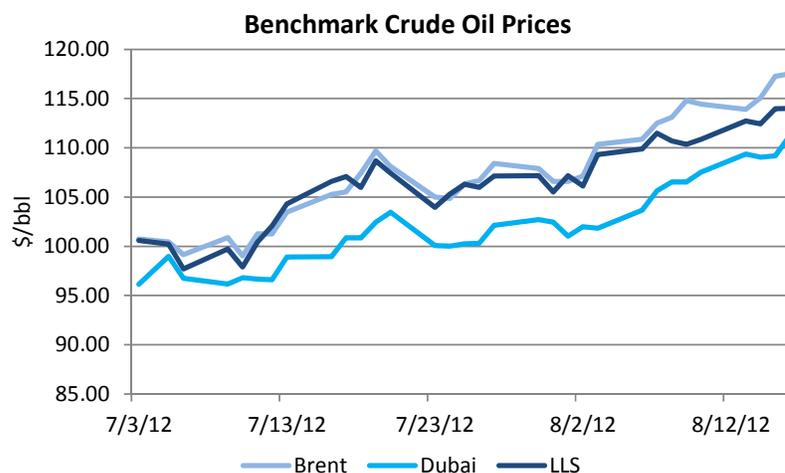


Brent Premiums Reflect Shifting US Crude Import Patterns

Brent's premium over other crudes reflects constrained supply, as well as changing US import patterns

Brent crude's premium over both Dubai crude and Louisiana Light Sweet (LLS) crude has risen by more than six dollars per barrel in the last six weeks. At the same time low production and upcoming field maintenance push Brent prices higher, high US crude production and storage levels are tempering LLS prices and changing US crude import patterns towards increased Arabian Gulf and Caribbean imports, and lower West African imports. The same developments that push Brent up relative to LLS are therefore increasing VLCC and Aframax demand, while lowering Suezmax demand.

Brent, Dubai, and LLS prices have all risen by \$10 - \$20 per barrel since July 1st



Sources: Bloomberg, Poten

Brent's premium over both Dubai and LLS is near 5-year highs

The chart above shows Brent, Dubai, and LLS crude spreads over the last two months. Many analysts and media outlets are focusing on light, sweet Brent crude's widening premium over heavy, sour Dubai crude: the spread this week reached 1.5 standard deviations above the 5-year average differential. However, Brent's premium over Louisiana Light Sweet (LLS) crude is also approaching record levels. The present differential between Brent and LLS is more than two standard deviations above the 5-year average.

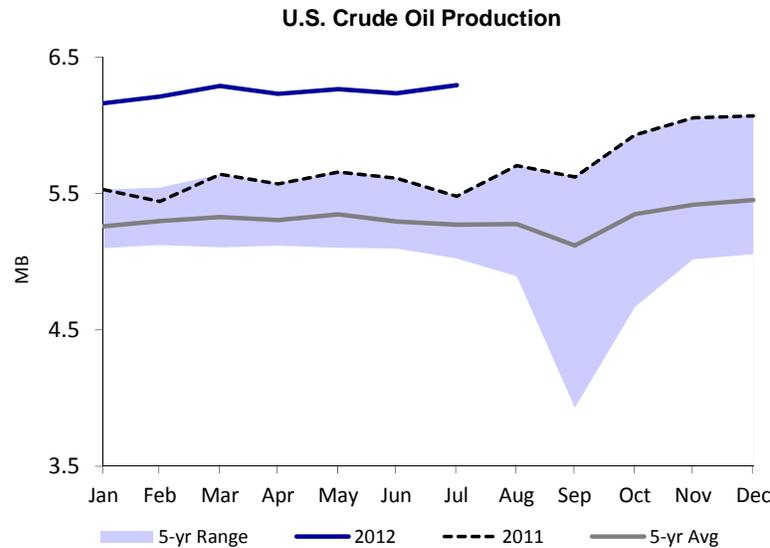
Brent's premium runs counter to 5-year averages

Brent's current premium over LLS is also a reversal of the historical trend: Brent has priced at a \$2 per barrel discount versus LLS on average over the last five years. However, Brent price increases are accelerating on a combination of 8-year low North Sea production and September maintenance at several key fields, while higher US inventories and production levels are helping to dampen the LLS price.

