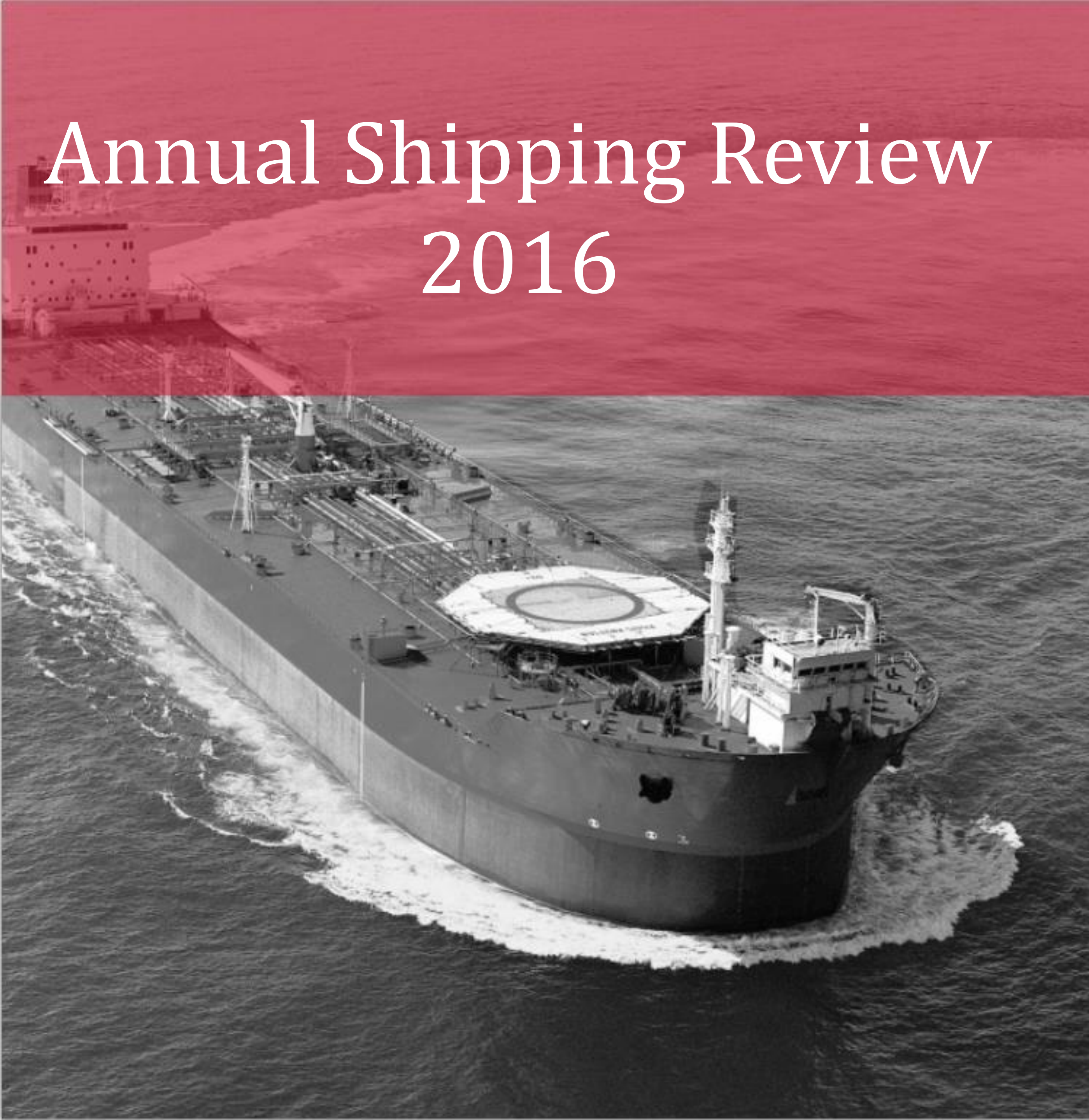
Annual Shipping Review 2016



Cardinal
Marine

Economic Snapshot

World GDP continues to progress at a slower, unbalanced and sluggish pace, as has been the case in this decade, and is expected to come in at 2.9% this year. Majority of advanced economies, this year, have witnessed low consumption, reduced fixed investments, reduced labour productivity and labour shortage due to which wage growth remains low. Furthermore, income inequality has resulted in higher household savings and lower consumption growth. Business investment growth in OECD countries have substantially reduced in 2015-16. Asset prices and credit growth marches on due to low interest environment. Global trade and investments continue to be weak and trade restrictions are on the rise. Meanwhile, in emerging markets, labour productivity concerns are attributed to skill deficiencies. Flow of capital to emerging markets is susceptible to risk and exchange rate uncertainty causes concern.

<u>US</u>

2016 first half showed weaker economic growth due to fall in oil prices, appreciation of dollar affected export competitiveness. In the second half of 2016, GDP growth picked up in U.S. due to strong domestic consumption and job growth. Unemployment data remains healthy and levels are similar to seen in 2007.

<u>Eurozone</u>

Political tensions, Brexit vote and refugee migration were the key themes to affect EU this year, leaving a clout of policy uncertainty. Euro area had weak growth in 2016 as domestic demand and export growth was lower, unemployment levels are similar to previous years and business investment is low. European countries that suffered in 2009 crisis: investment and domestic demand growth remains subdued partly attributed to impaired assets on their banks balance sheets and reduction in lending activity. German economy was weak in the second half of this year owing to lower demand of investment goods, fall in exports and low global trade. However, there were many positives as well that included: housing sector growth, higher housing income, increased consumption and low unemployment and growth on retail sector. French economy did well in the first-half of 2016 with the fall in energy prices, higher consumption and better profit margins for companies. Russian economy suffered due to recession in 2015-16, however, things are improving in second half 2016.

Asia

BRIICS countries have followed the trend of last few years since 2011 exhibiting lower per capita growth. Nonetheless, individual countries such as India and Indonesia exhibited stronger growth. India saw the fastest economic growth amongst G20 nations in 2016: due to higher urban consumption, increase in pension and wages, increase in exports and effective measures to control inflation.

Coming from the last two years, the concerns with China's economy and global commodity prices have abated as the former has progressed towards a moderating-stable growth and the latter has partially recovered. Chinese economy in 2016 continues to move ahead, although, at a slower pace. Other Asian countries such as Taiwan, Singapore, Malaysia and Korea have also seen slower demand growth in exports due to less demand from China.

Africa

Sub-Sharan Africa experienced a sharp slowdown in 2016 due to lower commodity prices. South Africa in 2015-16 had economic problems due to drought, high inflation, high unemployment and very low private investments. The situation, however, was better in the second half of this year due to picking up of exports and depreciation of local currency.

Latin America

Argentina economy continues to be in recession owing to high unemployment, lower global price of agricultural commodities, recession in Brazil, low investment and decrease in wages and lower consumption. As a result interest rates were increased this year to contain inflation levels. Brazilian economy suffered in 2015-16 due to a severe recession, bankruptcy and high unemployment rate.

Forecast

Global GDP is expected to show some improvement and expect to grow by 3.4-3.5%% in 2017-18. Economists suggest to adopt measures related to fiscal, structural and open trade policies with continued low interest environment to boost global growth. Advanced countries will be better off in increasing Government spending and other emerging economies could use fiscal initiatives such as improving education, increase R&D, increase Government backed infrastructure development, increase of tax efficiency and utilization, pension reforms and reduction of subsidies to accelerate long and short term growth.

Methods to fix the global economy are to create sustainable policies for reduction in income disparity/distribution, skill enhancement—especially in a dynamic environment caused by technology disruptions, social inclusion and free global trade.

US

New U.S. Government is expected to initiate a slew of measures such as Government spending and investment, and personal and corporate tax reforms to boost the economy and GDP is projected to grow by 2.5% in 2017-18. These reforms could also impact and provide boost to Non-OECD economies and neighboring countries of Canada and Mexico. However, flip side of more Government backed reforms in U.S. is continued growth in debt which may or may not yield the desired results.

EU, Russia & UK

Eurozone is anticipated to grow between 1.5-1.75% in 2017-18 with assistance from monetary and fiscal measures, although, concerns with regards high un-employment, low investment and slow local demand and asset quality/performance will prevail. OECD economic forecasts highlight France and Italy to show marginal GDP growth in 2017-2018 from 1.3-1.6% and latter to 0.8-1.0%. Meanwhile, German economic forecast remains robust in 2017-2018 at 1.7% due to higher household consumption and Government spending. U.K. is expected to grow its GDP by 1-1.5% in 2017-18, Impact of Brexit vote related to trade, financial flows, business investment and sentiment for other EU countries is to be seen and may take a few years to unfold. Economic situation in Russia is set to improve due to lower interest rates, higher wages, decline in poverty, reduced inflation, stronger currency and stability in oil price.

