

Connect with Us:

Follow IHS MARITIME & TRADE

 <https://www.facebook.com/IHSMaritime>

 @IHS4Maritime

 www.ihs.com/maritimelinkedin

IHS.com/maritime_trade

1734_0416CU



**Evolving trends
influencing the global
maritime industry**



China begins to restructure its economy

The world's second largest economy attempts a change of direction. How will shipping respond?

China's economic expansion has been slowing for several years: the pace of growth has slipped to an unverified 6.9% for 2015, while exports declined from 35% of the economy in 2007 to less than 22% in 2015. Last year was tumultuous for the government in Beijing, with global markets suffering as a consequence. Although most countries would love to announce growth of 6.9% in any year, this is somewhat alarming for China – and for shipping.

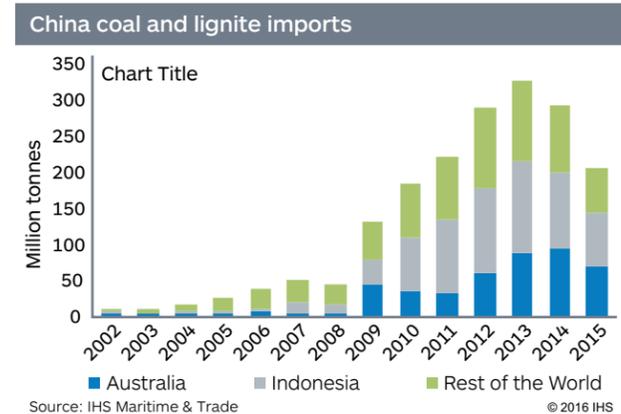
Economic growth has come to depend on efficient import of raw materials and export of finished goods, however an underlying trend has become established that cannot be monitored and measured through maritime. China's leaders are steering a shift from an economy driven by industrial output and trade to one driven by services and household consumption. Last year the service industries absorbed job losses in manufacturing. The transition will gain further momentum this year, but there are increasing concerns that high levels of hidden debt, an unsustainable reliance on household consumption, and a service sector yet to find its feet in a fiercely competitive environment are not the stuff of long-term resilience in an uncertain world.

What does this mean for shipping? It means the most significant source of demand for dry bulk, and a major contributor to the wet bulk and container sectors, is changing. Year by year, demand is reducing at a time when shipyards are completing work on a fleet of new vessels to meet the requirements forecast two or three

years ago. Sluggish economic growth in China has created a glut in steel – in 2015 China produced about 440 million tonnes more than it consumed – which in turn has put the brakes on iron ore imports from Australia and Brazil, and on metallurgical and thermal coal imports from Australia and Indonesia.

Further, China's stalling economy has cut expectations for crude oil demand. Energy consultants are unanimous in forecasting oil demand growth for the period 2016 to 2030 will be less than half the rate for 2000 to 2015. Government estimates for 2015 suggest that China's energy consumption rose by less than 1.0% which, in addition to keeping a cap on an oil price rally, will slowly erode demand for tanker shipping. In the decade to 2010, China alone accounted for 40% of growth in global demand for crude oil. The shift away from an industrial base and the need to reduce fossil fuel emissions will support the refocusing of energy majors towards gas and renewables.

China's burgeoning economy had a more significant influence on the health of shipping – dry, wet, containers, heavy lift and project cargo, and general cargo – than any of the other factors. Reduced demand for shipping from this source, in combination with the maritime industry's failure to react in time, has forced many vessel operators, shipyards, and related businesses to rebuild their future scenarios. It is not yet clear what kind of shipping will be needed by a more internally-focused Chinese economy, although the transition will take years to be finalised.



