The global shipping market has undergone significant changes in the preceding years amid weakening global economy, changing trade flows and a challenging operating environment. Alterations in demand and supply have impacted each cargo segment – container, chemical, refined product, LPG, LNG and dry bulk – differently, dealing each shipping sector with different prospects. In this report, Drewry targets each of these segments and performs a scan across both the shipping and port sectors. An analysis is also performed for key issues that could impact shipping in the Arabian Gulf.

**Container shipping**

The container shipping sector has transformed in the preceding years. A more difficult trade environment has affected international trade and business in the region, including the impact of the fall in oil prices on regional economies, political instability in Iraq and Yemen, and the advent of international sanctions from 2012.

Overcapacity in the container shipping sector has become acute, resulting in lower and unstable container shipping freight costs for exporters and importers. Larger and larger containerships are operating on the shipping routes to and from the Middle East.

A revamp of the shipping line alliances has happened. The network of container shipping services of the top container shipping lines will, from April 2017, be provided through just three carrier alliances (replacing the previous four alliances). The new, larger alliances are 2M, Ocean Alliance and THE Alliance.

The Asia region (excluding the Middle East and South Asia) and the Europe region generate the largest flows of import and export container port volumes in the world, with 54% and 17% of the global box traffic, respectively. The Middle East and South Asia region is the third largest region, with about 63 million TEU in 2016 accounting for 9% of global container port traffic. Of this, 38 million teu of container port traffic was moved in the Middle East in 2016, representing 5% of global traffic. The volumes of containers shipped every year globally has increased by an average of 5% a year during 2010-2015 and is forecast to increase more slowly, by 3% a year on average, between 2015 and 2020.

**Demand forecast**

Container traffic in the GCC is estimated to have decreased by 2% on average in 2016, with a particularly large fall in the UAE (-6%), and is forecast to grow by 2% in 2017 and then 4% a year in 2018, 2019 and 2020. Demand in Oman is influenced not only by container imports and exports, but also to a large extent by transhipment at the hub port of Salalah.
Supply forecast and demand-supply balance

2015 saw a big disconnect between supply and demand in container shipping, with supply rising much faster than demand and creating a situation of overcapacity. In 2016, shipowners reacted by controlling the additional supply, but the situation of weak supply-demand is forecast to continue for the foreseeable future.

Chemical shipping

Global chemical trade was 231.2 million tonnes in 2016, having increased by 35.7 million tonnes from 195.6 million tonnes in 2010, at a CAGR of 5.1%. The tonne-mile demand increased by 2.1% per year between 2010 and 2016. Organic chemicals accounted for nearly half the global chemical trade followed by vegetable oil and inorganic chemicals, with methanol, PX and MEG being the three largest organic commodities traded worldwide. While the Middle East and North America are the key exporting regions of global organic chemical trades, the former is the top exporting region, with an annual volume of 14.3 million tonnes in 2016. The major importers of organic chemicals are located in the Far East, where Methanol To Olefins (MTO) projects are expanding rapidly.

Demand forecast

Drewry expects a slowdown in the growth of organic chemical trade in the next five years (at a CAGR of 1.2%), but the tonne-mile demand is likely to increase supplementing volume (CAGR of 2.1% from 2015 to 2020), benefiting from the increase in long-haul routes following more shipment demand from the US to the Far East.

Supply forecast and demand-supply balance

Drewry projects the chemical fleet to grow at 2.8% over the next five years reaching 112 million dwt. The modest growth rate in fleet is expected due to increased scrapping. More demolitions are expected because of the new regulations that will come into force with regards to ballast water and emission in 2017 and 2020 respectively. Owners will be faced with higher costs because of the new regulations. Drewry also expects freight rates on major regional routes to remain stable in 2017, but rates on long-haul trades are likely to be challenged by the oversupply of large vessels.

Refined products

The refined product market was uncertain in 2016, with plentiful supplies weighing on the growth in product trade. Most of the product trades in 2016 resulted from arbitrage economics and short-term imbalances, rather than conventional supply-demand dynamics.
Ample vessel supply, in line with increased inventories, affected freight rates in the product tanker market.

