

CONCLUSION

Crude oil streams and various refined products create an array of petroleum supply/demand pictures. Although America of course is not the entire oil universe, a survey of the recent overall United States petroleum inventory scene offers insight into the general petroleum price trend. Also recall the linkage in recent years of major trends between the S+P 500 and the petroleum complex (and commodities “in general”). This analysis of petroleum inventories in context underlines the current bearish trends in petroleum and the S+P 500.

INVENTORY

At end March, US oil industry total inventory averages 50.3 days coverage (1996-2011, crude and products combined relative to total product supplied per day for that calendar month, Energy Information Administration inventory data; Strategic Petroleum Reserve stocks not included). End March 2012 days coverage climbed to 58.9 days supply. Not only did this soar more than eight days above average. It established a new record for that calendar month for the 1996-present era. Although the United States economy has been in a recovery for almost three years, these inventories broke beyond March 2009’s 58.2 day summit, achieved in the depths of the worldwide economic crisis and the month of the S+P 500’s a major low (3/6/09 at 667).

These high supplies for March 2012 are not a one month aberration. Glance at the previous three months in historical context. From 1996 through end 2011, average total inventory for December is 50.2 days, January 51.0 days, and February 50.0 days. December 2011 ascended to a new record high for that calendar month; its 56.3 days of supply decisively beat 1998’s 55.4 days. What about January 2012? Not only is its 58.9 days coverage about eight days above average. They smash January 2010’s top of 56.8 days (compare January 2009’s lofty 55.8 days). February 2012’s 57.9 days coverage likewise significantly exceeds its calendar month average. Its huge days coverage decisively climbs over the previous stockpile record of 56.9 days achieved in February 2009.

As of 4/27/12 (weekly EIA data), US petroleum industry inventory slipped to around 56.9 days of supply (average daily total product supplied for the most recent four weeks). Total oil industry stocks nevertheless remain ample from the days coverage perspective. Although not a new end April record elevation (2009 was 58.8 days), it still vaults more than five days over end April’s 51.5 days coverage average.

End May US stocks average 53.1 days of consumption, end June 52.3 days. The 1996-2011 end May summit is 2009’s 60.9 days. May 2009 represents the highest days coverage for all the calendar months in this 15 year period. February 2003’s 42.3 days was the deepest valley. The record height for end June stocks likewise was in 2009, at 59.5 days.

The most recent International Energy Agency statistics indicate plentiful supply for the OECD as a whole. OECD petroleum inventory at end February 2012 was 59.6 days (the IEA measures forward demand cover; “Oil Market Report”, 4/12/12, p1; next issue 5/11/12). Its preliminary

March 2012 data show a build since February of over 22 million barrels. The OECD industry inventory pinnacle of 61 days for recent years occurred (as in the US) in first and second quarters 2009. The 2012 stocks are on the high side. The long run desired (typical) range, at least until recently, probably has been roughly 53 to 55 days, with very tight inventory about 50 days. The low since 2Q09 has been 4Q11's (and 4Q09's) 57 days.

Non-OECD inventory (such as China) remains conjectural.

A QUESTION

The current noteworthy US oil hoard in days coverage terms at high oil prices parallels the substantial stockpile of 2009's time of depressed economic conditions and low prices. For example, look at NYMEX crude oil. Prices around 100 dollars a barrel (3/1/12 high 11055; 5/2/11 pinnacle 11483) soar over the major low at 3240 on 12/19/08. The Brent/North Sea signpost tells a similar tale. The 3/1/12 height of 12840 and 2011's ceiling (see 4/11/11 at 12700 and 4/28/11 at 12666) skyrocket from 12/24/08's 3620. Recent pinnacles in United States refined products are similarly stratospheric. Note US Gulf Coast regular gasoline's 4/3/12 high at 330.7 (about \$3.31 per gallon; the 5/10/11 top was 343.3). See USGC diesel's 2/24/12 top at 327.5, about even with 4/8/11's 327.7. USGC 3.0pc residual fuel oil's recent height at over 114 dollars a barrel (3/1/12) likewise hovers high. **So why are 2012 (current, recent) prices a multiple of about three years ago?**

The American (and global) economic rebound is part of the explosive petroleum price rally story. Rising petroleum demand from non-OECD nations such as China reflects this recovery. Especially focus on intertwining US policies. Recall two mammoth money printing rounds (quantitative easing) by the friendly Federal Reserve, government interest rates near rock-bottom for a sustained and promised duration (thank the bountiful Fed again), and enormous deficit spending (praise the politicians). Many other nations mirror these to some extent in various fashions. Moreover, the broad real trade-weighted dollar slumped severely since its March 2009 high at 96.9 (monthly average; same time as the S+P 500 major low). The dollar retreated to a new all-time depth of 80.6 by July 2011. Though it has risen from that floor, it also has remained relatively feeble. April 2012's 84.0 lurks right around former record lows. These factors not only have bolstered US (and worldwide) economic growth, but also have helped to rally equities such as the S+P 500 and the petroleum complex (and many other commodities). In recent years, commodities "in general" and oil in particular have tended to move in the same general direction as the S+P 500.