Asia

Japan in 2017 is expected to grow its GDP by 0.75-1.0% in 2017 due to slight improvement in weak Asian export trade and stronger US import demand. However, growth may again stall in 2018. India was projected to continue growing its economy by 7.7%, however, due to recent demonetization drive, there will be an effect on growth in the first half of 2017. Counter measures such as swift and effective implementation of GST may help. Growth in other Asian economies such as Indonesia has been good and is expected to sustain owing to stronger domestic demand, credit expansion growth and investment in infrastructure. China's transition to a more domestic consumption and service-based economy is expected to continue. GDP growth is projected at 6.25% in 207-18. However, the impact of this slower pace of growth in China continues to influence other emerging market economies, notably commodity producers and countries exposed to China's manufacturing sector. Nevertheless, the medium-term outlook for China remains clouded by the high level of corporate debt—a large fraction of which is considered at risk and vulnerabilities continue to accumulate with the economy's rising dependence on credit.

Latin America

Growth is set to return in 2017-18 in Argentina attributed to the Government adopting macroeconomic reforms and a stabilizing of commodity prices will also help Brazil recover. In 2017-18 Brazil's economy is projected to recover as a result of present Government being in power till Oct-18, higher investment and a will to lower public debt.

Africa

South Africa is projected to do better in 2017-18 owing to Government increased revenues, reduction of deficit and stabilizing of inflation, which will provide an opportunity for monetary easing.

(Source: OECD Economic Outlook, Volume 2016, Issue 2, November; World Economic Outlook October 2016, IMF)

Risks

Concerns in the short-medium term include geo political tensions, protectionist measures adopted by countries, inward-looking policies, Job losses due to global competition, wage growth, income inequality and cross-border migration. Elections in Asia, U.S. & even Europe in the present times are influenced by a combination of above. Furthermore, other factors bearing an impact on demand and growth involve drought in eastern and southern Africa, domestic conflict in parts of the Middle East and Africa and, therefore, increase in refugees to neighboring countries and in Europe.

Post 2009 depression, Governments continue to provide fiscal and monetary policy and measures, which in-turn support asset prices and emerging market capital inflows. However, low interest rates do remind us of present economic landscape and reality of low growth and possible deflation, especially in advanced economies. These measures do create an ever-increasing debt burden, which may need to be handled at some stage. Global GDP could become weaker by 0.4-0.6% if the reforms in U.S., China and Euro area do not progress as planned. Especially, the role of U.S. in uplifting of global growth cannot be overstated. China's transition from investments and exports based economy to focus on consumption and services will continue to influence commodity and machinery exporting partners.

Major risks, especially, for shipping sector is the slowdown in global trade in 2016 to 2.0% from 2.5% in 2015. Trade is expected to grow modestly in 2017-18 as import quantity growth in emerging economies is weaker vis-à-vis past trends. Lesser trade restrictions and trade costs, focus on fixed investment and infrastructure can improve the situation.

Businesses face more disruptions from geopolitical tensions, policy uncertainty, financial market volatility, and rapid changes in technology. Our shipping industry is not averse to these changes as change in trade patterns, climate change has caused us to adopt fuel efficient engines, Ballast water treatment systems, use of Gas and diesel fuels, CSR, PSPC, new ship designs et al. In an environment when return-on-investment is difficult to justify, a ship owner is faced with extra burden to comply with said disruptions. However, these challenges can be overcome with business need to be focused to these changes to stay productive.

(Source: OECD Economic Outlook, Volume 2016, Issue 2, November; World Economic Outlook October 2016, IMF)

Commodities

Oil has continued its run as the leading fuel amongst its peers accounting for about 32.0% of total energy consumption globally. Emerging economies consumption growth continues to increase: they now account for 58.0% of global energy consumption, although growth levels increased by 1.6% last year, which is lower than their 10-year average of 3.8%.

Consumer price inflation in advanced and emerging economies has been on the rise, resulting in higher commodity prices. Crude oil and coal have escalated maximum this year by 50% and later by 60-80% depending on the type and grade. In 2016, Natural Gas prices are in the US have been on a steady rise, however, prices in Russia have declined by about 20-30% this year. Metals indices also shot up this year due to stimulus: steel prices increased by 30%, Iron ore prices shot up by 40%-45%, Aluminum and Nickel by about 12-13% in 2016 although, Copper prices were similar to last year.

Agricultural commodities have been on the rise in 2016 expect for wheat and corn prices which have declined by 6.0-7.0% owing to good stock in U.S. EU & Russia. Sugar prices increased by 50-55% this year.

Natural gas Projections; Natural gas as source of energy is undoubtedly slated to grow in the next decade. Production increases by EIA & BP show large volumes from 27.2 trillion cubic feet (TCF) to 42.0 TCF in 2035, i.e. 54% increase. Similarly, BP & ExxonMobil project about 50 & 53% growth. Furthermore, bulk of this increase in natural gas production is projected till 2025 than the decade after. AEO2016 projects U.S. to change from being a Net importer of Natural gas of 1.0 TCF to Net exporter by 2018. BP, EVA & ICF differ in their projections: U.S. is set to become a Net exporter by 2020. BP and AEO2016 both project Natural gas Net exports to rise to 7.6 TCF by 2040. It is also stated that total U.S. consumption of Natural Gas by 2040 is about 34.4 TCF. Bulk of this consumption increase is anticipated to be absorbed in electric-power and industrial sectors.

(Source: BP Statistical Review of World Energy June 2016; Annual Energy Outlook 2016 with projections to 2040, U.S. EIA)

Tanker Sector

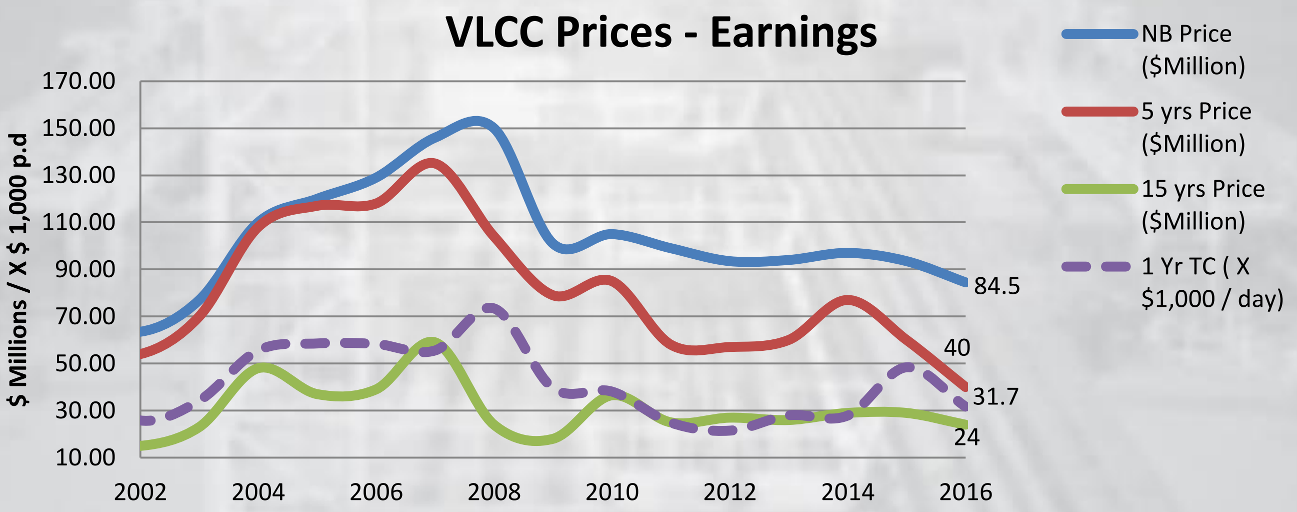
ASSET	NEW BUILDING ORDER BOOK				PRESENT FLEET	RECYCLING	TONNAGE PROFILE	
	2017	2018	2019+	TOTAL	TOTAL	2016	>20 Years	15-19 Years
VLCC/ULCC	37	26	5	68	696	4	109	118
SUEZMAX	66	22	0	88	512	1	61	95
AFRAMAX	71	40	11	122	965	6	93	144
PANAMAX	27	11	4	42	437	1	32	30
MR	74	28	20	122	1662	25	131	127

