As the market flips into backwardation, storage operators are getting increasingly nervous

Cheery traders turn teary

Eighteen months ago, many of the futures contracts were in contango. Tank storage construction was booming and tank lease rates were increasing. The loss of Libyan crude oil production coupled with other supply losses due to production problems put Brent crude oil in backwardation. The European gas oil and North American petrol markets backwardated as well. Then, after three years of contango, the crude oil market in North America found itself backwardated in October.

Stuck with large amounts of storage under lease and several major expansions underway, traders found it difficult to make money leasing significant storage volumes. That has translated into pressure on tank leasing rates, with many wondering, have rates now peaked?

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Contango and backwardation

The last few years have been dominated by contango, when the price of crude oil or a petroleum product is cheaper in the nearest or prompt month and more expensive in the next month.

In the opposite case, when the price of crude oil or a petroleum product is more expensive in the near term and less so in the future, that market structure is known as backwardation. If the price difference between the two time periods gets great enough in a contango market, traders can buy oil, store it, resell it for a later delivery date and make a profit after paying the storage and financing costs.

Today, the market is in backwardation, which occurs when the price of crude oil or a petroleum product is more expensive in the nearest or prompt month and cheaper in the next month. This type of market structure results in the liquidation of inventories as it makes little sense to hold on to higher priced oil inventory as the market gets cheaper.

Those tanks that had been built for the contango market became extraneous, a drag on the trader's profitability and ultimately will impact storage operator's revenue. Sort of like Las Vegas, too many hotel rooms, not enough visitors.

Oil market 2011

While many markets were preoccupied with geopolitical issues concerning the Arab Spring, a double dip recession and sovereign debt crises around the world, the crude oil market was looking at losses in supply. These production losses occurred around the world, some of which were quite obvious, others not so.

The big story on crude oil supply in 2011 was the loss of 1.6 million barrels per day of Libyan crude oil production. Much of this production was exported and processed at refineries in Italy, France, Germany and Spain. These refineries now had less petrol available for export to the US. The loss of crude meant that Europe produced less diesel fuel, requiring additional import from the US.

Libya was not the only country whose oil production was affected by unrest. In Yemen, about 50% of its daily production was shut in and they imported some crude oil from Saudi Arabia. In the North Sea, production problems in the Forties field reduced crude oil availability, while Kazakhstan and Azerbaijan experienced year on year production declines. All of these supply disruptions had one thing in common—the loss of light sweet crude supply.

Meanwhile in North America, two large Canadian oil sands upgraders, CNRL and Husky, experienced major fires resulting in significant downtime reducing light sweet crude availability. Fires in Alberta and flooding in North Dakota reduced crude oil production. In the Gulf of Mexico, oil production declined from pre Macondo Well disaster levels of 1.7 million barrels per day to just over 1.4 million barrels per day in August 2011.

Lower oil supply in a world with increasing its oil demand resulted in a drawdown of inventories. The market moved from contango to backwardation. Traders and refiners that could once take advantage of the contango by virtue of large tank storage commitments now found those tank commitments weighing down their profitability.

Cushing Oklahoma

Cushing is the delivery point for the NYMEX Light Sweet crude oil futures contract. In 2006, approximately 25 to 30 million barrels of tankage were available, mostly in the hands of major oil companies. By September of 2011, that capacity had grown to 65 million barrels. By the end of 2011, Cushing storage capacity is estimated increase to about 70 million barrels with another 9 million under construction, expected to be available by the end of 2012.

As we entered 2011, the NYMEX futures market was in contango by approximately $1.00 per barrel between the February and March contracts. This made traders quite content. Buying oil for $89 (€64) per barrel in February, storing for a month and selling at $90 per barrel in March was a profitable activity when storage costs were less than £0.50 per barrel per month. This type of market structure led to many of the tank expansion projects at Cushing. One had to have tankage in order to take advantage of the contango.

As the supplies of light sweet crude oil around the world were reduced, light sweet crude oil inventories were drawn down. Even politicians took notice when the International Energy Agency released 60 million barrels of crude oil and petroleum products in June. As the year progressed, the contango was coming out of the market structure narrowing to $0.20 per barrel in September. At $0.20, traders could barely afford the financing costs of buying and selling $80 per barrel crude oil.

Leasing rates at Cushing have come under pressure. Once quoted in excess of $0.45 per barrel per month, spot tankage could now be had for fewer than $0.37 per barrel per month. By the end of October, the crude oil market moved into backwardation. On some days, the front month futures contract was more than $0.30 per barrel more expensive than the second month. Traders simply could no longer rely on the contango structure to cover the monthly tank cost and were losing money.

New York and ARA

The Atlantic Basin product markets have been affected by a significant number of refinery closures that began in 2009 and continue today. In North America, Sunoco Eagle Point (145,000 B/D), Western Refining Yorktown (70,000 B/D), ConocoPhillips Trainer PA (185,000 B/D) and Shell Montreal (130,000 B/D) have been shut. In Europe, refinery closures have included Total Dunkirk (160,000 B/D), Petroplus Teeside (117,000 B/D), ConocoPhillips Wilhemshaven (260,000 B/D) as well as the end of year shutdown of Lyondell Basell Berre L'Etang (105,000 B/D).

This has led to a loss of refinery supply in local markets that must be made up from afar. In 2010, The US imported approximately 400,000 B/D of petrol and petrol blendstocks from Europe, while Europe imported about 200,000 B/D of distillate from the US. Product inventories have steadily declined with October 2011 petrol stocks in the US about 5% less than prior year levels and distillate stocks in the US about 14% below previous year's levels. Meanwhile distillate stocks at independent storage locations in the Antwerp-Rotterdam-Amsterdam (ARA) area recently reached an 18 month low.

In early 2011, petrol was coming out of its contango market structure; backwardation increased as the year progressed. The same could be said about diesel fuel. As the backwardation increased, the incentive to liquidate inventories went up as well and product supplies grew tighter. In the same way that crude oil tankage at Cushing began to weigh on traders profitability, the same could now be said about clean product tankage.

In this kind of environment, traders looked at reducing tankage costs. Some traders reduced the amount of tankage that they had under contract. Others renewed tankage at lower rates. Tank rates in New York Harbor, which had been done at well over $1.00 per barrel per month, could be done between $0.80 and $0.85. Tank rates in parts of Europe, as well as in Houston and Los Angeles are also under some pressure.

What does the future hold?

The last several years have been good to trading companies and terminal operators alike. An extended period of contango that contributed to trading profits, a significant expansion of tank storage capacity construction and ever higher tank lease storage rates, has given way to backwardated market.

Tankage, which had been an integral part of the business model, has become a weight on profitability. As traders reduce their tankage costs, terminal operators will see an impact to their revenues. If only the contango market would return…and soon.