

January 2017

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## MISC Financial Calendar

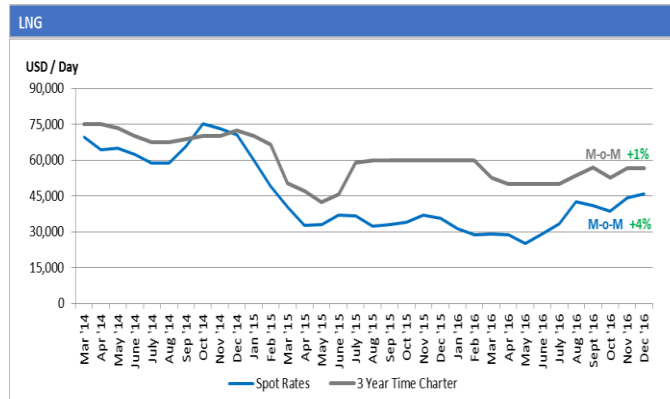
4Q FY2016 Quarterly Results

Friday, 10 February 2017

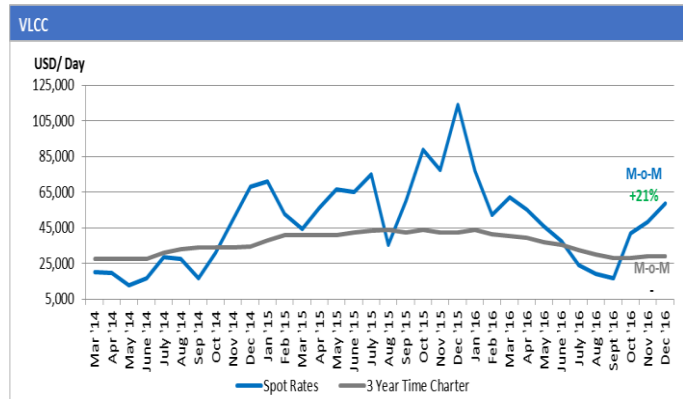
## MISC Announcements

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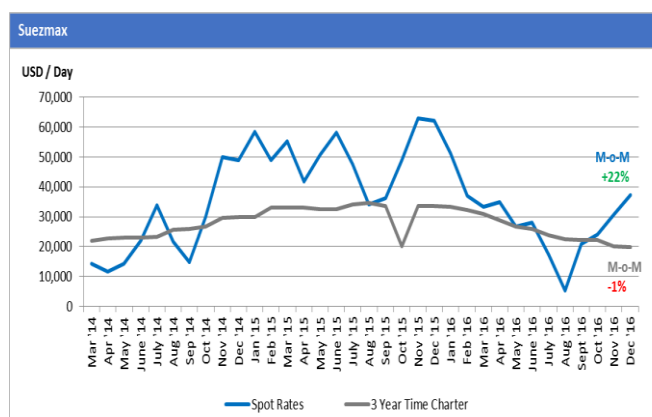
## FREIGHT MARKET



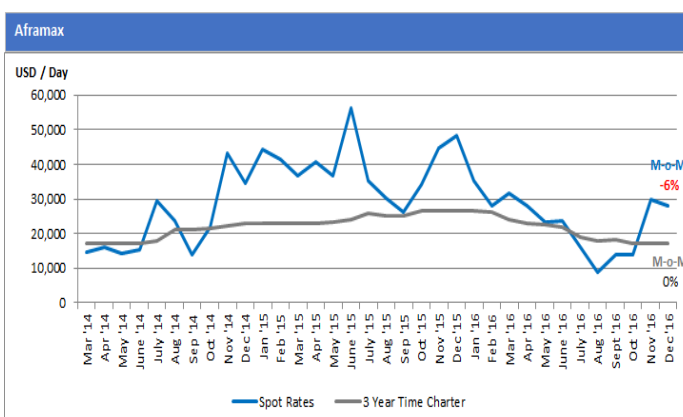
- Supply instability at Gorgon and Angola, leading to higher volume of West – East arbitrage trading and demand for vessels in the Atlantic basin.
- Quiet second half of the month due to the year-end holiday season.



- Spot rates continue to rise with the peak winter months demand.
- Stronger demand from both the Middle East along with West Africa with pre-holiday rush.
- Heightened production from the OPEC countries ahead of the production quota cut in January pushed up activity and demand for vessels.
- There was only 1 new VLCC delivery during the month.