Crude Segment

This year started with strong VLCC spot earnings, albeit lower than 2015, and first quarter rates increased from $45,000-$60,000 per day. Thereafter, in second quarter VLCC earnings continued to fall and by mid-year they were at $25,000 per day. with good number of VLCC spot fixtures in June. In 3rd quarter earnings fell further and reached yearly lows of $17,000 per day interestingly, the fourth quarter of this year saw average earnings spike up to $59-60,000 per day with September and October seeing record number of spot fixtures. Period activity (one-year T.C.) in the VLCC' started with $45,000 per day . and stayed stable till summer. Thereafter, VLCC one-year period fixtures were done at $30,000 per day Suezmax's on the long-haul trade and average Aframax's earnings were about $34,000 at the end of the first quarter. However, in line with VLCC's, Suezmax spot earnings fell to $7,000 per day by the third quarter. On the contrary, Aframax's fared better and low of $8,700 per day was seen. Last quarter similar to larger crude carriers, both segments earnings escalated sharply to $31,000 and $35,000 per day. Suezmax period activity was less volatile and from start of the year at $32,000 per day is presently at $21-22,000 per day . In comparison, Aframax crude carriers period fixtures dropped from $26,500 per day - $15,500 per day

Supply

This year about 32.8 million deadweight crude tankers were expected to be delivered, whereas actual increase in overall fleet was about 22.2 million tons, i.e. 30% cancellation/deferments. VLCC Fleet size increased by 7%, Suezmax fleet grew only by 2.8% and Aframax tonnage increased by 5.8%. Most deferments and/or cancellations have been for Suezmax segment. Total percentage increase in total crude tankers fleet was about 5.33%. NB orders were most for VLCC’s. However, the increasing supply of tonnage could be a concern. Demolition activity had been minimal and only 1.3 million dwt was sold for recycling. Asset price movements for crude carriers dropped more than 25% for modern VLCCs and about 30% for older. Meanwhile, Aframax and Suezmax prices reduced by about 36% & 30% in both segments.



<u>Oil consumption in Emerging economies</u>

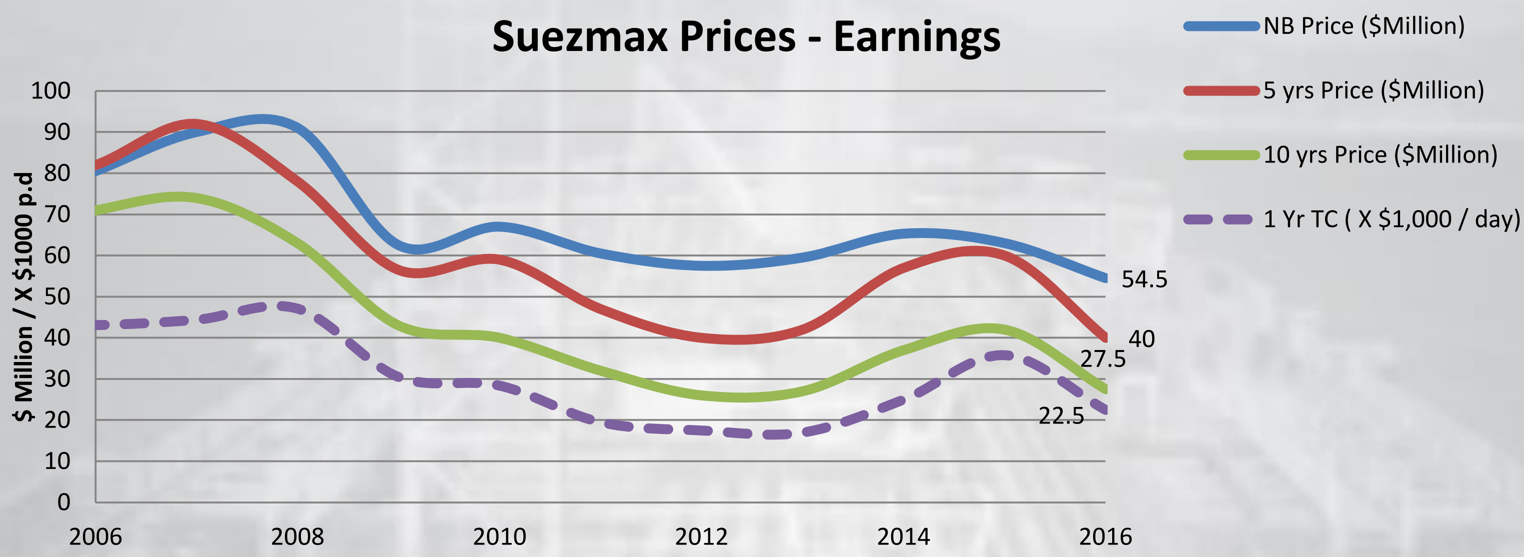
Overall Global Oil consumption is projected to grow at 0.9% per annum till 2035-2040 driven by demand from the freight, aviation and petrochemical sectors. For Shipping it is worth noting, that as per Long term trend till 2040: average ton-mile increases by 0.3% per year till 2040 and fuel (bunker consumption) increases by about 1.9% in the same period. Non-OECD demand for oil is expected to grow at a slower pace than last 20 years, but it is still more than OECD countries. India and China are expected to be major drivers of consumption. BP Energy Outlook projects oil demand majorly to grow in India and China till 2035 due to population and income growth. Indian economy is expected to have increased demand of 6 million b/d.

Demand

Global trade of crude oil and refined products expanded by 3 million b/d (+5.2%) last year, the largest increase since 1993 due more offtakes from Middle East. Exports of crude increased from U.S., South and Central America, Russia and Middle East. Crude's biggest gain in imports was from Europe, India & China. Region, where crude imports decreased, which include North Africa, East and South Africa and Australasia. Crude imports to U.S showed some increase in 2016 vis-a-vis- previous years, due to reduction in domestic production. Last year crude imports to China moved up by 6.3% amounting to about +770,000 b/d once again accounted for the largest increment to demand, while India (+8.1%, or 310,000 b/d) surpassed Japan as the world's third-largest oil consumer.

China's consumption growth increase, however, slowed to 1.5% in 2016, India on the contrary increased theirs to 5.2%. OECD countries witnessed a unexpected increase in Oil imports by 1.1% (about 510,000 b/d) as opposed to a decline of 1.1% witnessed in the previous decade. In line with increase in consumption, the production also increased 3.2% last year by 2.8 million b/d—strongest growth since 2004. OPEC production increased by 1.6 million b/d to 38.2 million b/d, exceeding the previous record reached in 2012, Indonesia and Gabon joined OPEC members in 2016. Non- OPEC production slowed from last year's record growth but still grew by 1.3 million b/d. The US (+1 million b/d) had the world's largest annual growth increment and remained the world's largest oil producer. Less production increases were seen in Brazil, Russia, UK & Canada. Meanwhile, Mexico and Yemen declined in its production with largest decline of about 200,000 b/d in Mexico.

(Source: BP Statistical Review of World Energy June 2016; Annual Energy Outlook 2016 with projections to 2040, U.S. EIA)



What Next?

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In comparison, African continent despite more population: 30% more people than China and 20% more than India, is expected to increase its energy consumption by only 10%. More than half of the increase in global energy consumption (fossil and renewables) is expected to be used for power generation. Oil supply from Non-OPEC countries is projected to increase supply by 11 Mb/d, while OPEC increases by 7 Mb/d. All the net increase in Non-OPEC supply comes from the Americas: US shale, Brazilian deep-water and Canadian oil sands. OPEC supply increase is projected to be majorly concentrated from the Middle East.

(Source: BP Statistical Review of World Energy June 2016; IEA World Energy Outlook 2016).

Total Quantity of Crude imported in U.S during the period from 2015-2040

With rapid growth in U.S. crude oil production, net imports fall as projected by EIA: AEO 2016. In the Reference case, total net imports of crude oil and products fall from 4.6 million b/d in 2015 to 3.3 million b/d in 2025, 1.7 million b/d in 2035, and 1.4 million b/d in 2040. In the BP projection, total net imports are even lower than in the AEO2016 Reference Case, falling to 1.2 million b/d in 2025. By 2035, the United States is a net exporter of 1.9 million b/d of crude oil and products. BP & EIA both project U.S. domestic crude oil production to increase in next decade (2015-2025) by about 10% from present levels. AEO2016 projects from present 9.4 million b/d to 8.6 million b/d in 2017 and back to 9.4 million b/d in 2025. BP projects from 9.4 million b/d to 10.2 million b/d by 20225. Thereafter, both projects lower production till 2040. IEA however projects, the production to increase by about 20-25% by 2025 and then drop by 2040 to 10.6 million b/d.

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(Source: Annual Energy Outlook 2016 with projections to 2040, U.S. EIA; IEA World Energy Outlook 2016; BP Statistical Review of World Energy June 2016).

Factors affecting Demand in 2017

Price of Oil may likely impact demand; however, we can anticipate crude imports levels to sustain due to strong internal drivers in place India and China and China's export trade for refined oil. One can argue though, if Oil price escalation is sudden and high, it may result in short term decreases in crude imports. Reason of a sudden demand-supply imbalance cannot be ruled out in the medium term due to underinvestment in oil production in last 3 years.