Impact of the continuing low price of crude oil

Low prices have had a devastating impact on the offshore sector but crude oil shipping is healthy

The second element of the maritime double whammy has been the collapse of crude oil prices. This was sparked by Saudi Arabia's refusal to continue its traditional role as global swing producer, especially when rival producers and exporters – most notably the United States' shale oil, Russian oil and gas, and Iranian crude – threatened to increase their share of an already overcrowded market. Tumbling from a zenith of USD117/barrel in April 2014 to a nadir of USD30 in January 2016, the oil price plunge has stimulated increased levels of demand – and increased demand for shipping – but has had a catastrophic impact on the offshore sector, and hasn't helped the trend towards alternative sources of energy.

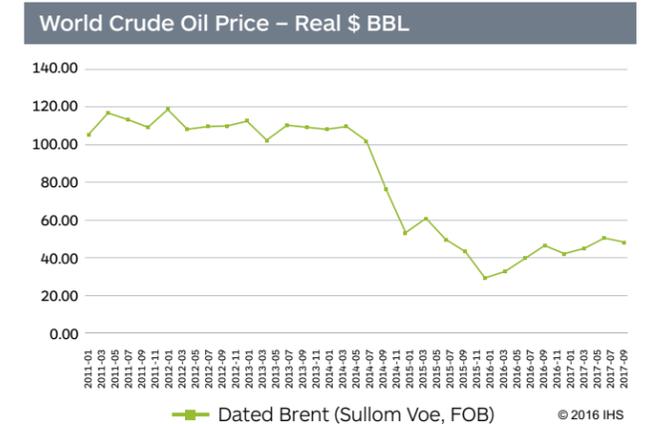
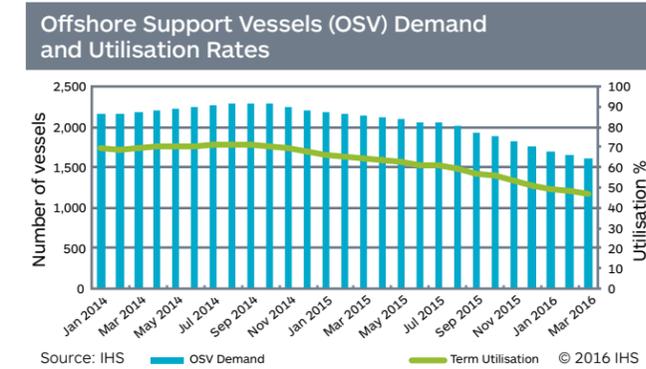
So far, this has been a good news story for crude oil shipping. Freight rates have been strong, the fleet of ships has been able to handle demand rising at a forecast 1.2 million barrels/day year-on-year, and newbuilding deliveries are entering the market at a steady pace. There are virtually no ships being used to store crude oil, although slow steaming and port delays provide an unintended storage. The expected expansion of floating storage in Q2 2015 didn't happen because consumption rose; consumption is expected to increase again this year, which will offer employment to newbuildings delivered in Q4 2016 and Q1 2017.

For offshore exploration and production, this has been very bad news. The flow of investment in drillships has ended, and with it the steady stream of offshore support vessels that worked in the northern North Sea, and

offshore Brazil and West Africa. Wells already under development will survive, but the deepwater sector looks likely to remain on hold in the short term; in the medium term, if prices remain low, the offshore sector might not return to recent activity levels until well into the next decade.

The wider implications of crude oil prices failing to rise above USD50/barrel reach far beyond the oil business. With COP 21 talks in Paris calling for a reduction in coal consumption, cheap oil will be viewed as an affordable alternative for emerging economies. However, while proponents of wind turbines argue strongly that clean tech solutions are still reasonable, it appears unlikely that biofuels will survive the onslaught of cheap oil. That has consequences for research and development in alternative sources.

IHS Maritime and Trade believe it's not the actual price of cheap oil that matters as much as the length of time prices of Brent and WTI remain below USD50/barrel. The past 18 months has seen significant change in the crude oil and refined product markets and in the offshore exploration and production sectors; shipyards that specialised in advanced construction of rigs and drillships and in construction for the offshore wind sector have had to reassess their business models; skilled and experienced workers have left the business. The concern for the commercial shipping sector at the end of 2016 and into 2017 is whether the increased pace of newbuilding deliveries will have a significant impact on freight rates.



