

MAKING CONNECTIONS

Picture the current ongoing worldwide economic crisis, first during its acceleration in spring and fall 2008, then through the recovery and up to the present day. During this challenging era, as well as generally in the preceding few decades, important price and time trends for commodities in general roughly have tracked those of key stock marketplace benchmarks such as the S+P 500. Bull (bear) moves for the broad Goldman Sachs Commodity Index (GSCI) parallel upward (downward) patterns in the S+P 500 and the Dow Jones Industrial Average.

The S+P 500 made its major low 3/6/09 at 667, with the GSCI's preceding it by a couple of weeks (2/19/09 at 306). Despite assorted twists and turns since then, significant advances in both arenas have been associated with worldwide economic recovery (or sufficient growth), with substantial tumbles linked to fears regarding financial health (inadequate growth, recession).

As a reflection of and as a remedy for the global economic disaster, the United States government and many other nations have engaged in massive deficit spending campaigns. America's Federal Reserve Board likewise has attempted to spur and sustain economic growth (and thus stock marketplace rallies) by formidable measures such as sustained rock-bottom interest rates (Federal Funds) and massive money printing (quantitative easing). Other key international central banks in various ways have engaged in similar exercises. Consequently marketplace players should monitor the timing of central banking policy initiatives alongside commodity and equity price trends.

Petroleum is a key part of the broad GSCI and many other commodity indices. Of course not all commodities travel in the same direction, for they have diverse supply/demand situations. And marketplace timing relationships are not precise; commodities (even within a specific sector such as petroleum) do not all embark in a bull or bear trend at or around the same time. The overall petroleum complex, a key chapter in the commodities in general story, nevertheless has marched more or less alongside the S+P 500.

Each of the assorted petroleum spreads has its own supply/demand variables. Picture a front-to-back intramarket NYMEX crude oil spread or a US Gulf Coast gasoline crack (refining margin) spread. An analytical connection portraying a relationship between petroleum spreads to the S+P 500 and economic recovery (decline) and Federal Reserve policies may seem to be a fairly long stretch.

Yet the price and time movements of one or more important petroleum spreads often "confirm" or warn of changes in outright price trends in the overall petroleum price complex (and its individual marketplaces such as Brent/NSea crude oil, or US Gulf Coast gasoline). So in a web where flat price petroleum patterns generally (roughly) coincide with those of the broad GSCI, trends in oil spreads offer guidance to the broad GSCI trend. Given the rather close bull (and bear) shifts between the GSCI and the S+P 500, petroleum spreads therefore sometimes can offer insight into S+P 500 trends (and into US and international economic growth trends as well). And so Federal Reserve policies tie into some petroleum spread marketplaces. Keep in mind, however, that perceived connections between petroleum spreads and these other domains are only guidelines, and they are not unchanging.

The Federal Reserve announced a new round of money printing (QE3) 9/13/12. In previous quantitative easing festivals, stocks and commodities in general eventually climbed higher. Yet this has not been the case so far this time. Admittedly only two months have passed since then. Perhaps the US fiscal cliff problem weighs heavily on these playgrounds; Europe, Japan, and China also face difficulties. Maybe solutions for these challenges will emerge soon. Maybe the Fed will engage in QE4 in the near future.

However, what has happened in petroleum spreads since the announcement of the Fed's latest money printing performance? Intramarket crude oil spreads are especially important. Their price and time links are particularly close to flat price crude oil trends (and thus overall petroleum complex price direction and therefore moves paths of the broad GSCI). A widely-monitored front-to-back Brent/NSea crude oil spread, the December 2013 less December 2014 one, has slumped; the nearby month is less high relative to the distant one (reduced backwardation). The same fall in backwardation has occurred with the analogous NYMEX crude oil spread.

How did key United States Gulf Coast refining margin (crack) spreads respond? But first, review stock marketplaces. The S+P 500 high to date since the bull move occurred just after the Fed's latest easing, on 9/14/12 at 1475. However, the Dow Jones Industrial Average top occurred a bit later, on 10/5/12 at 13,662 (S+P 500's second high was 1471 on that day). The refining margin spreads rallied from mid-September lows achieved a few days after the Fed's announcement. However, the cash marketplace regular gasoline versus NYMEX first futures crude oil crack attained a final peak on 10/5/12 and then plummeted dramatically. The spot diesel (ultralow sulfur) versus NYMEX first futures crude oil spread reached heights around \$46 dollars a barrel on 10/5 and 10/11/12, falling modestly from those elevations since then.