Thus, in 2017 one can anticipate focus on oil exploration, drilling and investment activities. In the event of sudden spike in Oil prices, trade and Shipping would be impacted to an extent as incremental demand from emerging countries such as India and China may likely reduce. Indian consumers would expect the Government to subsidize and remove taxes to insulate from an increased crude price.

This will also help in reigning in inflation in the country. Policy interference is this regard may be necessary as much of the slide in crude prices in previous years did not result in any major drop in petroleum prices in the country. On the contrary, due to demonetization drive in India demand for crude could be weakened.

(Source: IEA World Energy Outlook 2016).

OPEC’s & Russia’s anticipated cuts in production of 1.8 million barrels per day, which if materialized could lead to a supply deficit in crude inventories if demand is expected to sustain. Furthermore, the timing of US shale oil coming back will affect U.S import volumes. As per estimates from EIA US crude oil production is expected to fall by a further 420,000 bpd through 2017, which implies that imports to U.S. will likely sustain at least in the first half of 2017, if not longer.

China’s incremental crude imports in 2016 were due to permission for small private refineries to buy, process crude and export products and Government creating reserves. The permission for 2017 is still awaited.

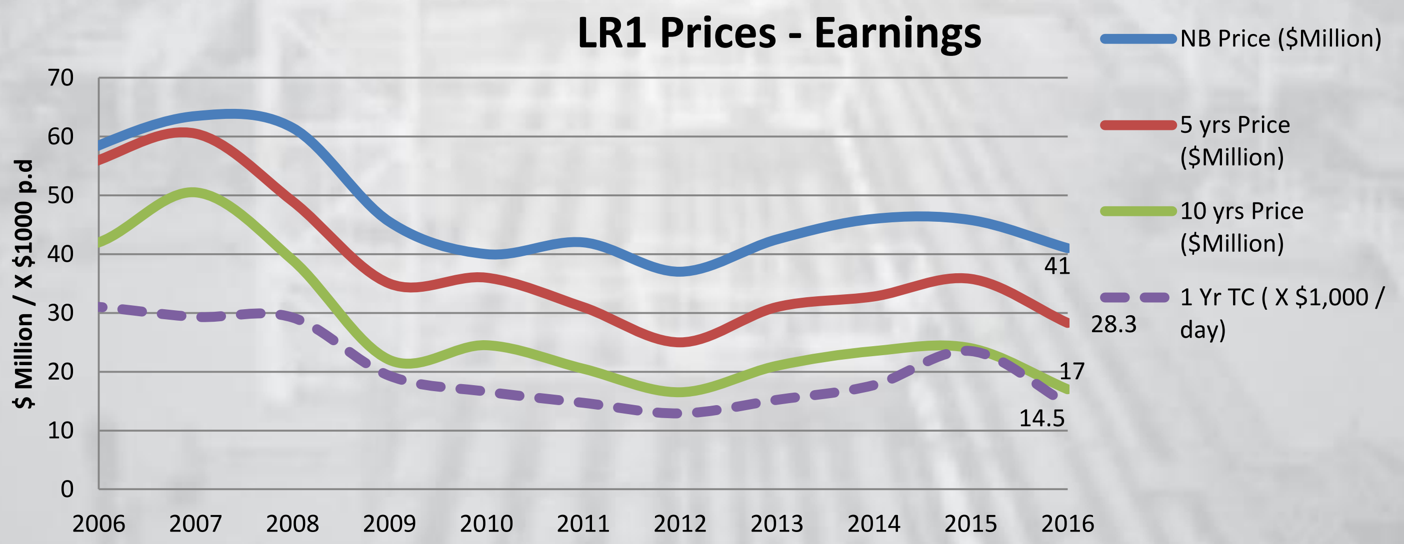
Global trade in 2017 will be influenced by change in oil supplies as Saudi Arabia is likely to cut shipments to Europe and U.S and increase focus to retain its preferred oil volumes to China. On the other hand, Iran’s crude imports to China have reduced, however increase to Europe and India persists. Iraq similar to 2016 is expected to continue to ship more oil to US and India in 2017. Furthermore, storage of crude oil at sea would be likely remain at present levels or reduce due to less merit in adopting contango.
(Source: Reuters)

Sector Outlook

Supply side risks emanate from excess Suezmax New buildings orderbook if it gets delivered or is delivered without employment. In either case, it may lead to capping and/or lowering of earnings, however, we expect not to reach earning levels of 2013. On the contrary, VLCC supply is not that excessive, however, excess Suezmax’s in water will impact rates for VLCC’s. It would help if 20 years old tonnage is scrapped, whereby, assisting the supply-demand balance. One the demand side, we do not expect major downward revisions, however, strong import levels seen in 2016 may not sustain. Thus, overall cautious/defensive approach is required with a scrutiny on Oil prices

Petroleum Segment

Petroleum tankers LR2 average spot earnings started in 2016 at $30,000 per day levels and period fixtures, LR2’s (clean) were accomplished at $30,500 per day . By June the period rates had dipped to $21,500 per day End-of-year LR2 fixtures (dirty, 6 months) have lowered to $17,000 per day Spot earnings for LR2 were lowest in September and rates of $4,000 per day were seen. Similarly, LR-1 earnings in 2016 were also lower than 2015, vessels average spot earnings in January were $19,000 per day dropping to $12,000 per day. by mid-year and $5,000 per day in October. LR1 period activity was at $22,500 in the first quarter and by last quarter rates have lowered to $12,500 per day Meanwhile, MR tanker highest average earnings in clean trade were seen in UKC-USAC-USG-UKC route and Asian movements, however, earnings were lower than 2015. Even in the third quarter when rates on various MR lanes were lower, Asian product trade was good. In the first and the fourth quarters of this year rates fared with better earnings, although the third quarter in line with overall tanker sector was dismal.



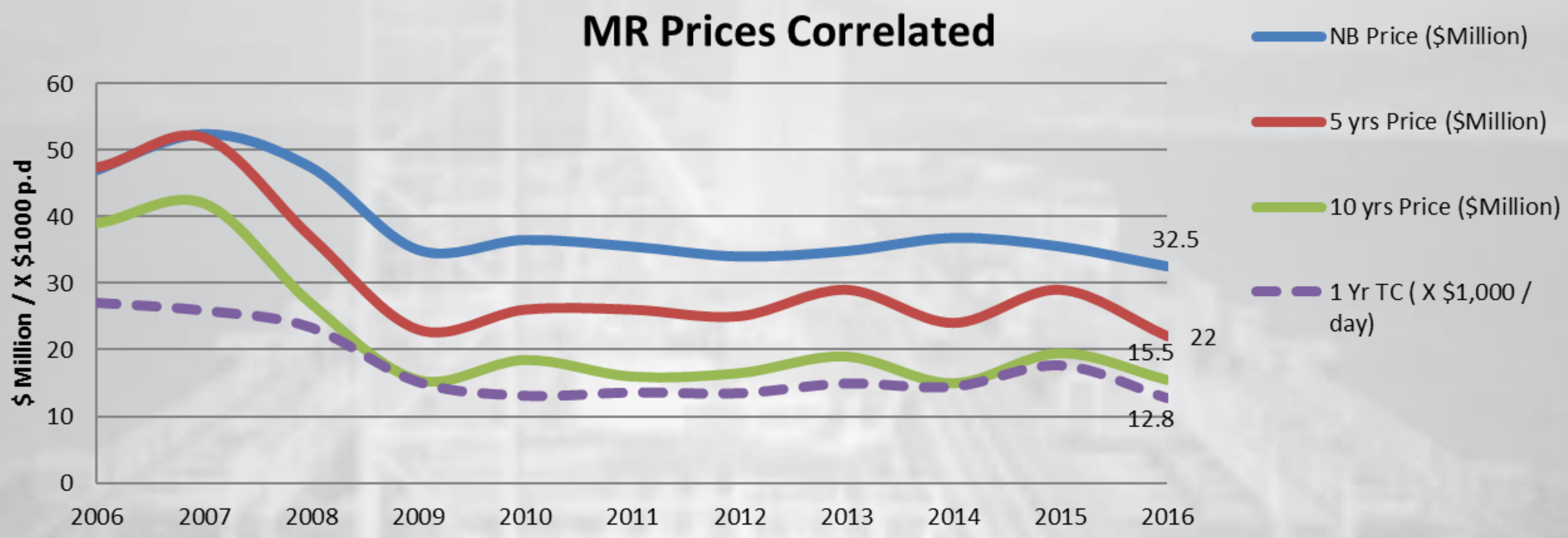
Supply

2016 petroleum tanker fleet size grew by about 6.7% and new building and recycling activity were both constrained. Due to excess tonnage and lower earnings asset prices for LR1 and MR's have reduced by 25% in 2016. About 2.2 million dwt LR1'S (30 vessels) was delivered. Meanwhile in MR segment most of the scheduled deliveries in the sector have been completed—about 119 vessels amounting to 5.8% fleet growth. The coming year has limited MR tanker orderbook with about 72 vessels (3.6 million deadweight) although, about 2.5 million deadweight LR1's and about 50 LR2 vessels are due to be delivered, which is a cause for concern. Despite excess deliveries scrapping was lesser in comparison to 2015 as about 1.2 million deadweight was recycled.