Charter market weakness drives consolidation

Survival in several sectors of the shipping business will depend on mergers and acquisitions

Desperate times call for desperate measures; this is true of shipping as much as it is of any other business. Several high profile mergers have been announced in the container shipping sector, including Hapag-Lloyd's successful integration of Chilean line CSAV, CMA CGM taking on Singaporean company NOL and its container line APL, and the state-encouraged merger of COSCO and China Shipping Container Lines. The last of these now seems likely to drive transformation in the alliances, as mergers force carriers to choose between alliances or remain independent.

The most unlikely, although the most necessary merger, is between the two South Koreans Hanjin Shipping and Hyundai Merchant Marine. Debt levels reached by these two lines might suggest it would be hard to argue they should survive, but the government in Seoul has worked hard to create an environment in which the carriers can attempt revival even though, coming from competing chaebols, a merger could be tricky to negotiate.

Smaller operators in the container sector remain vulnerable, but there are plenty of geopolitical reasons why certain marriages won't be sanctioned.

The dry bulk sector is far more fragmented than containers. A prolonged period of low freight rates is now weakening vessel owners' resolve. In Singapore, BW Group, riding high on the back of oil and gas revenues, is openly in the market to snap up distressed assets as vessel values fall in tandem with dry market rates. It's a strategy that presupposes an upturn in the dry market at a date in the not-too-distant future; whether the policy will be to become a major player in the dry bulk business or to sell modern vessels at improved rates.

The ultra-low rates have also significantly dented shipbrokers' revenue. Earlier in the year, Arctic Securities, a Norwegian investor, attracted former Frank Mohn CEO Trond Mohn. He quickly built a stake of 32.5% in Arctic, and then announced the business was forming a 50/50 venture shipbroker with Geveran

Trading, owned by shipowner heavyweight John Fredriksen. Arctic aimed to be the leading broker in Norway, competing with both Clarksons-Platou and Affinity Shipping, with which Fredriksen had been working.

The tanker business is generating sufficient revenue to avoid the merger merry-go-round, but the offshore oil sector has suffered catastrophically since the oil price plunged in September 2014. This is a sector where acquisitions are expected when the upturn comes, and that will happen when the crude oil price rises – but there's no sign of that coming in 2016. However, with asset prices at minimal levels, this is the time when entrepreneurs can pick up bargains.

It is expected that the ship construction sector will also bring a slew of acquisitions as builders seek to dispose of poorly-performing assets to cut debt. Daewoo has been unsuccessful in offloading its Romanian yard at Mangalia, but Genting Hong Kong, owner of Star Cruises among others, has acquired Nordic Yards' facilities at Stralsund, Warnemünde, and Wismar and will integrate them into the majority-owned Lloyd Werft Group to build cruise vessels for the China market.



Big data, small data, and the issue of security

Shipping has come late to the Internet of Things party, but it's catching up fast. What's the latest?

Big data is almost clichéd; the talk now is of small data – only the information that is relevant at the time – and, more crucially, how to protect the storage and flow of information we are gathering.

Gathering data on its own leads to paralysis as opposed to informed action; making sense of data and connecting disparate pieces of data will enable shipping to gain actionable insight. However, decision-makers in shipping are struggling to buy into new forms of insight, which is the reason why they fail to incorporate it into board decisions. Data must be supported by analytics and insight in equal measure.

According to Patrick Thomson at IHS's advanced analytics team, shipping businesses need a new role, a maritime analytics leader, to “combine detailed experience on the quantitative side with detailed expertise on the industry side.” Until that role is defined, he said, “the industry will continue to make decisions on the basis that the flaws and discontinuities [in data] are routinely ignored, that the paucity of data is unfailingly accepted, and that the research and forecasts we cling to are biased and opinionated.”

