THE PETROLEUM THEATRE © Leo Haviland, 646-295-8385

May 5, 2014

CONCLUSION AND OVERVIEW

The worldwide petroleum marketplace "in general" will continue its sideways to down trend.

Despite modest global economic growth and forecasts by leaders such as the International Monetary Fund for further expansion, despite sustained highly accommodative monetary policy by the Federal Reserve Board and its allies, look at petroleum price benchmarks such as NYMEX and ICE Brent/Sea crude oil contracts (nearest futures continuation), as well as at US Gulf Coast regular gasoline and diesel. These gradually have retreated from their 2011/2012 peaks.

Note the similar weakness in emerging stock marketplaces "in general", including China's. Indeed, Chinese economic growth probably is significantly less than many believe. Given China's major role in the world commodities arena, that portends further weakness in the overall commodities universe (see the S+P broad GSCI or other indices) and petroleum in particular.

Moreover, the Federal Reserve continues to taper its gargantuan bond buying (money printing) program. Ceasing money printing in 2010 and 2011 encouraged United States equity (use the S+P 500 as a benchmark) and commodity (and emerging stock) marketplace weakness. Though history may not repeat itself, the Fed's ending of this round of quantitative easing probably will maintain the current sideways to down pattern in the petroleum complex. In recent years, the S+P 500 and commodities "in general" (including the overall petroleum complex) have tended to make noteworthy marketplace turns around the same time. Though the S+P 500 of course continued its bull move since spring 2011 while commodities in general moved in sideways to down fashion, this timing turning point relationship since spring 2011 has tended to persist.

Moreover, overall OECD petroleum industry inventories probably are slightly high, with total US days coverage several days above average. Supply/demand estimates for calendar 2014 indicates that global oil stocks will not decline much if at all this year.

SETTING THE STAGE: GLOBAL SUPPLY/DEMAND

The International Monetary Fund's World Economic Outlook (April 2014, Table 1.1 and Table A1) portrays world real GDP growth rising 3.6 percent year-on-year in calendar 2014 (2013's rose 3.0pc; 1996-2005 averaged 3.7pc), with 2015's advancing 3.9pc. Advanced economies grow 2.2pc in 2014 and 2.3pc in 2015 (up merely 1.3pc in 2013). Emerging and developing nations, after 2013's output growth of 4.7pc, see real GDP increases of 4.9pc in 2014 and 5.3pc in 2015.

The International Energy Agency's "Oil Market Report" ("OMR", Table 1, 4/11/14) displays worldwide supply and demand in fairly even balance in calendar 2014. All else equal, this argues for a relatively neutral outlook on prices relative to current levels. Total consumption increases about 1.4 percent year-on-year to 92.7 million barrels per day. Total OECD (so-called advanced nations) demand in 2014 remains about unchanged at 46.0mmbd. Non-OECD consumption rises about 1.4mmbd, a 3.1pc ascent.

Assume OPEC crude oil production remains around 30.0mmbd (2013 averaged 30.5mmbd and 1Q14 was 30.0mm; IEA Tables 1 and 3). Then 2014 global supply will stand around 92.8mm, about equal to demand.

However, OPEC and US government numbers are a bit bearish for calendar 2014. OPEC's "Monthly Oil Market Report" (Table 10.3, 4/10/14) calendar 2014 supply/demand balance (if one supposes OPEC crude oil production of 30.0mmbd), has a .4 million barrel per day stock build. The US Energy Information Administration's Short-Term Energy Outlook ("EIA", "STEO"; Table 3a, 4/8/14), which assumes OPEC crude production of about 29.8mmbd, has worldwide 2014 oversupply of just under .2mmbd.

The International Energy Agency ("IEA") estimates end fourth quarter 2013 OECD industry inventories around 56 days of forward demand (OMR, Table 5). The IEA apparently believes this days coverage is a bit high. It says "the deficit of inventories to their five year average, while still large by historical standards" (p2; see also p29).

The IEA's view that OECD industry stocks are high is incorrect. Its time horizon is too brief. Admittedly OECD inventories are down from 1Q13's 59 days (stocks stayed around 59 days from 1Q12 through 1Q13). However, 56 days is around normal levels, and arguably a little high. Compare end year lows of 49.7 days of forward demand in 2004 and 49.9 days in 2002; at the end of the Goldilocks Era in 2007, they were 51.8 days. In regard to the 59 day highs of the past couple of years, what about other highs over the past two decades? At end 1992, OECD stocks were 58.7 days (steadily declining to 50.7 days by 1999). For the end year stocks over the 1992-through 2013 span, average days coverage was around 54.4 days (for 1996-2013, it was 53.8 days). See the IEA's "Annual Statistical Supplement with 2011 Data (2012 Edition)" (Table 14.2), with updates from the April 2014 OMR.