Demand

Refining activity picked up globally by 1.8 million b/d owing to low crude prices with Europe seeing most activity. Refining declined in Russia, South America & Africa. On the contrary, Refining capacity only grew by 450,000 b/d— lowest increase in 23 years due to expansion delays in China and closures in Australia and Taiwan. Global trade of refined products expanded this year and growth in refined product exports was again led by the US (+470,000 b/d); the country's net oil imports fell to 4.8 million b/d, the lowest since 1985. Light distillate consumption increased in U.S by 2.5%, although fuel oil demand increased in U.S. Overall North America saw a drop of 6.4%. Middle distillates saw slight reduction of 0.2%. Year-on-year the outages in Mexico, Brazil and Venezuela has led to a drop of up to 700,000 barrels per day (bpd) in refining capacity, leading the region to significantly increase its imports from U.S. Gulf Coast refineries. Refinery throughput in Mexico has been lower and not kept up with growth in demand. This has assisted in US Gulf coast refineries exporting to Mexico. Meanwhile, China's petroleum exports and imports increased last year. India, on the other hand, saw the share of petroleum imports increasing especially for diesel in 2016 due to refinery strikes cutting production and a slight reduction in exports. Imports continue to dwindle in Middle East, Japan, East & South Africa countries owing to various factors such as increased production, low demand and low growth. Trade Countries where product imports have increased are; US, Europe, Canada, Mexico, South & Central America, West Africa, India, China, Australasia & Singapore. Furthermore, exports of products from Saudi Arabia to Europe has increased in the last two years as Russia's and U.S. trade to Europe for refined products has reduced.

(Source: BP Statistical Review of World Energy June 2016; Reuters).



What Next?

Global output of Refined products

Last quarter of 2016 has continued to be profitable for European refiners, however, due to less volatility, excess inventory, reduced refinery margin and less contango could affect the refined trade in 2017. China's strong push for increased exports also assisted last year's increase in product trade. Plus seasonal increments such as refinery maintenance in Latin American countries increased the trade from US and to an extent European refiners. However, owing to higher margins, future volatility and imbalances might have been created. Refinery higher throughput was not well-matched with demand and so, even though oil demand growth in 2015-16 was the fastest in a decade (excluding 2010's post-recession recovery), it still was insufficient to absorb all incremental product output. In addition, some of the increased demand in recent years for petrochemical feedstocks has been met by NGL products, such as ethane and LPG. These are products that largely bypass the refining sector. Refined product stocks increased throughout 2014 and 2015 and started putting pressure on the margins at the beginning of 2016. Refiners in Europe have, as-a-result, already been forced to start retreating from the high throughput rates seen in 2015.

(Source: Annual Energy Outlook 2016 with projections to 2040, U.S. EIA; Reuters)

Factors contributing to Demand in 2017

Demand for Distillates in Asia Pacific, China, India & Africa and Middle East is expected to stay strong. Demand may return in Latin America and industrial activity picks up. Distillate consumption is likely to grow in 2017, however, Gasoline consumption may slow down: U.S. refiners are likely to see stronger demand for middle distillates such as heating oil and diesel in 2017 after two years of declining domestic consumption. Distillate consumption is forecast to increase by 60,000 barrels per day in 2017, after falling by 120,000 bpd in 2016 and 40,000 bpd in 2015, according to the U.S. Energy Information Administration. Distillate consumption is driven by a combination of heating demand (the smaller but more variable share) and freight demand (far larger and more steady) and both look positive, or at least not negative, in 2017. U.S. refiners strained to maximize output of Gasoline during 2015 and 2016 to meet rapidly-growing demand from private motorists. But, domestic gasoline demand growth is likely to moderate next year. Heating demand has been unusually low during 2016 because of the exceptionally warm winter of 2015/16 and the warm start to the heating season of 2016/17. (Source: Reuters)

India's demand for diesel and Gasoline could be tepid in the 1st quarter of 2017 due to demonetization drive, however, as the year progresses, demand is expected to go back to normal levels. However, unlike last year, the demand for diesel may not be incrementally high if production levels are maintained. On the long-term outlook, both India and China are expected to become net refined product importers, despite throughput gains of 3 mb/d and 4 mb/d respectively. Demand of Gasoline from Mexico, which is world's fourth largest consumer of Gasoline is expected to continue and grow at 2-3% per year as the state owned refiner's reduced investments. Country is the fourth largest consumer of Gasoline globally.

(Source: Annual Energy Outlook 2016 with projections to 2040, U.S. EIA; Reuters)

Longer term outlook for Petroleum trade

Companies both from oil exporting regions, such as the Middle East and Russia, and from major refining centers, such as Japan and Korea, are expected to start looking abroad for downstream partnerships to expand their businesses. This search for growing markets eventually could bring them to sub-Saharan Africa, where the extent of the deficit in transport fuels justifies new refining investments, albeit towards the later part of the projection period (2015-2035). At the same time, some refining capacity, elsewhere, will become redundant due to lower demand and refinery runs. Current spare refining capacity plus planned refinery additions over the next five years is already enough to meet the incremental growth in crude and condensate supplies projected over the next two decades (10 Mb/d). Assuming growth regions, such as China and India, continue to invest in refining capacity, Outlook implies a long period of volatile margins, with capacity reductions required in disadvantaged refining centers.

Almost 15 million b/d of capacity is at risk of closure by 2040, with Europe accounting for a third of the total. In oil products trade, non-refined products (ethane, LPG and naphtha) account for a third of some 3 million b/d growth in trade volumes, predominantly flowing from the United States and the Middle East to South America and Asia.

(Source: Annual Energy Outlook 2016 with projections to 2040, U.S. EIA; IEA World Energy Outlook 2016; BP Statistical Review of World Energy June 2016).

Long-term trend (till 2040) in the sector, one can infer that growth in the global consumption of liquid fuels will be driven by transport and industry, with transport accounting for almost two-thirds of the increase. Kerosene, Diesel and Naphtha will be the fastest growing fuels. Gasoline demand, which received a boost in 2015 as low prices encouraged a surge in driving in China and the United States. Over the longer term, such effects wane and demand grows more modestly, as fuel standards improve the efficiency of the vehicle stock. Gasoline consumption in non-OECD countries grows by over 5.5 million b/d, and global demand eventually reaches a high point in the early 2030s at just over 23 million b/d. This is not far in practice from today's level as growth in non-OECD countries is balanced by a commensurate reduction in gasoline for road transportation in OECD countries. The marginal changes in headline figures therefore mask an 11 million b/d swing in gasoline demand from OECD to non-OECD countries. Additionally, growth in transport demand is due to increases in vehicle ownership in emerging economies. This growth, however, is partially offset by sustained gains in vehicle efficiency, which slows the sector's growth post-2025. Global demand for Diesel used in cars is expected to reduce owing to vehicle efficiency, however, increase in Low-sulfur diesel used in shipping is projected to increase the demand by about 2.0 million b/d will likely aid refinery activity in Europe. Transport fuel continues to be dominated by oil (88% in 2035). The share of non-oil alternatives increases from 7% in 2014 to 12% in 2035, with natural gas the fastest growing transport fuel (6.3% p.a.). Another major source of demand growth for liquid fuels, especially diesel, is industrial use, especially in petrochemicals, which is the fastest growing source of demand. Growth in industrial use of oil is aided by the relatively limited scope for efficiency gains and fuel switching. Moreover, over 40% of oil used in industry is not combusted and so is less affected by climate policies. The global vehicle fleet (commercial vehicles and passenger cars) more than doubles over the Outlook, from around 1.2 billion today to 2.4 billion by 2035. Almost all that growth is in emerging economies—the non-OECD vehicle fleet more than triples from about 0.5 to 1.5 billion over the Outlook, overtaking the OECD in the early 2020s.

Sector Outlook

LR2's and LR1's vessels saw good revenue streams in last 2 years due to limited orderbook and increase in trade. Subsequently more new orders were inked, which, when and if delivered would suppress the growth in earnings. Thus, long haul trade (LR2's) demand needs to be watched carefully as rates have softened and at best marginal improvement may only be seen. MR tanker earnings were low in 2016 due to excess deliveries. In 2017, addition in tonnage is expected to be less than half of 2016, thus, there is potential to improve earnings. Concerns stem from possibility of reduced trade as demand for Gasoline in U.S. and China, which was high in 2015, could be more price sensitive this year.