These declines in petroleum intramarket and crack spreads over the past couple of months thus confirm the weakness in US stocks and the broad GSCI. They underline the challenges facing economic recovery and warn that a US (and worldwide) economic slowdown looms. In addition, this oil spread behavior underscores the limited (so far, anyway) effectiveness of the Fed's September 2012 round of monetary accommodation. They also hint that further Fed creativity likewise probably will not generate much additional upward momentum in real GDP.

CURRENT PRICE AND TIME LINKS

1. Marketplace highs in mid-September to early October 2012: (On 9/13/12, the Federal Reserve Board announced its latest money printing expedition, QE3)

S+P 500: 1475 on 9/14/12, then 10/5 at 1471, Dow Jones Industrials top 10/5 at 13662
Broad GSCI: 699 on 9/14/12

Brent/North Sea crude oil (nearest futures): 9/17/12 at 11702
NYMEX crude oil (nearest futures continuation): 11042 on 9/14/12

Crude oil intramarket spread, Brent/North Sea, December 2013 versus Dec 2014 (closing basis):
highs 9/14/12 at \$6.53 (backwardation; hereafter dollar signs and decimals omitted) and 10/11/12
at 607

Crude oil intramarket spread, NYMEX (WTI), December 2013 versus Dec 2014 (settlement basis): 409 on 9/13/12 and 308 on 10/11/12
(Incidentally, note the 10/11/12 timing of the high in the February less April 2013 NYMEX New York Harbor heating oil spread at about 710 points- over seven cents a gallon. It recently crashed under 200.)

US Gulf Coast gasoline crack spread (regular grade cash marketplace gasoline versus first futures NYMEX crude oil, settlement basis): \$39.90 per barrel (hereafter dollar signs and decimals omitted) on 10/5/12

USGC diesel crack spread (ultralow sulfur diesel cash marketplace versus nearest futures NYMEX crude, closing basis): 4571 on 10/5/12 and 4610 on 10/11/12

See several other marketplace turning points over the 2009-2012 vista:

2. Highs of March/April (and early May) 2012:

S+P 500: 1422 on 4/2/12 (then 1415 on 5/1/12)
Broad GSCI: 3/1/12 at 717 (then fall-off point 5/1/12 at 689)

Brent/North Sea crude oil (nearest futures): 3/1/12 at 12840 (then nosedive from 5/2/12's 11980)
NYMEX crude oil (nearest futures): 3/1/12 at 11055 (then drop from 5/1/12's 10643)

Crude oil intramarket spread, Brent/North Sea, December 2013 versus Dec 2014: 847 on 3/8/12 (then 815 on 3/27/12 and 4/27/12's 719)
Crude oil intramarket spread, NYMEX (WTI), December 2013 versus Dec 2014: 632 on 2/24/12 (4/27/12 at 555)

US Gulf Coast gasoline crack spread (regular versus first futures NYMEX crude oil): 4/4/12 at 3398
USGC diesel crack spread (ultralow sulfur diesel versus nearest futures NYMEX crude): an earlier high on 2/6/12 at 3496

3. Lows of early October 2011:

S+P 500: 10/4/11 at 1075
Broad GSCI: 10/4/11 at 573

Brent/North Sea crude oil (nearest futures): 10/4/11 at 9911 (just above the 8/9/11 bottom at 9874)
NYMEX crude oil (nearest futures): 10/4/11 at 7491 (beneath 8/9/11's trough at 7571)

Crude oil intramarket spread, Brent/North Sea, Dec 2013 versus Dec 2014: a series of rising lows; these include one at 247 on 10/6/11, but there were earlier bottoms at 224 on 8/9/11 and 182 on 6/27/11
Crude oil intramarket spread, NYMEX (WTI), December 2013 versus Dec 2014: final low -129 (contango) on 10/4/11 (8/9/11 -169, 6/27/11 -78)

Although the NYMEX front-to-back crude oil spread made an initial low at -78 (contango) on 6/27/11, in contrast to the Brent intramarket spread, it achieved a lower low at -169 on 8/9/11. The Brent spread rather quickly surpassed its 4/20/11 high at 307 (see the 7/8/11 top at 374),

whereas the NYMEX spread generally kept declining until its early August 2011 bottom. The stronger front-to-back pattern in the Brent/NSea intramarket spread probably in part reflects the Libyan (sweet) crude oil supply interruption in 2011 due to its civil war.