- Temporary weather delays had impacted movement in the Black Sea and Mediterranean which helped to push up rates.
- Active Asian buyers ahead of new OPEC production limits added to the peak seasonal winter demand.
- There were 2 new deliveries of Suezmaxes during December.



- Decline in rates were due to an oversupply situation which has not improved.
- Deliveries of 8 vessels each were recorded during the November and December period which added further to the current oversupply conditions.
- Influx of coated clean petroleum product tankers switching into the more lucrative crude tanker market.

### FREIGHT MARKET

USD/Day	Nov 2016 Avg	Dec 2016 Avg	1-Month +/-%	2016 Avg	2015 Avg
<b>LNG</b>					
Spot Rates	44,375	46,000	4%	34,796	38,430
1 Year Time Charter	34,500	34,700	1%	32,639	36,119
3 Year Time Charter	56,500	56,700	1%	54,079	56,750
<b>PETROLEUM</b>					
<b>VLCC</b>					
Spot Rates	48,544	58,559	21%	44,900	67,279
1 Year Time Charter	30,000	30,125	1%	38,352	45,805
3 Year Time Charter	29,000	29,000	-	34,496	41,869
<b>Suezmax</b>					
Spot Rates	30,725	37,375	22%	28,897	50,411
1 Year Time Charter	19,875	22,000	11%	27,381	35,024
3 Year Time Charter	20,000	19,938	-1%	25,780	33,063
<b>Aframax</b>					
Spot Rates	29,943	28,127	-6%	23,368	39,614
1 Year Time Charter	17,000	17,188	1%	22,334	26,577
3 Year Time Charter	17,250	17,250	-	20,957	24,619
<b>MR2</b>					
1 Year Time Charter	12,250	12,525	2%	15,078	17,754
<b>CHEMICAL</b>					
<b>Spot Rates (USD/Tonne)</b>					
Rotterdam - Far East	105	106	1%	107	105
Rotterdam-Taiwan	77	79	2%	80	85
Gulf-Far East	32	34	7%	38	46
Singapore-Rotterdam	72	73	1%	76	91
<b>Time Charter (USD/Day)</b>					
1 Year Time Charter 19,000 dwt	15,000	14,000	-7%	15,513	15,233
1 Year Time Charter 37,000 dwt	11,750	11,750	-	13,995	15,877

### ASSET VALUE

USD 'Million	Nov 2016 Avg		Dec 2016 Avg		1-Month +/-%		2016 Avg		2015 Avg		
LNG											
Newbuild (DFDE, Atlantic Max)	193		192		-1%		196		200		
PETROLEUM											
VLCC											
Newbuild	85		85		-		89		96		
5-Year	60		60		-		69		81		
Suezmax					-						
Newbuild	55		55		-		58		64		
5-Year	40		40		-		51		60		
Aframax					-						
Newbuild	45		45		-		48		53		
5-Year	29		29		-		35		46		
CHEMICAL											
IMO II 37,000 dwt	S/S		Coated	S/S	Coated	S/S	Coated	S/S	Coated	S/S	Coated
Newbuild Prices	48		29	48	29	-	-	50	30	59	31
Secondhand Prices - 10 years	35		16	34	16	-1%	-	36	17	37	16

### FLEET DEVELOPMENT

No. of Vessels	Current Fleet	2017	2018	2019+	2020+	Total Orderbook	Orderbook as % of Fleet
<b>LNG</b>							
LNG Carriers	441	42	40	12	5	99	22%
<b>PETROLEUM</b>							
VLCC	643	51	36	0	0	87	14%
Suezmax	509	71	16	0	0	87	17%
Aframax	695	46	39	3	1	89	13%