Dry Bulk Sector

ASSET	NEW BUILDING ORDER BOOK				PRESENT FLEET	RECYCLING	TONNAGE PROFILE	
	2017	**2018**	**2019+**	**TOTAL**	**TOTAL**	**2016**	**>20 Years**	**15-19 Years**
CAPE / VLOC	55	27	17	99	1650	77	93	90
KAMSARMAX/ PANAMAX	105	25	3	133	2449	110	169	325
SUPRAMAX/ HANDYMAX	169	35	6	210	3443	82	318	315
HANDYSIZE	140	43	16	199	3311	84	651	408

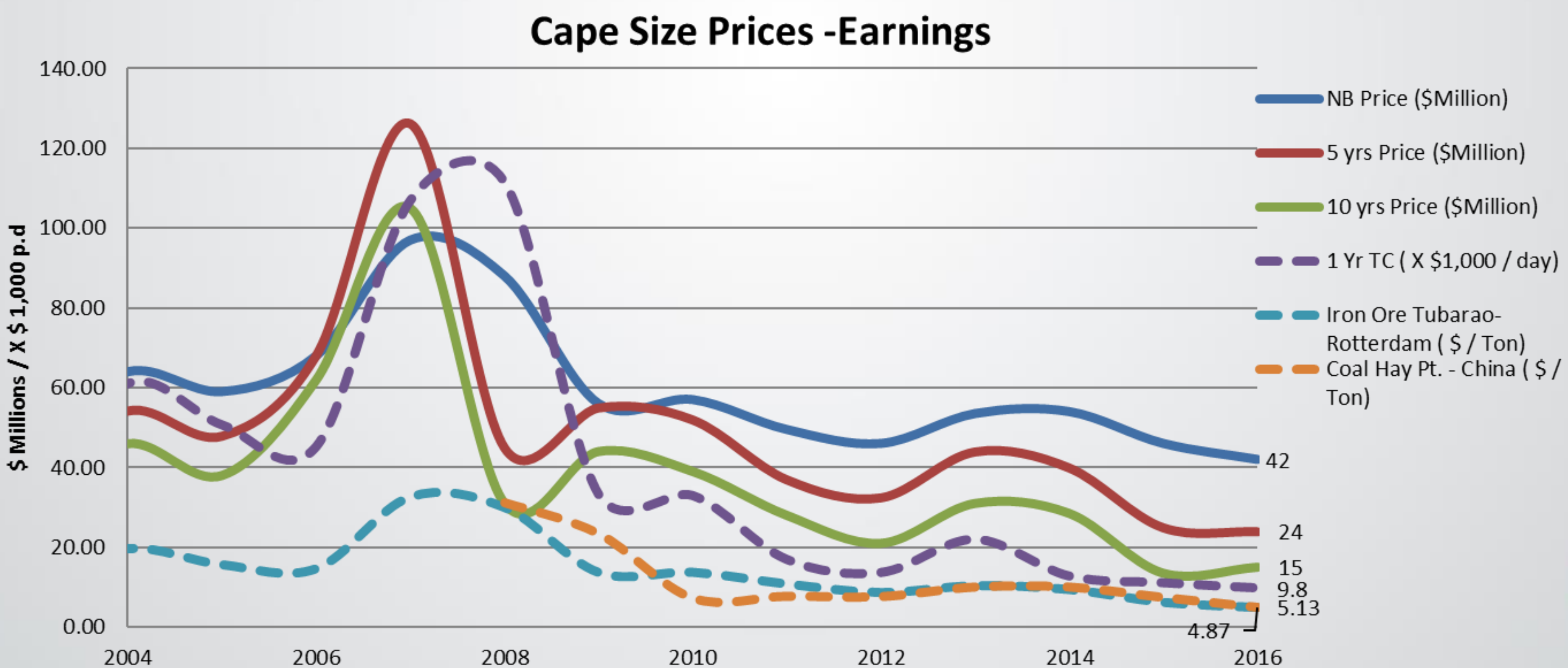
2016 started with low freight vis-à-vis 2015: Cape earnings on benchmark Tubarao-Qingdao Iron ore route were at $4,000 per day rates started to move to $8,000 in April and by August, the rates had spiked on this route to $17,000 per day In comparison, Cape coal trades from Bolivar spiked in April to $11,000 per day, September to $13,000 and November to $19,000. In contrast, South African coal, Cape shipments only witnessed good earnings in November to $16,000 per day. On the Panamax front, Indonesia-ECI and Australia-North China were the drivers of the business and saw rates going up from $3,500 per day in January to $11,800 per day in November. Grain trade on Panamax's from USG was also robust and from low $6,000 per day rates escalated in November to $14,000 per day levels.

Supramax weak earnings trend continued from last 2 years in to 2016 as coal trade revenue was very low and below break-even levels. Grain trade though from USG was seen at good levels and yearly earnings averaged around $12,000 per day. This year also saw reduced exports of Nickel from Philippines to China due to low nickel prices. Nickel trade could improve if Indonesian export ban is lifted. Meanwhile, average Handy earnings were also lower in 2016 similar to last year. However, the trend reversed in November and earnings spike to $14-15,000 per day due to higher Grain shipments from Latin America and U.S.

Supply

Dry bulk global fleet grew this year by about 5.7%, amounting to about 15.4 million deadweight addition. Cape fleet growth was just about to 1.6%. The Panamax-Kamsarmax bulker fleet remained static with just 0.1% change owing to high recycling activity. Meanwhile, Handymax-Supramax fleet grew by about 5%. Handy size bulker fleet was enhanced by 1.5%. Overall, dry bulk fleet order-book is about 11.0% percent of the present world fleet; with 10.7% order-book in Handymax-Supramax and in 13.0 percent deliveries to take place in Cape segment. Low freights for the first two quarters of the year brought dry-bulk new building contracting to an almost halt with very few new contracts being inked.

Sale and purchase activity in the sector was very high during 2016. Asset values for modern Cape bulkers increased slightly by only 2% during 2016. Modern Kamsarmax prices rose by 11-14%, however, for 10-12 year old vessels price appreciation was much steeper and during the course of the year prices rose by 30-40%. Prices in the Supramax segment witnessed a hike of about 60-70% and older Handymax vessel prices rose by about 50%. Similarly, Handy-size prices increased by about 25-35%.



Grain Production and Trade in 2016

Global rice production for this year is projected to be 481.5 million tons: up 2% from last year. and the highest on record, attributed due average expansion from major rice producers; Australia, Burma, Brazil, Colombia, Egypt, India, Indonesia, North Korea, Pakistan, Thailand, and the United States. Production forecasts for 2016/17 were lowered for China, the Philippines, Colombia, Guyana, and Iraq. Global ending stocks for 2016/17 are projected at 120.2 million tons, down 1.5 million tons from the previous forecast but the highest levels since 2001/02. U.S. and Vietnam's trading prices declined over the past month, while Thailand's prices rose. Global consumption for this year is projected at 477.4 million tons, about 2% larger than 2015. Although, global production will exceed consumption, thus, inventory will increase by 3%.

World wheat production increased to 751. 3 million tons up by 6.5% in 2016. Globally, wheat consumption has also correspondingly grown to 739.8 million tons up by 3.3% in 2016. Major wheat supplies and exports are expected to be strong from U.S., Australia, Canada, Argentina, Ukraine, Kazakhstan and Russia. Meanwhile, Consumption is increasing in Australia, EU, Vietnam, Bangladesh. In Indonesia food consumption is on the increase by 0.3 million tons, however, due to import restrictions placed more domestic corn produced locally is being used. Although, wheat imports from Australia persist.

Global wheat trade has increased to 175.8 million tons, up 1.6% in 2016. Increase in exports were seen from Australia (largest), Brazil & Argentina, however, Russian exports were down. In comparison, wheat imports to Brazil (as it required high quality feed), Bangladesh, Indonesia, Vietnam & Thailand, Wheat trade to Vietnam is on the rise as feed-quality wheat prices at historical lows, the country's pace of imports is high. Additional wheat from Australia and Europe is partly used for food, and partly to expand its wheat feeding for both animals and aquaculture. Meanwhile, in Bangladesh, food use is up this month, reflecting a high pace of wheat imports, mainly from Russia, Ukraine, Canada, and Australia.
(Source: Rice Outlook, Dec 13 2016, United States Department of Agriculture USDA ; Wheat Outlook, Dec 13 2016, United States Department of Agriculture USDA)

Demand

<u>Coal and Iron Ore trade in 2016</u>

Demand and prices for thermal coal and coking coal soared in 2016. Thermal coal prices have nearly shot up this year from low-mid 40's - $100/ton. Coking coal on the other hand opened the year at $80/ton and had shot up to $300/ton levels by November this year. Main reason for this dramatic increase is attributed to China shutting down domestic coal mines and curbing production. Overall global coal trade was 1% lower in 2016 as India's coal import volumes were lower due to more domestic coal production. Indian Coking coal import volumes were almost similar to 2015, however, reduction was mainly in the thermal coal sector. India has overtaken China as world's largest coal importer. Coal import volumes this year in other Asian economies such as Japan were similar to 2015, although marginal reduction was seen in South Korean imports. Meanwhile, Iron ore trade in 2016 was higher than 2015 due to more imports from China and Japan. Chinese steel production was higher in 2016. Prices for Iron ore have escalated by almost 65% this year. Vale predicts Iron Ore prices to remain stable in 2017.

