



**No. 17 – MED MARKET ON THE MOVE**  
**DECEMBER 21, 2016**

The Mediterranean market is witnessing a change in supply fundamentals as easing political conflicts and upstream developments revitalize crude production in the region. In this note, we will examine the potential impact on tankers from higher Mediterranean crude supply in the context of the recent Organization of Petroleum Exporting Countries' (OPEC) production cut.

New barrels are entering the Mediterranean market as Kazakhstan restarts its massive Kashagan oil field. In the coming months, crude production at the field is expected to reach an initial plateau of 180,000 b/d and then slowly rise to the field's current maximum potential of 370,000 b/d before the end of 2017. This could result in an average production level of around 1.75-1.8 million b/d for 2017, contributing to the growing supply (JBC Energy).

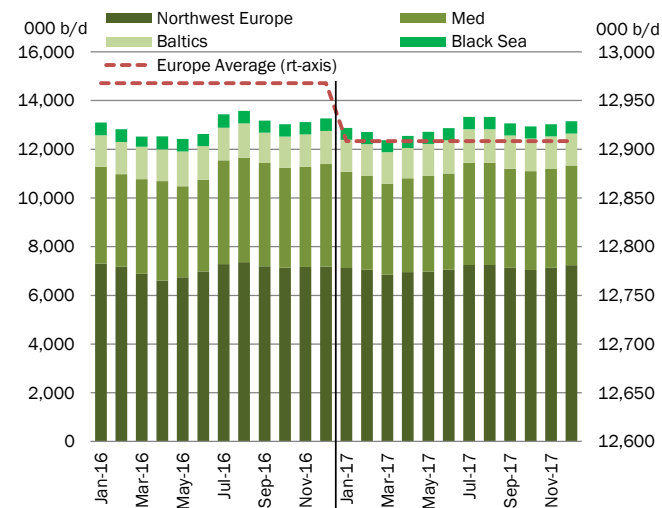
Neighboring Russia ramped up oil output throughout the year, boasting a crude and condensate production level of 11.29 million b/d in November, supported by higher output from mature oil fields and new projects launched earlier this year. The incremental gains in Russia were likely strategically accelerated in anticipation of concerted efforts to balance the market. In conjunction with the OPEC decision to cut oil production, Russia has agreed to reduce output by 300,000 b/d over the course of 2017; however, production will still remain above 2016's average. This year, Russian crude oil export volumes have averaged 4% higher than 2015 and are expected to increase in 2017 as refinery runs decline by 55,000 b/d and the Russian oil export duty decreases.

Additional supply growth in the region may stem from Libya, which has struggled to maintain stable oil output for years, as political factions clash over the nation's export infrastructure. However, in November, crude production averaged 575,000 b/d, a significant jump when compared to the 340,000 b/d witnessed through the first nine months of 2016. While geopolitical risks are high, it is our view that production will exceed 600,000 b/d in 2017, despite recent reporting from Libya suggesting production may approach 1 million b/d (Bloomberg).

Traditionally, the majority of these Mediterranean barrels remain within the European refining system. Through July, approximately 21.9 million tons (47%) of Russian crude exported from the Mediterranean traveled to Northern Europe while 17.6 million tons (38%) remained

in the Mediterranean. In the case of Libyan oil exports, 49.2% remains in the Mediterranean while 31.8% is sent to Northern Europe. As the volume of crude supply increases, one may expect more barrels to enter the European refining system; however, crude runs in Europe are expected to decline slightly next year. As a whole, crude intake in the Continent is forecasted to average 60,000 b/d lower than 2016 (12.9 million b/d), with crude runs at Mediterranean refineries on track to fall 45,000 b/d (Figure 1). With this in mind, we predict an excess supply of crude to exit the Mediterranean for Eastern markets.