### INDUSTRY HEADLINES

#### **LNG: Outages and cold wave trigger Asian LNG market boom**

An unprecedented outage at the Gorgon liquefied natural gas plant in Australia and a cold wave in north Asia have driven up Asian LNG prices, revived long-haul LNG shipments to the region and pushed LNG vessel spot rates to over \$48,000 per day. The last time spot LNG carrier rates and LNG prices for delivery into North Asia reached these levels was in early 2015, and traders and shipbrokers in Singapore said they had not seen this level of activity in many months. In early December, train one of the Chevron-operated Gorgon LNG project halted production, after a temporary shutdown in mid-November and several start-up issues since it started operations earlier this year. The timing of the outage could not have been worse, as its main customers were gearing up to stockpile the fuel as an early cold wave swept across the region. These included China's state-run oil major PetroChina, Japanese and South Korean utilities and even India's Petronet LNG. As buyers and traders scrambled to replace volumes from Gorgon, offers for LNG cargoes delivered to north China have surged to nearly \$9.50 per million British thermal units, after falling below \$4 this summer, and could easily touch \$10 per mmBtu by the end of this year. Comparatively, the NBP gas price in Europe is just \$5.75 per mmBtu and the Nymex Henry Hub benchmark for US natural gas is at \$3.51 per mmBtu. With only \$2-\$3 needed for liquefaction and freight costs, there has been a flurry of enquiries to send US, Middle East and Atlantic basin cargoes to Asia to profit from the arbitrage. Even charterers in the US Gulf are struggling to find empty LNG carriers within the right loading window, which has pushed vessel rates in the west over \$48,000 per day, while rates in the east are still under \$35,000 per day, one shipbroker said. He said the \$50,000 mark is not far off. The shipbroker said many owners and operators had been taken by surprise by Asian demand and had not ballasted enough ships to the Atlantic basin to position for loading fresh cargoes.

*Source: Lloyd's List*

#### **LNG: LNG bunkering plans are taking shape**

The number of ports planning to offer LNG bunkering facilities is growing, and oil majors are increasingly looking at adding this service to their portfolio. IBIA's Annual Convention heard about concrete plans in Tenerife, and by the oil major Shell, and got a forecast from SGMF about the uptake of LNG bunkers in the next 7-10 years. Interest in LNG as a bunker fuel has been on the rise in Europe for some time, supported by EU policies aimed at increasing the use of this clean, low emission profile fuel in transport. With the International Maritime Organization's global 0.50% sulphur cap now confirmed for 2020, interest is set to grow outside emission control areas (ECAs). The legislative framework is also in place with the IMO's International Code for Ships using Gases and other Low Flashpoint Fuels (IGF Code) set to take effect from 1 January, 2017. As noted, we heard several examples of plans to put in place LNG bunker supply to ships at IBIA's Annual Convention in early November, and news keep trickling in from around the world about new "world firsts" in LNG bunkering or LNG-fuelled newbuilds. With the 2020 goalpost in place, owners now have a clear date to consider their compliance strategies, but there isn't much time so it seems unlikely that the uptake of LNG will be huge already by 2020. According to Mark Bell, General Manager, Society for Gas as a Marine Fuel (SGMF), the current gas fuelled fleet comprises just 0.14% of the total global fleet of 5,500 ships above 500 grt. There are some 80 LNG-fuelled ships in operation today and another 80 on order, he told the IBIA convention. That number may be expected to grow to around 1,500 ships, accounting for 2.75% of the world fleet over the next 7-10 years, he said. LNG bunkers can in fact technically be made available just about anywhere on relatively short notice providing local authorities permit it, because most LNG bunkering today is done by truck. But longer term and for larger ships, this is neither cost effective nor convenient. They need higher efficiency LNG bunkering options, and that is beginning to take shape. We can expect major hubs to be the first to offer effective LNG infrastructure, alongside providers in ports where LNG supply has been made available to cater to specific companies that have been early adopters of LNG, such as TOTE in the US and various ferry and cruise operators in European ports. The majority of the world fleet will likely count on procuring oil-based marine fuels with no more than 0.50% sulphur in 2020, and there are likely to be many more ships with scrubbers that can use cheap high sulphur fuel oil than ships with LNG-fuel systems. The reason is simple; building LNG-fuelled ships and setting up effective LNG bunkering options requires huge investments compared to installing scrubbers. Longer term, however, LNG is expected to gain market share as supply infrastructure improves and owners look to "future proof" their ships to meet current and potential future emission limits for sulphur, nitrogen oxide, particulate matter and even CO2. As long as methane slip doesn't count as part of a ship's CO2 equivalent emissions, LNG-fuelled ships offer significant CO2 reductions compared to ships operating on conventional oil fuels.

*Source: IBIA*

January 2017

**INDUSTRY HEADLINES****PETROLEUM: Tanker earnings to be affected by OPEC cuts: A sector-by-sector breakdown**

Any decision which affects crude oil supply, let alone the first by OPEC after more than eight years is bound to have an effect on tanker earnings. But the hows, whens and which tanker segments will be the most affected is still up for question.