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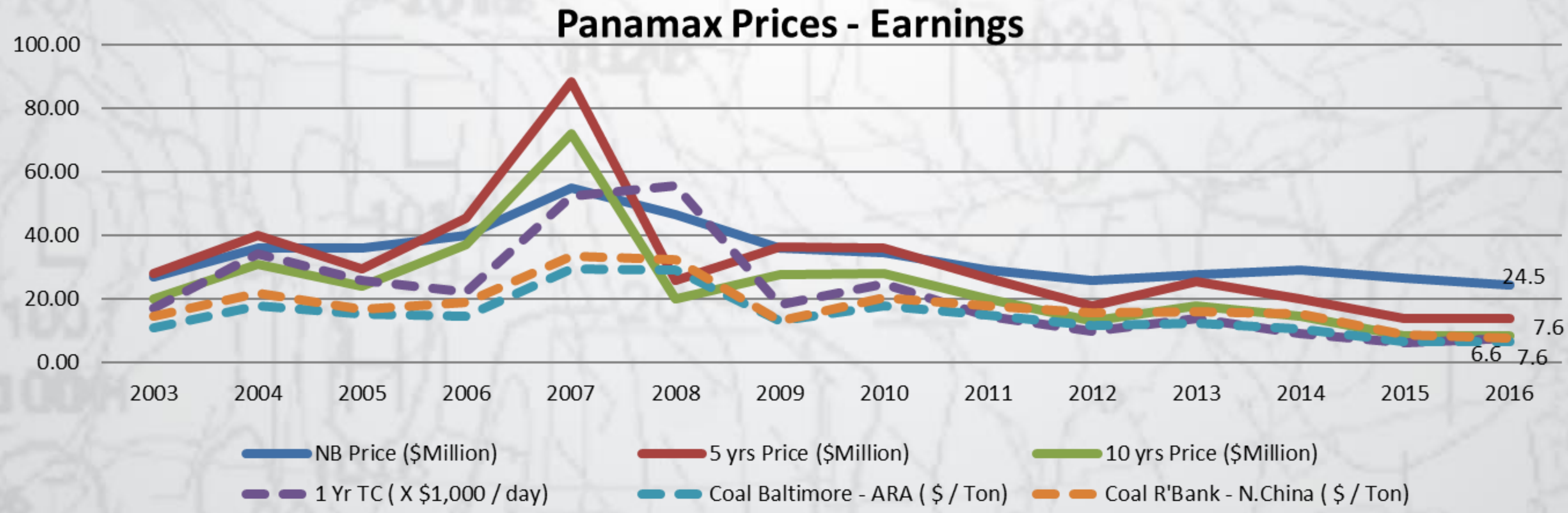

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World wheat production is projected to be much higher leading to expanded wheat trade, higher consumption, and increased stocks. The changes are driven mainly by Australia and good weather experienced, where a huge wheat output is expected, but are also supported by much lesser increases in projected production in China, the European Union, and Brazil.

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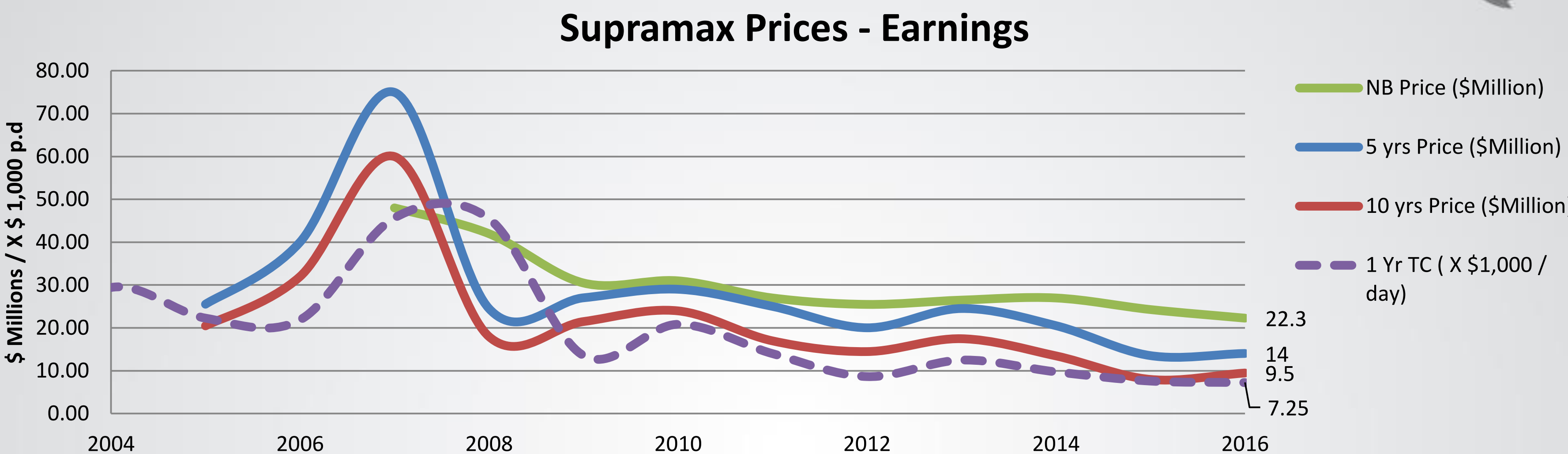
What Next?

Coal & Iron Ore: Price affecting Demand and Supply

Demand for commodities in China and India was driven by increase in inherent demand as opposed to increased supply. On the forecast front Iron Ore and Coal prices are said to drop every quarter as China reinstates domestic production. However, if coal prices remain lower as in recent past, coal production in China could be impacted. This bodes well for shipping as more coal will be imported by China. In 2017, however, China's Government is likely to permit more thermal coal production to ease the prices and meets its demand. However, coking coal production may not be increased. Similarly, Chinese steel output is expected to be marginally weaker due to slowing of real estate. Nonetheless, demand for Iron order is expected to continue and likely increase to more than 1 billion tons in 2017. India's coal shipments are expected to reduce as high prices and biggest domestic miner making every effort to increase domestic sales. New developments which may positively impact dry bulk trade are commodity exports from Iran wherein the Aluminium, Copper, and Zinc are expected to increase in the coming decade. (Source: Reuters)



<u>Long term Outlook for Coal</u>

Coal is projected to suffer a sharp reversal in its fortunes due to reduced consumption. After gaining share since 2000, the growth of coal is projected to slow sharply (0.5% p.a.), such that by 2035 the share of coal in primary energy is at an all-time low, with gas replacing it as the second-largest fuel source. The share of coal declines from 43% in 2014 to around a third in 2035. In contrast, the share of non-fossil fuels increases, reaching nearly 45% by 2035. It is worth noting that coal demand will continue to grow at 0.5% yearly. China's demand for coal grows by just 0.2% p.a. over the Outlook (2015-2035), down from over 8% p.a. during 2000-14, and by 2030 it is in decline. Even so, China remains the world's largest coal market, consuming almost half of global coal supplies in 2035. On the other hand, if due to socials costs, coal production cuts are high, production may not be halted in China and country may become the Net exporter of Coal. India shows the largest growth in coal consumption (435 M. ton), overtaking the US to become the world's second biggest consumer of coal. Over two-thirds of India's increased coal demand feeds into the power sector.