A slowdown in global oil demand and thin margins are expected to cap the refinery throughput this year, which will hurt the product trade, as will the expected de-stocking of products. After a strong build-up in the last two years, Drewry expects a drawdown in inventories this year to balance the market.

**Demand forecast**

Tonnage demand is expected to soften further in 2017 on account of the slowdown in global oil demand growth as well as the high inventories of refined products. On the other hand, Asia is expected to expand its refinery capacity by 0.7 mbpd in 2017, following capacity additions in China, India, Taiwan and Vietnam during the same year. Refinery expansion in the Middle East will continue to support product tanker demand. Since more than 70% of the scheduled refinery capacity expansion between 2019 and 2021 will be in the Middle East, exports of refined products from the region are likely to increase.

**Supply forecast and demand-supply balance**

The product tanker fleet will surge in 2017 on account of a flurry of deliveries expected during the year. The fleet, which has already increased by more than 13% in the last two years, is expected to add another 5% to close at 86 mdwt by the end of this year. Most of this growth will take place in the LR segment. Beyond 2017, the pace of fleet growth is expected to falter, which bodes well for the long-term prospects of the product tanker market. Tonnage utilization in the product tanker market will improve after 2019 as demand recovers and fleet growth slows down.

**LPG**

The US has been one of the leading LPG producers in the world, while Northeast Asia is the largest LPG consumer. The share of US LPG in the import mix of Asian countries is increasing as importers attempt to diversify their sources of supply. This trend is likely to continue in the coming years as the export capacity expands in the US.

The Middle Eastern countries are also holding on well as their exports have also remained stable despite increasing US LPG export. The Indian import demand has particularly helped Middle Eastern countries to maintain their exports when other major Asian countries are increasing their imports from the US. Going forward, Iran is expected to play an important role in LPG exports as new refineries come on stream.

**Supply forecast and demand-supply balance**

As Asian consumers increase their purchase of US LPG in an attempt to diversify their sources of supply and gain access to cheaper LPG. The share of Middle Eastern countries in LPG exports to Asia is expected to decline as LPG production in the latter grows moderately.

**LNG**

Global demand for LNG has been increasing at a rate of 2.3% from 2010 to 2015. Northeast Asia is the largest consumption center of LNG in the world. It accounted for more than 60% of global LNG imports in 2015. Japan and South Korea are the two biggest importers of LNG, followed by China and the EU. The key exporting regions are the Middle East and Oceania. The year 2016 witnessed the advent of new US LNG volumes heading towards Asia. Sabine Pass LNG owned by Cheniere Energy has already started production from its first three trains and will likely bring on a fourth train in the first half. In addition, Dominion Cove Point LNG is also due online in 2017. These developments will keep LNG market well-supplied.

**Demand forecast**

Drewry expects China’s natural gas demand to increase by 7.7% over the next five years. The contracted LNG imports remain stagnant because there are delays in overseas suppliers’ liquefaction construction in the short term. The gap between the natural gas demand and supply will lead to increased LNG imports to China, which is expected to be a key driver of growth in the global LNG trade in coming years.

**Supply forecast and demand-supply balance**

The LNG fleet expanded rapidly over the last five years at a pace of 7.1% per annum. The average size of the LNG fleet has also been increasing as ship owners eye long-haul trade from the US. According to Drewry’s orderbook, 37 new vessels (apart from the seven already delivered) will be joining the fleet in 2017, and 45 more will join next
year. Based on future deliveries and demolitions, Drewry projects the number of LNG vessels to reach 537 by end-2018 – 27% higher than the current fleet.

Given weak demand, the expanding fleet is only widening the supply-demand gap, thereby putting pressure on rates. This gap is expected to stay wide in the coming two years but improvements are likely to take place in 2018 as new plants come online in the US and Australia, which will help in increasing the utilization rate of the fleet. However, many vessels are likely to be delivered during this period.