Shipping is becoming technology-intensive; beside companies' new maritime analytics leader, whole new digital businesses are expected to be set up, with no assets under ownership but providing operational control. This will require standardised solutions rather than the fragmented technology the industry has grown up with.

Further, as a ship becomes a system of interconnected systems, connected not only to each other but via satellite to a shore-based control centre, the need to provide different levels of protection becomes urgent. Cyber security isn't something to be added to the ship, the experts caution. It must be part of the systems architecture. That will demand new knowledge and skills, new competencies. Cyber security becomes an issue when vessels are controlled from shore rather than just monitored.

The arguments appear strong: fewer people involved will mean fewer accidents, but dealing with incidents that occur at sea will be harder when there are fewer people on board. Vessel maintenance costs will be reduced if there is continuous monitoring of engines and hull structure, yet getting to this stage will require huge investment that can only be achieved with larger fleets and consolidated businesses.



It's important to remember that certain elements of the data-analytics-insight future are already present, informing decision-making, although the more futuristic elements appear beyond the imagination of most people in shipping. However, the flow of data is increasing rapidly, storage is becoming an issue to be addressed, new technological skills are available at energy and automotive businesses, and at propulsion and systems specialists. Understanding the ships of the future begins with advanced engineering in the aviation and communications sectors, and overlaps with them. Training the next generation of engineers alongside the next generation of maritime lawyers and business leaders must begin early, rather than leaving it to the very end.

Working with data, designing new systems, and thinking of the ship in a different way are expected to feature strongly over the next decade.

Mega container ships in the wider supply chain

As shipping absorbs ever-larger vessels, supply chain businesses are exploring the challenges

The successful handling of the CMA CGM container ship Benjamin Franklin at both Los Angeles and Long Beach in recent months showed the mega-ship would not necessarily bring new levels of congestion to the industry. Yet not all carriers have been convinced that size is everything. Speaking at the TPM conference, Hapag-Lloyd CEO Rolf Habben-Jansen commented that beneficial cargo owners are not insisting on mega-ships. “Why invest in something that won’t cut end to end cost?” he asked.

This is no longer an idle question. IHS Maritime and Trade data shows that four vessels of 14,000-18,000teu were delivered in 2013, with 14 in 2014, and a further 18 in 2015. Twelve more are expected to be delivered this year, with a peak of 25 in 2017, and 23 in 2018. Given

there are a limited number of ports and terminals able to receive these ships and handle as many as 10,000 containers from one call, mega-ships are challenging the very supply chain they were ordered to serve.

The reason for their popularity with carriers is that cost is spread across more units of cargo; one crew, one propulsion system, one hull but two or three times as many boxes as 10 years ago. However, the disadvantage is the pressure placed on land-side operators to get cargo away efficiently before the next mega-ship arrives. They will operate almost exclusively on the east-west routes, especially on the Asia to Europe/Mediterranean services and on the Trans-Pacific, as these terminals have been scrambling to invest in larger and faster ship-to-shore gantry cranes and rubber-tyred gantry cranes.

A contentious issue for the container business has been the need for shippers to provide carriers with verified weights of both the box and its contents. According to a timetable set by the IMO, all boxes are to be weighed and verified by July 2016. This has caused a great deal of heat but not much light as the deadline approaches. The reason for this regulation is the alleged widespread misdeclaration of container weights, as revealed in various investigations following incidents at sea. This issue is not confined to mega-ships but will affect all container vessels, and all terminals handling containers.

The arrival of larger vessels has also stimulated a surge in investment in new terminals with larger quay cranes, deeper approach channels, and more extensive storage

areas. This has driven improvements in handling efficiency, but has challenged logistics businesses at every stage of the supply chain. As ships of 22,000teu are placed on the newbuilding orderbook, and monsters of 25,000teu are on the drawing board, it is more likely that congestion at the terminal and across the supply chain will bring a halt to the race for size than the design criteria or shipyard capability.

Author: Richard Clayton, Chief Correspondent, IHS Maritime &Trade

For more information visit ihs.com/maritime_trade