LLS's current discount to Brent reflects US crude production and inventory situations

US crude production is well above 5-year averages

The chart below shows 4-week average US crude production is currently more than 800 kbpd higher than 5-year averages. New shale oil production plus increased offshore production are lifting US production volumes to levels not seen since 1999.

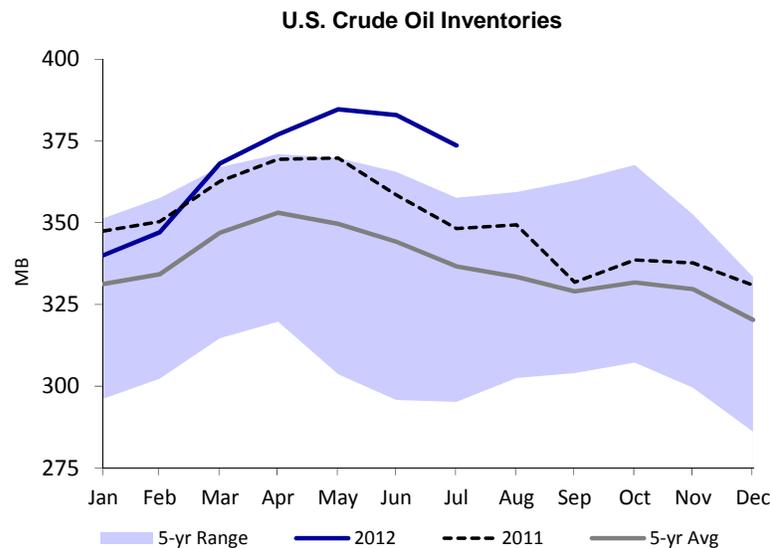


Sources: EIA, Poten

Increased US crude production has helped increase US crude inventories

Increased domestic production has helped to fill US crude tanks recently. Crude inventories remain 7% above the 5-year average for this time of year. Despite this glut, the chart below shows US crude inventories falling nearly fourteen million barrels in the last four weeks, the largest four-week drop since the beginning of the year.

Despite recent -week reductions, crude inventories are well above 5-year averages



Sources: EIA, Poten

Higher domestic crude production and inventories are changing the slate of crude oil bound for the U.S. in a few interesting ways. First, US Gulf refineries generally run

Increased domestic shale oil production allows refiners to import heavier, sourer crudes

heavier, more sour crude oil. Second, the high incremental volumes of Eagle Ford and Bakken crude currently in production are light and sweet. Thus, refiners can import much heavier, sourer crude grades to offset these high-spec domestic crudes. As the table below shows, US crude imports from West African countries that traditionally produce light, sweet barrels decreased. At the same time, US crude imports from the Caribbean and Arabian Gulf, regions that traditionally send heavier, more sour barrels to the US, increased. The latest EIA monthly data shows that the weighted average API for crude imports in May was the lowest level seen in five years.

US Weekly Crude Imports from Key Regions (kbpd)

Region	1-Year Average	4-Week Average	Difference
Arabian Gulf	2,087	2,201	114
Caribbean	2,534	2,679	145
West Africa	830	613	(218)

US imports of heavier, sourer crude are increasing while lighter, sweeter crude imports fall

Sources: EIA, Poten

Changing crude import slate increases VLCC and Aframax demand, but lowers Suezmax demand

VLCCs benefit from increased Arabian Gulf crude imports (114 kbpd more crude from the Arabian Gulf requires four more VLCCs), and Aframax benefit from increased Caribbean imports (145 kbpd requires four more Aframaxes). On the other hand, Suezmaxes suffer from lower crude imports from West Africa: 218 kbpd less crude from West Africa lowers Suezmax demand by up to nine Suezmaxes. The global factors that drive and underscore the current record Brent premiums therefore could represent some mildly bullish developments for VLCCs and Aframaxes, but bearish developments for Suezmaxes.

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