US Gulf Coast gasoline crack spread: 322 on 11/17/11. The USGC crack valley thus was about six weeks later than the early October lows in the S+P 500, broad GSCI, crude oil outright, and crude oil intramarket spreads. However, the crack spread acceleration was dramatic thereafter. USGC diesel crack spread: 1972 on 12/13/11, so its tie to other marketplaces was relatively loose

4. Highs of April/May 2011:

S+P 500: 5/2/11 at 1371

Broad GSCI: 4/11/11 and 5/2/11 at 762

Brent/North Sea crude oil (nearest futures): 4/11/11 at 12700, with final high 4/28/11 at 12666
NYMEX crude oil (nearest futures): 5/2/11 at 11483

Crude oil intramarket spread, Brent/North Sea, December 2013 versus Dec 2014: initial high 4/20/11 at 307. Recollect the rally from the 182 low on 6/27/12; the bottoms in outright crude oil occurred later. This underlines that outright and spreads do not necessarily march together in lockstep fashion (or “right away” in the same direction).

Crude oil intramarket spread, NYMEX (WTI), December 2013 versus Dec 2014: 4/20/11 at 214

US Gulf Coast gasoline crack spread (regular versus first futures NYMEX crude oil): 5/10/11 at 3908

USGC diesel crack spread (ultralow sulfur diesel versus nearest futures NYMEX crude): this crack does not fit the pattern of the other marketplaces of the “April/May 2011 highs” period, another warning against excessive faith in guidance (signs, signals) from a given marketplace in relation to others. The USGC diesel crack established an earlier peak during winter, on 2/16/11 at 3266. In addition, despite a sharp fall, this crack then rallied sharply.

5. Major lows in first quarter 2009:

S+P 500: major low 3/6/09 at 667

Broad GSCI: major low 2/19/09 (initial low 12/24/08 at 308)

Brent/North Sea crude oil (nearest futures): final low 2/18/09 at 3935 (first low 3620 on 12/24/08)

NYMEX crude oil (nearest futures): final low 3355 on 2/12/09 (initial bottom 12/19/08 at 3240)

Crude oil intramarket spread, Brent/North Sea, December 2013 versus Dec 2014: -256 (contango) on 2/27/09

Crude oil intramarket spread, NYMEX (WTI), December 2013 versus Dec 2014: -266 (contango) 2/24/09

US Gulf Coast gasoline crack spread (regular versus first futures NYMEX crude oil): this spread swung widely during 2009 (and in late 2008). Its patterns do not closely fit the other marketplaces during this time horizon. It made major lows as a negative crack at -943 on 11/3/08; note also the next low, on 12/26/08 at -433 (and recall the initial bottoms in flat price crude oil around then. Though perhaps these very wide negative gasoline cracks reflect settlement issues and a timing difference between spot product and nearby crude, they nevertheless generally were negative

during this late 2008 span. However, notable lows then appeared at 179 (positive crack) on 1/23/09, as well as at 384 on 4/2/09 (around the time of the first quarter 2009 ones reached in other battlefields). This crack definitively bottomed at 110 on 9/25/09. USGC diesel crack spread (ultralow sulfur diesel versus nearest futures NYMEX crude): final low at 191 on 5/27/09, but note the 3/9/09 date of the 293 initial trough

Other points in recent times to review for associated trend changes across these marketplaces include June 2012 (S+P 500 low at 1267) and spring 2010 (S+P 500 high 4/26/10 at 1220). As the worldwide financial crisis unveiled, the S+P 500's final high was 5/19/08 at 1440 (major summit 10/11/07 at 1577), with the broad GSCI peak not long afterward on 7/3/08 at 894.

ASSOCIATED PICTURES

For an additional perspective on these petroleum intramarket and refining margin crack spread marketplaces in context over the past several years, note the accompanying graphs and comments on them.