Perhaps the oil industry in the past few years has moved toward a just-in-case rather than just-intime inventory management approach. Increased fear of supply interruption would encourage players to hold more supplies. However, whether such a shift has occurred is conjectural. Alternative investment in commodities (buy and hold for the long run) probably has reduced free supply, though wizards can debate as to how much. This alternative investment in petroleum would require petroleum industry participants to boost their inventories to maintain a desired free supply days coverage total. However, since 56.0 days is somewhat above longer run coverage averages and far above coverage lows, 56 days nevertheless probably still is, in contrast to the IEA's opinion, at least around normal levels.

In any case, the IEA's OECD days coverage total arguably edged higher since end 2013, for IEA statistics indicate a 1Q14 global stock build of about 1.1mmbd. Of course inventory boosts (and draws) occur in non-OECD lands such as China.

What about inventory trends over other calendar 2014 quarters? Based on the IEA's statistics, if OPEC produces 30.0mmbd in 2Q14, international inventories grow by about .5mmbd. However, they draw about .6mmbd in 3Q14 and .4mmbd in 4Q14.

Saudi Arabia in recent years has performed as a swing producer for crude oil when the world confronted notable supply interruptions. It acts like a central bank of petroleum. They probably will continue to do this. The Saudis surely like 100 dollar per barrel Brent/North Sea oil prices, but they do not want elevated prices to endanger world economic growth. So if the worldwide economy starts to weaken, the Saudis will tolerate lower petroleum prices.

Will sectarian conflict cause a notable drop in Iraqi crude oil supplies? This risk is significant, but probably not much supply reduction will occur in the near term. Iraqi 1Q14 output reached 3.3mmbd versus calendar year 2013's 3.1mmbd (IEA, OMR, Table 3).

What about Iran? Iran produced 2.8mmbd in 1Q14. Iran's output surely would climb substantially if US and European negotiators reached an agreement with it regarding its nuclear development program. These nuclear discussions are edging forward. Consequently the US and Israel probably will not attack Iranian nuclear facilities while these negotiations continue. The current talks seek to create a long term deal by July 20. However, the timetable probably will be extended if any progress is made. The next round of talks begins 5/13.

Libya's crude oil production is merely .4mmbd; compare 2012's 1.4mmbd. Yet industry players have adjusted to this longstanding output slash (as they have to cuts in Syria's output). A recent agreement between the Libyan government and various regional factions may result in an export boost of up to 700mbd. Nigeria supply interruptions remain a concern, but so far have not been massive.

There has been no progress in the Israel/Palestine situation. This, however, shows no signs of igniting an oil price rally anytime soon.

The Ukraine's troubles have captured much political, economic, and media attention in recent months. Perhaps an interruption of Russian natural gas supplies via the Ukraine may occur. In any event, Russian oil production likely will remain substantial. The IEA forecasts Russian production will stay about unchanged year-on-year at just under 10.9mmbd (OMR, Table 3).

US SPOTLIGHT

America embarked on a crude oil production boom a few years ago. According to the EIA's April STEO (Table 4a), domestic crude oil production averaged about 7.4 million barrels per day in 2013. It jumps upward in 2014, rising to 8.4mmbd, with 2015 climbing to over 9.1mmbd.

However, US consumption for refined products looks flat for 2014. Total products supplied at 18.9mmbd during calendar 2014 are unchanged relative to 2013. This sluggish US demand prospect exists across various refined products categories. Motor gasoline consumption remains about 8.8mmbd in calendar 2014. Distillate fuel demand for 2014 matches 2013's 3.8mmbd. Jet fuel consumption remains stationary at 1.4mmbd. Residual fuel demand of .3mmbd likewise is flat.

The absence of US oil demand increases probably partly reflects conservation (efficiency) efforts. However, it also may indicate relatively weak economic growth.

What is the current overall stock situation in days coverage terms for the US petroleum industry (crude and products inventory combined relative to the most recent four weeks total products supplied)? Days coverage now is about 58.5 days (EIA; 4/25/14 weekly statistics), up from 55.9 days around end March 2014 (3/28/14). This 58.5 day total for the overall petroleum complex is bearish. Admittedly it is about the 58.4 day end April average for the five years 2009-13. But it decisively exceeds by six days the 52.5 days end April average (1996-2013; end month stocks relative to total products supplied for that calendar month). US end May total petroleum days coverage averages 53.8 days (1996-2013).