**VLCC Demand**

"Given that 78% of the cuts are distributed to the Middle East region, the implications are notionally negative for the VLCC workhorses of that region's exports, though this could actually prove beneficial to VLCC demand by prompting greater purchases of West African crude by Asian buyers. Angola's 50,000 b/d cut is relatively small compared to offline Nigerian production poised to come back on stream during 2017. During October, Nigeria's production rate was 157,000 b/d below 1Q16 and 237,000 b/d below 2015 (using the same OPEC production data as that applicable to the OPEC deal). If Asian buyers source just nine additional VLCC cargoes per month from West Africa as a result (representing a replacement of just 64% of volumes lost in the Middle East), due to longer voyage durations, total round-trip VLCC employment days associated with Asia-bound trades could rise by around 8.7%. Elsewhere, we note that Venezuela's cuts (which were likely to occur on the basis of directional production declines) are unlikely to alter crude flows to China as part of normal trades and oil repayments for development loans, relative to our prior base expectation. Floating storage could also come into play, provided that market participants are able to observe cuts being adhered to, raising a short-term contango structure for the remainder of the six-month term of the current OPEC agreement", said the shipbroker.

**Suezmax Demand**

According to CR Weber, "oil price support corresponding to the OPEC agreement could set the stage for a modest rebound in domestic US production, contributing to expected regulatory support for E&P from the upcoming Trump administration. Moreover, since the deal was announced, Brent prices have experienced greater gains than WTI prices; assuming such a structure holds, this could increase incentives for US refiners to increase their sourcing of US crude and reducing the modest increase of imports from West Africa observed in recent months. This would suggest a negative for Suezmax demand on the trans-Atlantic route.

**Aframax Demand**

The shipbroker added that "supply cuts in Latin America, North Africa and Russia (across its Baltic, Black Sea and Asia export areas) are likely to impact Aframax-favorable demand, though Panamaxers are likely to feel the brunt of Ecuador's estimated 25,000 b/d cut. However, Libya is targeting a 2017 production increase which exceeds the sum of production cuts in the three aforementioned regions, relative to its October production rate.

**Earnings**

In terms of tanker earnings, CR Weber notes that "with projected 2017 fleet growth levels already set to exceed our base demand growth case, adherence to the OPEC agreement presents an additional challenge to fundamentals. Our Suezmax and Aframax fleet net growth projections for 2017 stand at 10.6% and 7.5%, respectively, up from projected 2016 net growth of 5.5% and 4.3%. Meanwhile, VLCC net fleet growth is projected to decline from 2016's rate of 6.9% to 5.3.

*Source: Hellenic Shipping News*

**PETROLEUM: Fleet growth squeezes crude oil tanker market**

From January 2014 – October 2016 the crude oil tanker segment composing of VLCC, suemax and aframax ships, had a net-fleet growth of 7.3%, which is equal to 24.3 million (m) DWT. The VLCC segment, with 20.7m DWT or a net fleet growth rate of 11% took the lion's share, followed by the suemax segment with 4.4m DWT or 5.5%. Whereas the aframax segment decreased by -0.8m DWT or 1%, in relation to the fleet size of the specific ship segment. This analysis explains the recent history, updates you on the current state and displays future changes for crude oil tankers. BIMCO's Chief Shipping Analyst Peter Sand says: "The recent crude oil tanker fleet growth becomes increasingly troubling, and worsen the balance between supply and demand strongly, if demolition does not pick up. In the past two years, specifically, less than 2.3m DWT of crude oil tanker capacity has been demolished, which in comparison to the 358m DWT of the current crude oil tanker fleet is a vanishingly small proportion. But there may be changes just around the corner. The demolition of the 1994-built VLCC "Progress" with 297,237 DWT by mid-October indicates a resumption of demolition activity for the crude oil tanker segment. In October 2016, this ship was the first trading VLCC since the 1995-built "Hebei Mountain" in October 2014 with 307,050 DWT was scrapped." Per GMS reports in-between these two years only two other VLCC's were demolished. However, either these have already stopped trading or have been converted for other use. Most recently in November 2016, another VLCC with 281,434 DWT was demolished, thus indicating a new trend in demolition activity.

