

## **US OVERALL PETROLEUM INVENTORIES- ENOUGH IS ENOUGH**

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### **CONCLUSION**

What does a survey of total United States petroleum industry inventories (crude and products combined) relative to total products supplied indicate regarding current and near term US petroleum price trends? The very elevated days coverage (end month inventories versus average daily consumption for that calendar month) probably has significantly contributed to the renewed price weakness in the overall petroleum complex that emerged in February 2013.

Is there (finally) increasing convergence between price trends of US equities (S+P 500) and commodities in general? In recent days, US equities (S+P 500) and petroleum prices have fallen together.

### **COVERING THE BASES**

Days coverage for overall US petroleum inventories (1996-2012) varies by calendar month, ranging from a low of 50.5 days (February) to 54.1 days (September). In June 2008, just before NYMEX crude oil's major pinnacle (nearest futures continuation) on 7/11/08 at 14727, they were 49.8 days. Not long after the S+P 500's major bottom in March 2009 and around the start of the US (and worldwide) economic recovery, US days coverage peaked at 60.9 days in May 2009.

However, since May 2009, oil industry inventories have consistently stayed several days above the averages of 1996-2012. The days coverage low for any given month since mid 2009 is December 2010's 54.1 days, which is 3.2 days over calendar December's 1996-2012 average. The next three lows are March 2011's 54.3 days (about 3.4 days higher than the long run March average), December 2009's 54.6 days, and March 2010's 55.5 days.

### **INCREASED COVERAGE: CHANGING DIRECTIONS**

Why the increase in America's total inventory holdings in days coverage terms? During the worldwide economic recovery, there probably has been a shift from the just-in-time inventory management method that began around 1996 to a just-in-case one. Fears of supply interruption due to the ongoing Iranian nuclear crisis, other Middle East unrest (Libyan and Syrian civil wars, for example), and potential instability in Nigeria and Venezuela probably partly account for this inventory shift.

The jump in US crude oil production in the past couple of years arguably has induced greater inventory holdings, especially in crude oil (or made it harder to cut crude oil stocks substantially). In the Lower 48 states, domestic crude oil production (including lease condensate) is up about twenty-five percent (1.3 million barrels per day) in first quarter 2013 versus the prior year period (EIA, 3/29/13 weekly statistics, Table 1).

Moreover, in recent years, alternative "investment" by buy-and-hold players in the commodity universe in general and petroleum in particular probably has reduced petroleum free supply (readily available physical stocks). The CFTC's Index Trader position levels (futures and options combined) and trends within the Index Trader agriculture sector probably approximately

represent the IT situation throughout the entire commodity arena. In any event, the average net long IT position for the 12 commodities combined from 2007 to the present is about 24.8 percent of total open interest. For 3/26/13, it was 23.1 percent. Thus the commodity buy-and-hold for the long run alternative investment community is a very important factor within the commodity arena. This reduction in practical days coverage pressures the oil industry to gather more arithmetic inventory to satisfy days coverage needs.

In addition, the CFTC Commitments of Traders data in recent years consistently display a net long noncommercial position for the NYMEX petroleum complex (benchmark crude oil, heating oil, and RBOB contracts, futures and options combined). When “speculative” noncommercial length becomes very high and is sustained at lofty levels, since forward marketplaces (including exchange-traded ones) intertwine with spot (cash, physical) ones, such noncommercial net long holdings probably reduce physical (free) supply.

The recent peak in the NYMEX petroleum complex net noncommercial long position was about 445m contracts on 2/12/13. This equals a very elevated 14.3 percent of total open interest, as was 2/5/13’s hefty share of nearly 14.4pc. As of 3/26/13, net noncommercial longs at NYMEX had fallen to about 375m (around 12.3pc of total open interest); this nevertheless remains quite high from the historical viewpoint. What happens to petroleum prices if many of these noncommercial longs liquidate?

### **PRICE PERSPECTIVES: COMMODITY BENCHMARKS AND OIL SIGNPOSTS**

The broad GSCI established a major high around 762 in spring 2011 (4/11 and 5/2/11 tops), with lower peaks at 717 on 3/1/12 and 699 on 9/14/12. NYMEX crude oil (nearest futures continuation) peaked 5/2/11 at 11483, with lower tops on 3/1/12 at 11055 and 9/14/12 at 10042.

As part of the major longer run downtrend that exists for commodities in general, note the assortment and timing of minor tops made in early 2013 (especially February) in several commodity indices and in numerous particular commodity marketplaces. See “Commodity Index Investment and US Stock Trends” (3/20/13).