However, the question remains why such a high physical inventory level in days coverage terms exists alongside the overall petroleum complex price rally. Even allowing for some regional or particular supply tightness (as in sweet crude, or a particular refined product such as gasoline, diesel, jet, or residual fuel), why have petroleum prices generally been so lofty (keep the higher levels of calendar 2011 and 2012 to date especially in view) when there's so much overall inventory around?

JUST-IN-CASE

Beginning around the mid-1990s, much of the oil industry shifted to a just-in-time inventory management scheme. However, in the past couple of years, fear of a substantial oil supply interruption probably accounts for much of the buildup trend in OECD industry stock holdings

alongside a price rally (sustained high prices). Strategic (governmental) petroleum reserves offer some but not sufficient comfort to commercial participants.

Just-in-time inventory procedures seek to keep working inventories at low levels, yet sufficient to satisfy ongoing commercial commitments. To some extent, in the past couple of years, the US and worldwide petroleum industry has shifted from a just-in-time inventory management method. It now operates somewhat on a just-in-case procedure. So in a more worried world, prudent players believe more inventory (particularly in days coverage terms) must be held in order to meet marketplace obligations (or stay in business). The simmering longstanding Iranian nuclear situation worries many marketplace participants. Remember Libya's recent civil war, and keep the production troubles (risks) of Syria, Nigeria, Sudan, Yemen, Gabon, Kazakhstan, and other producing nations in mind.

NONCOMMERCIAL HOLDINGS

Rhetoric that commodities represent a worthy "asset class", a reasonable "alternative investment", has inspired substantial noncommercial commodity buying (including buying and holding for the so-called long run). This has helped to propel petroleum and other commodities higher. Debates rage regarding the price impact.

However, "alternative investment" and similar noncommercial buying strategies probably reduce "free supply", even though this relationship and its consequences (like those between other economic variables) are complex issues and a matter of opinion. In any event, commodity buy-and-hold strategies, regardless of whether they receive the honored "investment" label, usually are not matched by comparable actual production increases (at least anytime soon) to meet (accompany) that incremental demand. They thus tend to reduce current "free supply" (readily available inventory) to some degree. Why? Some commercials (in addition to commodity producers) sell to these noncommercial buyers. Those commercials (think of banks or investment banks or similar entities) typically hedge such sales by buying something somewhere since they want to run a balanced book (roughly offsetting longs and shorts). This hedging effort by the commercial merchant eventually involves their (or some other marketplace participant with whom they deal) holding or controlling some physical supply to balance against their short sale to the noncommercial.

The CFTC produces a report for 12 US agricultural commodities. It lists holdings of Index Traders. This noncommercial participant category is a proxy for the buy-and-hold alternative investment group. These Index Traders are net long. The average net long Index Trader position (futures and options combined, all commodities combined) is around twenty-five percent of total open interest. This is obviously huge. Although the petroleum complex is not part of these statistics, presumably Index Traders represent a substantial amount of noncommercial participation in petroleum. After all, index investment rhetoric and activity extends throughout the commodities world.

Suppose alternative investment or "speculative" ownership (especially longer term holdings) reduce the "free supply" of any given petroleum industry physical inventory level. Again, one can quarrel as to how much. If so, then all else equal, the petroleum industry will need to hold a greater amount of physical inventory to achieve its desired readily available inventory level. Thus in a period of sustained notable alternative investment (substantial noncommercial ownership), the nominal level of days coverage may have to rise to satisfy the desired (rough target for)

industry inventories. All else equal, fifty five days of inventory in an alternative investment era is not the same in free supply terms as in an epoch without such investment.

CHANGE

A slowdown in world growth (and a recession in key regions) is bearish for commodities in general, including petroleum. The broad GSCI high was on 3/1/12 at 717, the S+P 500 peak to date 4/2/12 at 1422. The S+P 500 peaks in 2011 (5/2/11) and 2010 (4/26/10) and the final one in 2008 (5/19/08) occurred in springtime. In any event, falling equity benchmarks such as the S+P 500 probably will find parallels in bear moves in the petroleum complex.

Reduced just-in-case fears in petroleum make the petroleum days coverage situation more burdensome (increasingly more bearish for price). So with United States (and overall OECD) inventories high, the easing of a just-in-case bias will tend to pressure petroleum prices even more.

The Iranian nuclear situation remains volatile. Observers heatedly debate whether and when (if at all) Israel (with or without US assistance/involvement) will attack Iranian nuclear facilities. However, there has been at least some slight recent progress in ongoing negotiations with Iran. The US and its allies generally agree on the likely need to wait to see further consequences of existing sanctions. In addition, Israel has substantial political divisions regarding the merits of an attack. Israel is holding an election soon, probably around September 4. In sum, there probably will not be an attack by Israel on Iranian nuclear facilities (with or without America) in the next several months (if at all).