*Source: BIMCO*

### INDUSTRY HEADLINES

#### **OFFSHORE: Decommissioning of aging offshore O&G facilities increasing significantly, with annual spending rising to \$13 bln**

The decommissioning of aging offshore oil and gas platforms, subsea wells and related assets is increasing dramatically, with more than 600 projects expected to be disposed of during the next five years alone. This rapid trend toward decommissioning is causing spending to rise significantly, according to a new study by IHS Markit. It expects spending on decommissioning projects to increase from approximately \$2.4 billion in 2015, to \$13 billion-per-year by 2040, or an increase of 540 percent. An additional 2,000 offshore projects will be decommissioned between 2021 and 2040, the report noted, and total expenditures from 2010 to 2040 will amount to \$210 billion. During the next five years, Europe will absorb approximately 50 percent of global decommissioning spending as the industry removes major offshore structures from the North Sea. Each year, the industry currently decommissions an average of 120 projects on a global basis. According to the IHS Markit report, as E&P activity has shifted to deeper waters, harsher environments and increasingly complex projects, some of which comprise hundreds of wells and miles of risers tied back to a few ultra-large platforms, operators now face enormous challenges when planning the removal of these assets. Some of these decommissions can cost billions of dollars and take years to successfully dispose of, and decommissioning delivers no return on investment or revenue, but instead carries significant environmental and regulatory liabilities.

*Source: Reuters*

#### **OFFSHORE : Anticipated recovery in offshore maintenance, modifications and operations expenditure to 2021**

A sustained low oil price environment has led to a large number of delayed maintenance activities as operators continue to look to reduce costs wherever possible. The Offshore Maintenance, Modifications & Operations (MMO) market experienced a substantial fall of 22% in total expenditure between 2014 and 2015, and an additional 5% decline is projected by the end of 2016. This is a result of the postponement of non-critical work which otherwise would have been sanctioned in a \$100 oil period. However, whilst efforts to reduce bottom line figures have paid off and continue to be in play, E&P operators must acknowledge the inevitable threshold levels of MMO that are required in the prevention of lost-time incidents. Therefore, DW anticipates a recovery in MMO expenditure to 2021 as operators address maintenance backlogs that can no longer be postponed. As a function of this backlog and the growing age and degradation of existing asset infrastructure, the market is forecast to witness expenditure increasing from \$81 billion (bn) in 2017 to \$95bn in 2021 for the world's global offshore platform population of approximately 8,700 fixed and floating assets. This forecast expenditure will be comprised of Asset Services (60%), which focuses on the R&M of structural, mechanical and electrical systems on platforms, Asset Integrity (14%), people-driven services focusing on efficiencies and processes, Support Services (6%) which is the provision of manpower services supporting the needs of onboard personnel and Modifications (20%). Among all sub-services, Modifications spend is forecast to experience the most significant improvement through to 2021, as a function of the increasing number of platforms globally due for upgrades and operators turning their attention to previously postponed Modifications work scopes.

*Source: Douglas-Westwood*

#### **Oil & Gas : Standardization could cut costs 30%, says IMCA official**

Offshore oil majors could shave nearly a third off their exploration and development costs by agreeing to industry-wide equipment standards, says Allen Leatt, chief executive of the International Marine Contractors Association (IMCA). Rather than having big companies continue to go their own ways in ordering E&P equipment tailored for their individual needs, oil majors could take a leaf out of the US shale oil industry's book, Leatt told Reuters in a recent interview. US shale oil drillers, Leatt says, have halved their cost base to around \$30-40/bbl, thanks in part to standardization of drilling equipment. "Oil companies could take out 30% of the cost using standardized specifications and ruthlessly pragmatic engineering," Leatt was quoted to say. In one of the most cost-intensive industries, cross-sector equipment standardization is rare. Most oil majors use in house-designed equipment to explore offshore for and produce oil. Capital investment in exploration and offshore development is expected to have fallen by almost a quarter this year, to around \$500 billion – the first time in three decades that budgets have been cut for three successive years, according to Norwegian offshore consultancy Rystad Energy. "We haven't seen oil and gas companies work in a significant way to reduce their long-term cost base," said Leatt. "They have delayed projects in the short-term, cut jobs and squeezed the supply chain." He said that if oil companies "put more emphasis into sensible pragmatic specifications" that would "help bring stalled projects back to the market."

*Source: Offshore Magazine*

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