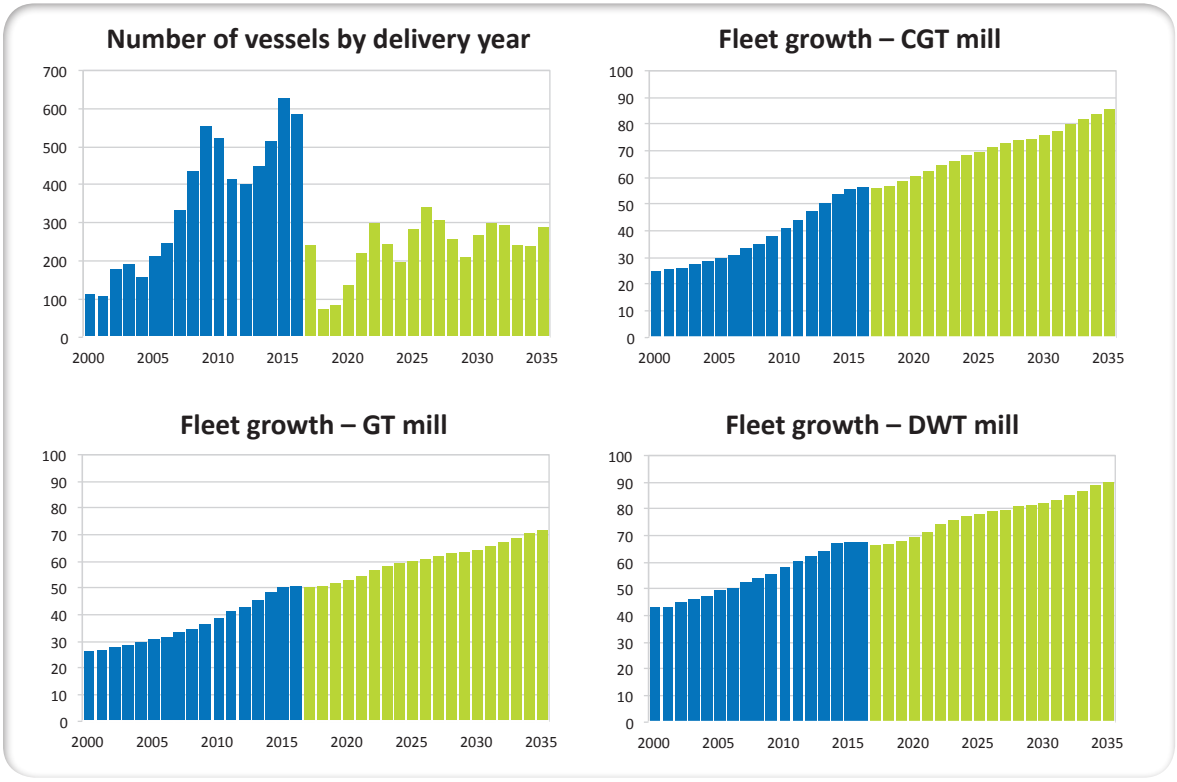
The oil price is still under pressure and the cost development for oil companies has required cuts in investments and postponement of projects. However, as we have seen before, cuts in investments and spending may lead to a new upturn later as lower growth in production leads to a higher oil price. The question is of course when.

As it is close to impossible to predict a future oil price development, it is also very difficult to predict the future level of vessel demand, but we know for sure it will take time before we see a more balanced market. Right now, instead of talking about light at the end of the tunnel, it is more about the tunnel getting lengthened.

Still, with a growing global population, increasing industrialisation and urbanisation, growth in energy demand where oil and gas will dominate for decades, the long-term outlook for offshore is most likely promising.

The market balance is often sensitive with trigger effects. As we have seen in the past when utilisation level is increasing above a certain level the charter rates are sky rocketing with an order boom as a result. Thus, the peaks may get higher and downturns deeper than what is possible to predict in a newbuilding prognosis. However, we will most likely not see the extreme peaks we have had the last decade.

Costs and efficiency requirements are important drivers for innovation and technology development. Thus, these are times with opportunities too. When this crisis is over, we will see a "new" industry with a totally different cost picture.



Source: SEA Europe