**Dry bulk**

Seaborne dry bulk trade increased from 3.2 billion tonnes in 2010 to 3.6 billion tonnes in 2015 at a CAGR of 2.2%. China and India continue to play vital roles in the global dry bulk trade, which is expected to sustain a strong import demand for iron ore, coal and grain.

**Demand forecast**

China’s iron ore imports are expected to continue to increase on the back of low iron content domestic ores and continued growth in steel consumption despite steel capacity rationalization. India’s import of coal is expected to pick up as the government plans to electrify villages and continues to implement power for all policy, which is likely to increase power consumption in the country.

Coal trade is expected to grow by 3% in 2017 and 2% from 2018. Grain trade is forecast to increase by 6% in 2017 and 2% from 2018. Asian countries will continue importing huge amounts of grain because of the high growth in population as well as low prices on the international market. Supply from Australia, Europe and the US will also increase because of favourable weather conditions and rising domestic stocks.

Minor bulk demand, which contracted in 2016 because of disrupted supply and tumbling Chinese demand, is forecast to rise by 3% in 2017 and 4% thereafter. Infrastructure building plans, as well as the housing rally by the Chinese government, will result in high imports of iron ore, bauxite, nickel and other minor bulks.
Supply forecast and demand-supply balance

From 2010 to 2015, growth in the dry bulk trade failed to catch up with the pace of expansion of dry bulk fleet. The decline in trade activity resulted in an increase in idle fleet, bringing down utilization to 69-74%. Moving forward, higher iron ore imports by China, stricter environmental regulations to increase demolition activity and the contracting orderbook to keep future deliveries in check are the three key factors behind expectations for demand-supply balance to improve thereby leading to an increase in earnings of ship owners.

There are over 30 major ports in the GCC states, many of which critical gateway ports that handle all cargo types: container, general cargo, dry bulk cargo, liquid bulk cargo and Ro-ro. These ports have seen steep challenges in preceding years, as spending power declines across the region due to sluggish global markets and the slump in oil prices. Infrastructure plans are largely being scaled back, while the Gulf nations search for answers in their respective economies that are traditionally reliant on oil.

Jebel Ali Port remains the largest hub port in the region, although it too has seen slower growth in recent years despite its limited exposure to oil prices. New developments such as King Abdullah Port in Saudi Arabia and Khalifa Port in Abu Dhabi, along with expansions in major gateways like Jeddah Islamic Port and Ras Laffan Port, have introduced increased competition in the region.

Key issues influencing shipping

Environmental regulations

The International Maritime Organization (IMO) is mandated to set global standards for the safety, security and environmental performance of international shipping. In the next five years, two regulations related to ballast water treatment (BW treatment) and emission are going to have significant cost implication for ship owners.

New ships, contracts for which were signed after 2012, must have approved ballast water treatment plant on board. Ships contracted before 2012 (with ballast water capacity > 5,000 cu.m.) must install an approved system by 2018 or at the next docking. The retrofitting of ballast water treat system, and compliance for each vessel is estimated to cost about USD 500,000 to 2.5 million depending on the size of the vessels. This will be a significant burden on ship owners. Therefore, this regulation is expected to drive ship owners to send older tonnage to scrap yards, therefore easing excess supply in most shipping markets.

IMO has a well-established ship pollution rules. These are contained in the “International Convention on the Prevention of Pollution from Ships” known as MARPOL Regulation. MARPOL Annex VI sets limits on NOx and SOx emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances.

In line with IMO plans of global implementation of emission control norms, many flag administration; besides, China has been exploring the possibility of adopting the norms early. Ship owners will apply one or a mix of the following solutions in order to comply with emission norms:

- Use bunker with sulphur <0.5%
- Use scrubber and SCR
- Use fuel/water emulsion
- Use LNG as fuel

For ships planning to retrofit scrubber and SCR, the capex is estimated to be about USD 500,000 to USD 1 million depending on the size of the vessels.

Oil prices

After the global financial crisis of 2008-2009, oil prices rose above $100 per barrel in 2011 and continued their breakneck growth till mid-2014, after which they fell steeply, losing more than 50% of their value in less than a year. At the end of November 2016, OPEC countries finally agreeing for a production cut, with non-OPEC members like Russia also agreed to participate. Oil prices have risen by more than 20% since then.