The US end April average (1996-2013) industry days coverage for crude oil is around 22.7 days, so 4/25/14's 25.4 day amount is moderately high. The end calendar May crude oil days cover average is 22.1 days. Current US commercial total gasoline stocks (not including ethanol) at 24.4 days coverage hover around end April's long term 24.0 days average (end May's average is 23.9 days). Unlike crude oil and gasoline, US distillate inventory coverage of 28.9 days as of 4/25/14 is modestly beneath its end April 1996-2013 average of 31.1 days (end May averages about 33.6 days). Perhaps this comparatively low distillate days coverage results from America's noteworthy net exports of distillate net exports. Table 4a states they touched around 1.0mmbd in 2013; the EIA predicts 1.1mmbd in 2014.

THE NORTH SEA SCENE: A KEY SUPPORT

Surely most crude oil production costs around the globe are not close to \$100 per barrel. What helps to keep worldwide crude oil (and many refined products) prices so high in recent years? The long-running very easy money policy of the Fed and its friends (which has inspired fervent hunts for yield/return in commodities, not only in interest rate and stock playgrounds) has played a key role. So has the relatively feeble US dollar. In addition to these considerations, an important factor is the Brent/North Sea crude oil production level and pattern.

For over a decade, and notably since the mid-2000s, OECD Europe crude oil production has tumbled as a percentage of worldwide petroleum output. The majority of that European output comes from the North Sea. More importantly, yearly average European crude oil production has plummeted over that span. North Sea production includes a crucial international crude oil price benchmark, Brent and related other offshore crude streams.

Brent/North Sea ("Brent") does not merely capture trader attention and spark media headlines. Despite its diminishing physical supply role as a share of global production, despite its sharp absolute production drop, Brent/North Sea's marketplace power nevertheless is very important and extends around the globe. Why? The petroleum industry continues to price many other crude oils directly or indirectly relative to it. Brent/North Sea has a greatly disproportionate influence on global crude oil pricing relative to its output.

Moreover, not only has the barrel per day output of Brent/North Sea oil declined in recent years. Demand for the "high quality sweet" grades it represents remains substantial.

Consequently, all else equal, Brent crude oil supply in recent years generally has become tight (low free supply). Thus all else equal, because Brent acts as a price guide for other crudes, its supply/demand situation thereby tends to boost global crude oil prices to and sustain them at "high" (or "relatively high") levels.

Focus on International Energy Agency statistics for OECD Europe. Most oil production from that category is from the UK and Norway, presumably substantially from assorted North Sea production streams. ("Annual Statistical Supplement with 2010 Data (2011 Edition)" Table 1 and OMR, April 2014, Table 1 and Table 3. Global supply includes natural gas liquids.).

In 2000, European crude oil production was about 6.8 million barrels per day, nearly equal to 1996's 6.7mmbd. By 2004, it eroded to 6.1mmbd. European oil output represented 9.2 percent of world supply in calendar 1996, 8.8pc in 2000, and 7.3pc in 2004.

Since 2004, European output continued its steady and sharp descent, as did its share of total world oil production. In 2005 it was 5.7mmbd (6.7pc of global supply), with 2006 at 5.3mmbd (6.2pc), 2007 at five mmbd (5.8pc), and 2008 at 4.8mmbd (5.5pc).

In 2009, it was 4.5mmbd (5.3 percent). In 2010, it slipped to only 4.1mmbd (4.7pc), with 2011's down even further to 3.8mmbd (4.3 percent of 88.7mmbd). The IEA placed 2012 at 3.5mmbd, down about 50 percent from the 1996/2000 heights and merely 3.8pc of global production around 91.0mmbd. What about calendar 2013? European production slumped further, to 3.3mmbd; its marketplace supply share dipped to 3.6pc (3.3mmbd/91.6mmbd). The IEA predicts European output will erode further in 2014 to 3.2mmbd. Suppose worldwide supplies this year are 92.8mmbd. Then the European share will be merely 3.4pc of it.

Moreover, what if the petroleum industry to some extent has shifted its inventory holding approach from a just-in-time method to a just-in-case vantage point? Imagine concerns about supply interruptions due to political unrest in the Middle East or elsewhere. Libya offers a fairly recent example, as does the Iranian nuclear situation. What if Nigerian supplies become tighter? Alongside declining Brent/North Sea production, an industry move toward just-in-case inventory management especially helps to support and rally Brent and related petroleum prices.

INVESTMENT ACTS, SPECULATIVE PERFORMANCES

Another variable probably keeping prices high in the petroleum complex is alternative "investment" in commodities. The CFTC's Commitments of Traders CIT Report provides data for Index Traders ("IT") in many important agricultural commodities. These Index Traders are a proxy for the buy and hold for the long run investment camp. These net long IT holdings tend to reduce free supply for the given commodities, though experts debate as to how much. Reducing free supply of course is bullish for prices. For these commodities combined, for the period from the beginning of 2007 to the present, Index Traders have been net long an average of about 24.7 percent of total open interest (the percentage varies between individual commodities). As of 4/29/14, the net long IT position was 23.7pc.