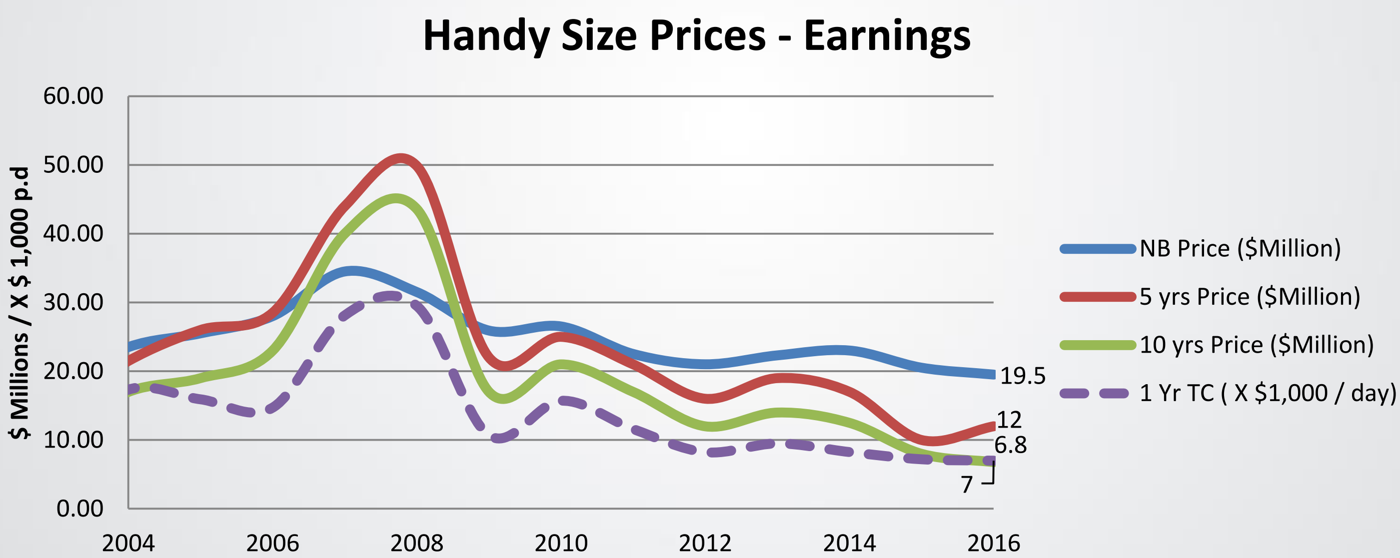
Coal demand is projected to fall by more than 50% in both the US and OECD Europe, driven by plentiful supplies of gas, the falling cost of renewables, and stronger environmental regulation. Coal demand in developed markets such as U.S and EU is expected to decline in the long-term horizon. Power generation is the main sector where all fuels compete and so it plays a major role in the evolution of the global fuel mix, with renewables and gas gaining share relative to coal. The outcome is a more balanced and diversified portfolio of fuels for power generation

(Source: BP Statistical Review of World Energy June 2016; IEA World Energy Outlook 2016)

Rice and Wheat Outlook for 2017

Global rice trade is projected to increase by 2.6% in 2017 to 40.6 million tons. This is still lower than 2014 when 44.1 million tons were traded. Purchases by top global import markets of Southeast Asia, South Asia, and Sub-Saharan Africa remain below 2014 levels and have more than offset increased imports by East China. On the export side, increased shipments from Australia, Burma, Cambodia, Egypt, Thailand, and the United States are projected to be more than offset reduced exports from Brazil, India, and Uruguay.

(Source: Rice Outlook, Dec 13 2016, United States Department of Agriculture USDA)



Outlook for Wheat trade is expected to be at similar levels, however, risks to global trade emanate if wheat prices increase is higher than demand. What plantation average is expected to reduce in 2017-18 due to low wheat prices. This coupled with weather anomalies in wheat producing countries could negatively, impact the trade.

(Source: Wheat Outlook, Dec 13 2016, United States Department of Agriculture USDA)

Sector Outlook

Supply-demand balance is slowly improving. Concerns stem from China's Government likelihood of permitting increased Thermal coal production, which in-turn may reduce imports. Indian thermal coal levels may reduce slightly due to increased domestic production, high coal prices and demonetization which may impact overall demand. Steel production in China may be softer this year which may impact Iron ore imports, however, not in a big way. On the bright side, coking coal imports to China and India levels will likely remain. Supply side Cape, Panamax and Handy size segments are in a better position and Supramax segment has excess tonnage. Overall dry bulk sector offers reasons to be cautiously optimistic.

Prices at which older assets are acquired is to be realistic as new maritime conventions such as ballast treatment systems and use of gas oil will impact Capex versus return on investment and are likely to push owners towards recycling, which is a positive for the sector.

Cardinal Marine

Container Sector

	New Building Order Book & Deliveries to Fleet	Present Fleet	Recycling	Tonnage Profile	
	2017 & 2018+	Total	2016	>20 Years	15-19 Years
Containers	416-3.21 MILL TEU	5167	179	613	842

Supply

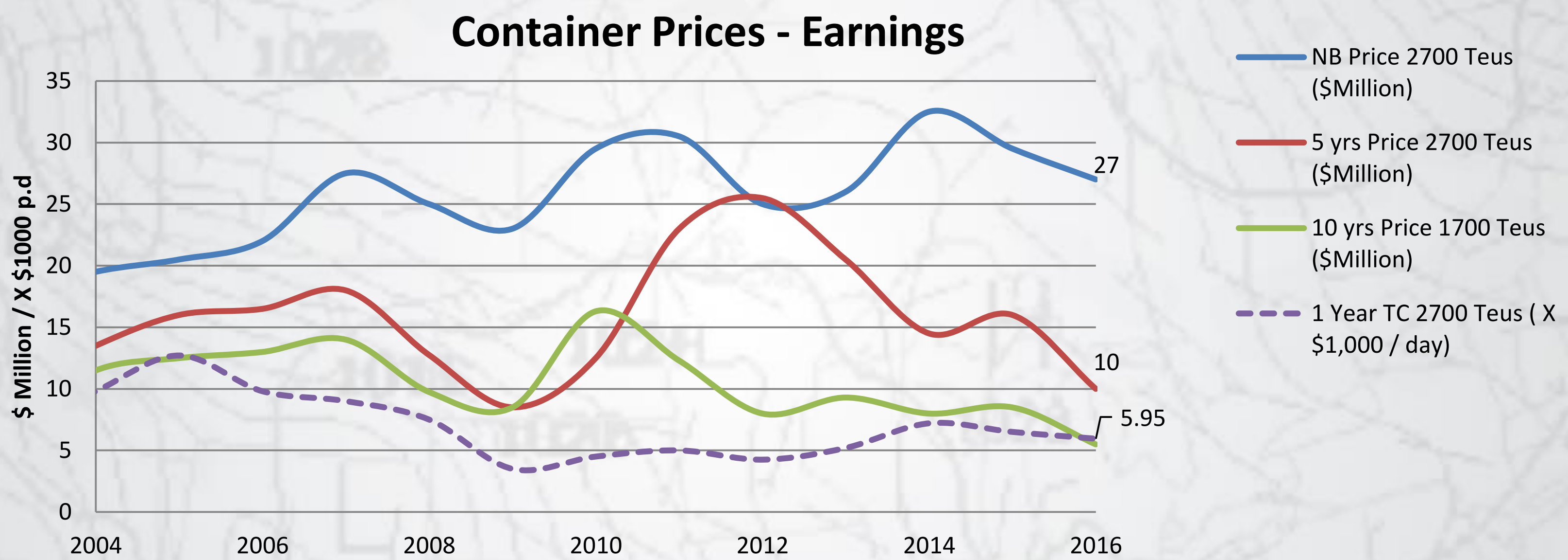
Owing to high recycling activity, the total container capacity has marginally increased this year. Of the 1.2 million TEU capacity that was to be added in this year, only 0.69 million TEU vessels were delivered until November and most of the remaining have been deferred for later deliveries. A record 8.7 million deadweight have been sold for demolition and the youngest among sold is aged only 10 years. Deliveries in 2017 onwards shows an upcoming addition of about 3.2 million TEU capacity in the present fleet. Of which 1.5 million are Post Panamax size. Meanwhile, world feeder tonnage continues to decline and despite number of deliveries expected in 2017, global fleet will still be lesser than past years. Trend in ordering and delivery of Post-Panamax container vessels continued in 2016. Due to which demand for 4000-5000 TEU ships declined and they were scrapped at a record rate. Overall demolition of containers was very strong in 2016 with about 8.5 million dwt. Major container owners such as Maersk: expect demand-supply balance not returning for a few years to come.

Demand

Due to low demand, 2016 will be remembered as a year of major consolidations in the container shipping industry. Trouble began on the key routes in the latter half of 2015 and continued going into 2016 with trade on the Asia – Europe route slowing significantly and increasing numbers of ultra-large containerships (ULCs) were delivered from the yards. The trend of low freight has reversed towards end of the year as volumes have shot up and port throughput have increased in Hong Kong, Singapore and China.

(Source: Seatrade Maritime New: The Future of the Container Industry: 2016)

However, these have not resulted in improved freight due to excess ship supply. Feeder ships and vessels up to about 2500-2700 TEU are still being preferred and the drop-in earnings have not be as drastic as larger tonnage. Contrastingly, the situation is different for the Intra Asia trade routes that extends from Japan and China to Myanmar and Indonesia. The emerging Asian economies, rapidly rising spending power of the middle-income population coupled with the growth of e-commerce in the region is boosting the demand of finished goods and has made this route attractive for smaller sized vessels.



What Next?

Projections of a rise in the Global GDP may boost box trade however the effects of this may not be result in increased earnings owing to the excess tonnage. Debate of regionalization versus globalization is still on. Decisions such as sale Hamburg Sud to Maersk Lines, may not be the last of such action

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