Since bunker prices follow the pattern of oil prices, they are also likely to get a limited boost. The extent of the price increase and its sustainability, however, remain a question. Drewry expects the oil market to face cyclical problems such as supply-demand imbalances in the weak global macro-economic situation. The following key reasons that are likely to affect the overall oil market, and in turn, the bunker prices.

The oil inventories are at record-levels, therefore despite OPEC and non-OPEC members’ deal for a production cut (only for six-months), the supply-demand balance is unlikely to be restored in the short term. If prices keep increasing, Light Tight Oil (LTO) production in the US is likely to come back with a vengeance, which can be inferred from the increasing rig counts with limited gains in prices.

Middle East geopolitical landscape

The geopolitical situation in the Middle East significantly affects global oil production and trade. For instance, tensions in Iran and Iraq not only hurt the production of oil in these two countries, but also its trade patterns. When Iranian sanctions were in force, European and Asian buyers diversified their import sources to other Middle Eastern, African or distant Latin American markets, which in turn supported the tonne-mile demand for tankers. Although Iran’s production surged last year after the removal of sanctions, future growth will be highly dependent
on the geopolitical situation in the country as it will determine the level of foreign investment in its oil sector. OPEC has exempted some cartel members such as Iran, Nigeria and Libya from the production cut, considering that the oil output in these countries has already been affected by geopolitical factors. However, if producers such as Iran, Nigeria and Libya manage to push their output higher, the oil market will take more time to balance out. In such a case, the volume of trade will not change much, but the resultant change in trade pattern will affect the tonne-mile demand.

Nevertheless, the probability of this scenario panning out is low. The ongoing geopolitical disturbances in the Middle East, North and West Africa suggest that a surge in oil production in Libya, Nigeria and Iran is unlikely in the short term.

Piracy

Among non-traditional security threats, piracy is a major concern for the shipping sector. Piracy had become common phenomena between 2009 and 2012. However, with combined efforts of naval forces and use of private armed guards, the incidence of actual and attempted attack has decreased dramatically in recent years. Piracy, nevertheless, remains a major security challenge from the perspective of both human and economic security and besides posing a threat to life and cargo, it also affects port infrastructure, naval and commercial vessels, and offshore platforms, which require many years to build and involve huge investments. Any damage to these structures or vessels can cripple a country’s economic growth. Even if the ships are not directly attacked, piracy raises their operating costs by increasing their insurance and reinsurance premiums, appointment of private armed guards and use of other anti piracy weapons.

Empty container availability in Middle East

The Middle East is primarily an importer of packaged products moving in shipping containers. This means that the GCC region and the Middle East in general have plenty of empty containers available for exports. The largest shipping route serving the GCC – the Middle East-Gulf-Far East route – generates an annual traffic of 5.8 million full TEU discharged at ports in the Middle East (imports) and a traffic of only 1.8 million full TEU loaded at ports in the region. This implies a surplus of empty containers in the GCC of about 3.4 million TEU a year. Hence, there is no current issue with container equipment availability for exports.

The full study is available for GPCA members only

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The Gulf Petrochemicals and Chemicals Association (GPCA) represents the downstream hydrocarbon industry in the Arabian Gulf. Established in 2006, the association voices the common interests of more than 250 member companies from the chemical and allied industries, accounting for over 95% of chemical output in the Gulf region. The industry makes up the second largest manufacturing sector in the region, producing over US$ 108 billion worth of products a year.

The association supports the region’s petrochemical and chemical industry through advocacy, networking and thought leadership initiatives that help member companies to connect, to share and advance knowledge, to contribute to international dialogue, and to become prime influencers in shaping the future of the global petrochemicals industry.

Committed to providing a regional platform for stakeholders from across the industry, the GPCA manages six working committees - Plastics, Supply Chain, Fertilizers, International Trade, Research and Innovation, and Responsible Care - and organizes five world-class events each year. The association also publishes an annual report, regular newsletters and reports.

For more information, please visit www.gpca.org.ae.