<b><u>Commodity Index; Oil Signpost</u></b>	<b><u>Date + Level of Recent High in 2013</u></b>
Broad Goldman Sachs Commodity Index (GSCI) (4/4/close 633.0)	2/1/13 at 681.5 and 2/13/13 at 681.7
Dow Jones- UBS Commodity Index	2/1 at 143.7 (4/4/13 close 133.6)
NYMEX crude oil (first futures)	1/30 at 98.24 and 2/13 at 98.11
US Gulf Coast regular gasoline	2/15 at 3.14
USGC diesel (ultralow sulfur)	2/12 at 3.29
USGC high-sulfur (3.0pc) residual fuel	2/8 at 101.38
Brent/North Sea (ICE, nearest futures continuation)	2/8/13 at 119.17
OPEC crude oil basket	2/13 at 114.94

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In recent years, not just in 2013, Brent/NSea’s time and price trends (nearest futures) roughly resemble those in NYMEX crude. It attained highs around 12700 in spring 2011 (4/11 at 12702 and 4/28 at 12670). The next Brent high at 12840 slightly exceeded its April 2011 peaks, yet it

occurred the same day as that in NYMEX crude, on 3/1/12. Brent's next interim high was 9/14/12 at 11795. The OPEC daily crude oil price basket summits were 4/28/11 at 12091 and 3/13/12 at 12464.

### **US PETROLEUM INVENTORY: A HEAVY BURDEN**

Of course many variables influence petroleum price trends. Not only economic recovery in general, but also Federal Reserve Board (and other central bank) money printing, massive deficit spending, a generally weak US dollar, very low American (and other) interest rates, and rallies in key stock playgrounds such as the S+P 500 have encouraged petroleum price strength.

However, current US petroleum inventories in days coverage terms probably recently have been an increasingly bearish factor on US petroleum prices in general (and thereby to some extent on worldwide oil prices in general). This viewpoint intertwines with perspectives on price throughout the commodity complex. In particular, note the recent price weakness since around February 2013. The bottom line is that US petroleum inventories have been and remain high enough to be rather bearish for petroleum prices.

The crude oil inventory situation is not the same as that in refined products such as gasoline and distillates, whether in the United States or elsewhere. However, focus on NYMEX crude oil (nearest futures) and keep in mind the recent highs across the US petroleum complex in 2013.

After the recovery that began in 2009, US total petroleum (crude and products combined) days coverage initially peaked around 59.4 days in March 2012, around the time of the second (lower) NYMEX crude oil peak at 11055 on 3/1/12. This coverage jumped 8.5 days above the end March average of 50.9 days (1996-2012). It also set a new record for calendar March for the entire 1996-2012 period. Even if one conjectures that a desirable stockholding level shifted upward to around 54 to 55 days (a supposed new normal) due to changes in inventory holding patterns, that March 2012 total remains at least 4.4 days above average (59.4 less 55.0).

Days coverage for crude oil and products combined dipped to 57.5 days at end August 2012. This rests about 5.5 days over the 1996-2012 average for that month (and near the record high of 58.6 days in August 2009). Since then, total petroleum inventories have remained quite lofty in days coverage terms, setting many new records. September 2012's 61.8 days is 7.7 days over that month's long run average as well as a new record for that month (recall the NYMEX crude oil peak 9/14/12 at 10042). October 2012's 59.6 days is nearly seven days over the long run average for that calendar month, as is November's 59.9 days; both created new records. What about December 2012? Another new record, at 61.3 days; this soars about 10.4 days over the end-year average. Compare some of these with the mammoth inventories of 60.9 days in May 2009 (still the record for that month), when prices were far beneath those which have existed in recent months.

In 2013, inventories have stayed very high. At end January 2013, 60.4 total days coverage broke 2012's prior record of 58.9 days and leaped 8.9 days above the 1996-2012 average. February 2013's 58.9 days towers 8.4 days over the 1996-2012 average; it too is a record high for that period. For the week ending 3/29/12, total days coverage was 58.1 days (EIA weekly data). Though under 2012's 59.4 day plateau, it still is 7.2 days above average.

## FINISHING LINES

International Energy Agency, OECD industry stocks at end fourth quarter 2012 were about 58 days (of forward consumption), around typical levels since end 2009 (“Oil Market Report”, Table 5; 3/13/13). These are arguably about two or three days above the long run average. So maybe the US could be more oversupplied than other regions. In addition, the OECD is not the whole world. Nevertheless, note the coincidence in trend timing between NYMEX crude oil and other key crude oil indicators such as Brent/North Sea and the OPEC basket.

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In the context of the US inventory oversupply, note the drop off points in early April 2013 in the US petroleum complex. NYMEX crude oil (nearest futures) slumped from 4/1/13’s high at 9780 (compare Brent’s dive from 11179 on 4/2). USGC regular gasoline had an interim top on 4/1/13 at 291.1, with USGC diesel’s on 4/2 at 311.1 and high sulfur residual fuel’s 4/1 at 9738.

Many watch US equities alongside commodities in general and petroleum prices in particular. The S+P 500 in the past three years made springtime highs: 4/26/10 at 1220, 5/2/11 at 1371, and 4/2/12 at 1422. Compare the timing of the high in the S+P 500 during its recent rally, 4/2/13 at 1574. Compare also this 4/2/13 high in the S+P 500 with the timing of the fall off points in the petroleum complex just noted, as well as the renewed tumble in the broad GSCI from its 3/28/13 level around 659.

The Euro FX peaked against the US dollar 2/1/13 at 1.3711. The China economic growth story underpins bull moves in much of the commodity landscape, including petroleum. China’s stock marketplace is not a great representative for overall Chinese economic growth. However, it should not be forgotten. The Shanghai Composite’s recent minor high was 2/18/13 at about 2445; note the timing of the minor low in the renminbi, 2/20/13 at 6.249.

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