Around 3/20/12, the Saudi Arabian oil minister said current oil prices were “unjustified”, proclaiming his nation would expand output by up to twenty-five percent if necessary (Financial Times, 3/21/12, p1). Saudi Arabia’s 1Q12 crude oil output of nearly 9.7mmbd jumps from the calendar 2011 average of just over 9.0mmbd. Libyan production has recovered a great deal.

The near term future for oil supplies currently looks more than sufficient. The IEA estimates the calendar 2012 call on OPEC crude oil will be 30.1 million barrels per day (Table 1). Assume OPEC crude oil production remains at 31.2 million barrels per day (the 1Q12 level; Table 3). Then worldwide stocks will increase over the balance of 2012 (forecast demand is 29.5mmbd for 2Q12, 30.7mmbd for 3Q, and 30.3mmbd for 4Q).

On balance, just-in-case fears regarding petroleum inventory probably are diminishing, and will continue to do so for a while longer. A bear trend in petroleum prices probably also will interrelate with attitudes regarding just-in-case inventory management. If prices are dropping, why worry quite so much about supplies, right?

Analysis of NYMEX noncommercial petroleum positions indicates they probably reached a peak recently. Liquidation by net noncommercial longs probably has helped to move oil prices lower and probably will continue to do so.

The NYMEX petroleum complex total (gross) noncommercial long positions peaked 3/13/12 at just over 616 thousand contracts (futures and options combined for the benchmark crude oil, heating oil, and RBOB/gasoline contracts combined). The NYMEX net noncommercial long (“NCL”) position that week was 454m contracts (and 13.7 percent of total open interest), just

under the nearly 456m height of 2/28/12. These gross and net NCL positions are records (1995-present). The 2/28/12 net NCL position was over 14.2 percent; this lofty percentage was the highest since first quarter 2004.

As of 5/1/12, the gross position was about 559m contracts. The net NCL position of nearly 410m remains a substantial 12.8pc.

There has been a tendency for “very elevated” net NCL petroleum complex positions and net NCL percentages to occur “near” in time to significant price pinnacles in the US petroleum complex (and in the Brent/North Sea crude oil benchmark as well). Spring 2011 was an example of this. The net NCL high was 4/15/11 at 426m contracts. Its 11.5pc of total open interest was only slightly below the 3/29/11 peak of about 11.6pc. On 4/26/11, the net NCL position was 422m and 11.5pc of open interest. Recall the NYMEX crude oil high of 5/2/11 at 11483 and the 4/11/11 and 4/28/11 Brent/North Sea highs around 12700. The S+P 500 high was 5/2/11 at 1371.

What about 2010? On 4/6/10, the net NCL position in the NYMEX petroleum complex peaked at high levels, with net NCL of 334m contracts and 9.6pc of total open interest. These fell sharply from 5/4/10’s 306m and 8.5pc. The high in NYMEX crude was 5/3/10 at 8715 (Brent 8958 that day as well), the pinnacle in the S+P 500 4/26/10 at 1220.

What about the coincidence of low NCL levels around times of price bottoms? What is a “low” NCL level (gross or net) varies according to time and individual perspective. In recent years in the NYMEX petroleum complex (benchmark contracts combined), the NC position has been consistently net long.

On 10/4/11, net NCL reached a low of 225 thousand contracts and about 6.5pc of total open interest. These levels are still substantial, but keep in mind the massive buildup since then. However, again remember the rough linkage between highs in the S+P 500 and commodities “in general” (and the petroleum complex), as well as that between lows in that equity benchmark and commodities (and oil). The S+P 500 bottom was 1075 on 10/4/11. The broad GSCI low of 573 occurred 10/4/11. The NYMEX crude oil trough was 7495 that day; Brent’s 9911 that day rested just above its 9874 low a few weeks earlier (8/9/11).

In the economic crisis period, the final low in the net NCL position (the noncommercial position never went net short; 10/7/08’s 73m and 2.2pc of open interest were the NCL lows) was 3/10/09, or 3.8pc of open interest. NCL accelerated higher from there. Though somewhat after the major low in NYMEX crude oil (12/19/08 at 3240), it was close to the NYMEX crude rally take-off point on 2/12/09 at 3355, and about the same day as the major low in the S+P 500 (3/6/09). What about NCL highs in the petroleum complex prior to this? The net NCL peak of 4/22/08, 238m, was not long before the final high in the S+P 500 on 5/19/08. Although the pc of open interest peaked at about 8.1pc on 9/18/07 (compare the timing of the peak in equities), it fell significantly after 4/22/08’s 7.0pc.

Not so incidentally, in regard to the 2012 petroleum complex NCL analysis (and petroleum and stock peaks and trends) note that the recent net long position in the Index Trader category was 3/27/12 at 1.54 million contracts. This was up quite a bit from the 10/4/11 low of about 1.3mm contracts. During the worldwide economic crisis, the bottom in net Index Trader length occurred 3/10/09 at about 923m contracts (remember the S+P 500 major low timing), a huge collapse from the 1.78 million contract peak on 5/13/08 (S+P 500 final top 5/19/08 at 1440).

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