**Figure 1: European Refining Sector**



Source: JBC Energy, McQuilling Services

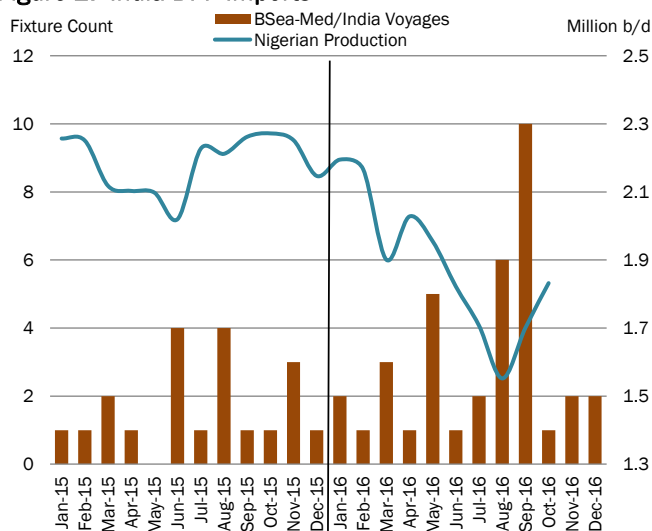
Potential markets which may look to increase imports of Mediterranean supply are India and the Far East. Beginning with the former, Indian crude demand has been steadily increasing since the beginning of the year and is expected to average 130,000 b/d higher in 2017. A substantial amount of Indian refining capacity runs lighter crude grades. Traditionally, Nigeria has been a main source of this supply; however, persistent militant attacks on Nigerian oil infrastructure has caused domestic output to decline by over 490,000 b/d since January 2016 to average 290,000 b/d lower than 2015. These supply disruptions have necessitated Indian refiners to source barrels from alternative production centers. Our data shows increased volumes of Black Sea/Mediterranean crude making its way to the sub-continent during these disruptions (Figure 2). Despite recent reports indicating Nigerian production is to recover, history has shown there remains a high level of uncertainty regarding Nigerian



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upstream operations. On this note, we believe Black Sea/Mediterranean barrels may continue to act as a substitute for Nigerian exports to India in 2017.

**Figure 2: India DPP Imports**



Source: JODI Database, McQuilling Services

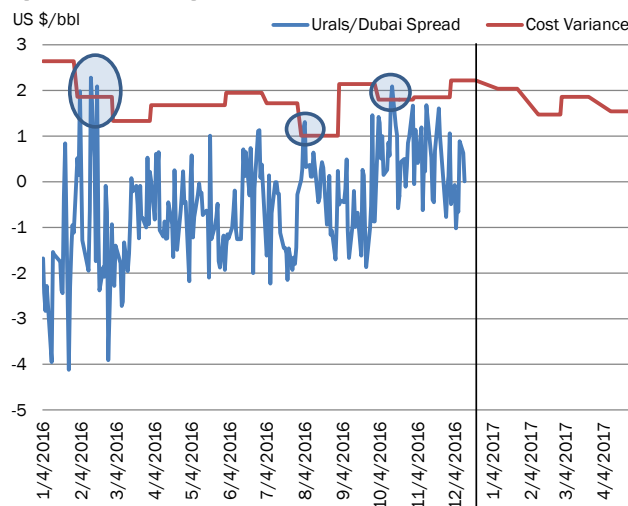
In the Far East, Asian oil demand will continue to grow, widening the supply deficit as China decreases oil output levels. China's oil production in 2016 has averaged 5.6% lower year-on-year, which has supported an increase in imports of 440,000 b/d from January to September. Next year, production is expected to average 200,000 b/d lower than current levels and contribute to a 490,000 b/d widening of the Asian supply deficit.

Traditionally, Asian refiners have sourced about 65% of their feedstock from the Middle East; however, as the regional producers participate in the OPEC output cut, less barrels will be available for export to Asia in the first half of 2017 and potentially longer. A majority of the cuts may stem from cheaper, heavier grades leading refiners to substitute heavy barrels from alternative production centers such as the Caribbean, Latin America and perhaps Northern Europe. Less complex refining operations in countries such as China may require blending heavy barrels with lighter grades. Therefore, we foresee Chinese refiners increasing their imports of Mediterranean light crude streams in 2017, supporting Suezmax ton-mile demand.

As Kazakhstan's production increases and Russia maintains a crude and condensate output upwards of 11

million b/d, pricing for Urals-linked grades (Russian) and Brent-linked crudes (CPC) should remain relatively attractive to refiners. With the expectation of higher prices for Middle Eastern grades, these crude spreads could widen in 2017. This may incentivize traders to offset the higher transportation cost of Mediterranean/Black Sea cargoes. In Figure 3, we can observe arbitrage opportunities where the Urals/Dubai price spread was greater than the cost variance between transporting cargo on a VLCC AG/China versus a Suezmax Black Sea/China. In the first quarter of 2017, we forecast this cost variance to average around US \$1.79/bbl and would expect to see increased voyages from the Mediterranean to the East if the Urals/Dubai spread trades above this level as expected. The substitution of Middle Eastern barrels by Mediterranean/Black Sea crude should support ton-mile demand for Suezmaxes to the East (like in 2015) as these voyages are longer than the conventional intra-Mediterranean trade routes.

**Figure 3: Arbitrage Opportunities**



Source: JBC Energy, McQuilling Services

Another possibility that must be considered is that increased loadings in the Black Sea could translate into longer transit delays through the Turkish Straits as evident by recent market events. In late-November, delays grew up to 15 days on the back of increased activity and inclement weather, supporting a boost to both Suezmax and Aframax rates in the Mediterranean. Combined, these demand (more ton-miles) and supply (vessel delays) fundamentals could help mitigate the expected downturn in freight rates next year from the high delivery schedule.