The CFTC does not publish Index Trader data for energy or metals marketplaces. However, alternative investment obviously is not restricted to the agricultural complex, and energy (especially petroleum) plays a vital part in broad commodity indices such as the GSCI. Therefore it is reasonable to assume that the large net long IT role in and bullish consequences for the petroleum complex is roughly similar to that in the agricultural domain.

CFTC statistics, however, reveal noncommercial length in the petroleum complex. Many of these noncommercial participants are "speculators" (including enterprises managing money) rather than "investors". Some of Index Trader "investors" in petroleum may lurk in the noncommercial category. However, many large IT players probably establish (and offset) their positions in over-the-counter territories via commercial firms such as banks and investment banks. The banks, as most of them desire to hedge their IT-related trades, often will do so via exchange-traded marketplaces. These hedges therefore may belong to commercial categories in CFTC data.

In any event, the current net long noncommercial position ("NCL") in the NYMEX petroleum complex (benchmark crude oil, heating oil/ULSDiesel, gasoline blendstock/RBOB contracts

combined; futures and options combined) is enormous. Place current levels in the context of CFTC data going back to early 1995. On 4/29/14, the net NYMEX NCL petroleum position was around 501,000 contracts, close to the recently established record of about 536,000 contracts (3/4/14). The gross noncommercial long position on 4/29/14 of about 718m contracts represents a new peak. The 4/29/14 net NCL represents about 17.7 percent of total open interest, close to the recently set all-time high around 18.8pc (2/25/14).

A price decline of a few dollars from current levels probably would inspire (reflect) a rush to liquidate by many of the long noncommercial "speculators" at NYMEX.

A notable price decline also probably would inspire liquidation by noncommercial long "speculators" in Brent. However, the ICE Brent contract shows a much smaller net noncommercial long position as a percentage of open interest than does NYMEX. At ICE Brent, the net noncommercial long position over the mid-February to mid-April 2014 horizon has ranged from just under three percent to about eight percent.

FOOTNOTES

In assessing and forecasting trends for overall petroleum trends, watch intramarket spreads in key marketplaces such as NYMEX and Brent/North Sea crude oil. In the current petroleum marketplace situation, declining backwardation (or increased contango) probably would intertwine with (confirm) bear flat price trends. Also monitor refining margin levels and movements.

Euroilstock crude and feedstocks inventory combined in March 2014 attained a new days coverage record for March (1998-present) at 48.5 days coverage (relative to refinery input), surpassing 2009's summit by 2.7 days.

Keep an eye on the movement of commodity indices such as the GSCI alongside travels in the petroleum complex. Note the timing of highs and lows in the GSCI alongside those in key petroleum commodities. For example, since early 2011, recall GSCI highs at 762 (4/11/11 and 5/2/11), 717 (3/1/12), 699 (9/14/12), 682 (2/13/13), and 675 (8/28/13).

Watch the sideways to bear trend in the base metal complex alongside that in the petroleum landscape. Note the London Metal Exchange LMEX index. Its bear move began 2/14/11 at 4478 (4/8/11 at 4469). A lower top on 2/9/12 at 3820 followed this. Then arrived an even lower high on 2/1/13 at 3614; note the ensuing further price decline.

Underline the sideways to down trend in the overall emerging marketplace stocks realm (MXEF, "MSCI Emerging Markets Index" from Morgan Stanley) since spring 2011. Its decline, like that for commodities "in general", displays lower and lower highs. Remember MXEF's highs on 4/27/11 at 1212, 2/29/12 at 1085, 1/3/13 at 1083, 5/9/13 at 1065, and then 10/23/13's 1048. Also recall the major peak in the MXEF on 11/1/07 at 1345 and its final high on 5/19/08 at 1253. Not only did these MXEF heights occur close in time to the S+P 500's major summit on 10/11/07 at 1576 and its 5/19/08 final plateau at 1440. The May 2008 MXEF elevation occurred not long before key mid July 2008 pinnacles in NYMEX and Brent/North Sea crude oil.

This essay is furnished on an "as is" basis. Leo Haviland does not warrant the accuracy or correctness of this essay or the information contained therein. Leo Haviland makes no warranty, express or implied, as to the use of any information contained in this essay in connection with the trading of equities, interest rates, currencies, or commodities, or for any other use. Leo Haviland makes no express or implied warranties and expressly disclaims all warranties of merchantability or fitness for a particular purpose. In no event shall Leo Haviland be liable for any direct, indirect, special, incidental, or consequential damages (including but not limited to trading losses or lost profits) arising out of or related to the accuracy or correctness of this essay or the information contained therein, whether based on contract, warranty, tort, or any other legal theory.

All content copyright © 2014 Leo Haviland. All Rights Reserved.