ATTACHED FOOTNOTES

For purposes of identifying and assessing important connections between and trend changes of these various marketplaces, the overall price trend direction in the context of fairly close time linkage is the key consideration. For example, start with the first quarter 2009 lows and focus on calendar 2012. One marketplace (such as the S+P 500) may attain new peaks (as in April 2012 and September 2012), whereas the pinnacle since the 2009 depths in another arena (such as the broad GSCI) remains that of April/May 2011. The key is that the GSCI reached other significant (though lower) highs in 2012 (March/May, mid-September) alongside those in the S+P 500 (the S+P 500 in turn had a lower but still crucial high in early May 2011 neighboring the GSCI's pinnacles of April/May 2011).

Monitor price and time moves in metals alongside those in petroleum outright (flat prices) and spreads, the broad GSCI, and the S+P 500. Note the recent highs in gold (10/3/12 at 1795, which was under the 9/6/11 summit at 1921), silver (10/1/12 at 3536; 4/25/11 plateau 4979), and the London Metal Exchange base metal index (9/14/12 at 3609, well under the early 2011 peaks on 2/14/11 at 4478 and 4/8/11 at 4469).

One can entangle interest rate marketplace analysis (such as US Treasury 10 year note and sovereign credit spread travels) and broad real trade-weighted US dollar ("TWD") trends with the S+P 500, broad GSCI, and petroleum outright and spread marketplaces. The TWD peaked at 96.9 (monthly average) in March 2009 (alongside the S+P 500; compare the GSCI and petroleum, including the spreads above). It eroded to its July 2011 bottom at 80.5 (the S+P 500, after its 5/2/11 high at 1371, subsequently slid further downhill that July, from 7/7 at 1357 and 7/21 at 1347).

A recent UST 10 year high was 1.89 percent on 9/14/12. Although UST yields edged lower alongside stocks since mid-September 2012, the TWD has not moved much. In September 2012, it was about 84.1 (monthly average, down from its June 2012 high at 86.2), standing at 84.3 for November 2012.

The outright (spot) Brent marketplace generally has exceeded (often hugely) the NYMEX crude oil one for quite some time, particularly since early 2011. The longer run decline of North Sea crude oil production is a key factor in this spread relationship, especially given the contrasting substantial boost in the past few years in domestic US crude oil output. In addition, the Libyan civil war that commenced in first quarter 2011, by cutting output of that country's highly desired sweet crude, sparked a scramble for comparable North Sea (and other related) crudes.

The Brent/NSea December 2013/2014 intramarket spread likewise has been higher than the comparable NYMEX crude oil one since around early 2011. The contrasting trends for North Sea and US crude oil production have been important variables in this context. The slashing of Libyan supply also has played a role.

Yet note the general tendency of both intramarket crude oil spreads to rally (or decline) more or less together during the overall worldwide economic recovery that commenced in early 2009.

Analysts could elect to view other December versus December crude oil intramarket year spreads before the 2013/14 one (such as December 2012/13). Note the timing of December 2012 versus December 2013 spread tops (settlement basis) in relation to other marketplaces this year; it achieved a key high 3/1/12 at 689, and later collapsed from its 9/14/12 one at 168. The December calendar spread is obviously not the only relevant intramarket relationship. Some may choose to analyze the first less second month crude oil on a continuation futures (rollover) basis.

USGC diesel and gasoline cracks do not necessarily move the same way or at around the same time. Also, these cracks at times display seasonal tendencies.

In general, the overall near term worldwide petroleum supply/demand picture remains mildly bearish. All else equal, this will tend to weigh not only on spot petroleum prices in general, but also on intramarket Brent/NSea and NYMEX crude oil spreads. Recently the USGC crack spreads have moved down alongside those in outright and intramarket crude spreads, though they may not do so forever (watch days coverage levels and trends in refined products in relation to crude oil).

First, from the days coverage perspective, current OECD (advanced nation) inventories of petroleum are adequate, and arguably rather high. The International Energy Agency statistics reveal elevated overall inventories in the OECD ("Monthly Oil Report", 11/13/12, Table 5 and p1). The IEA estimates OECD industry stocks at end 3Q12 represent about 59.6 days of forecast forward demand. This rivals the lofty 60 days of 3Q09, and it probably exceeds the "normal" level by about four to five days. Compare the 57 days at end 3Q11. These figures of course do not reflect the stockpile levels (and desired holdings) in China and other non-OECD nations.

What about the American horizon? Though the crude oil and refined products situations differ, US overall stocks are above average. US petroleum days coverage (crude and products inventories combined) at end November 2012 (EIA weekly data) is 57.4 days (this is relative to the most recent four week average of total product supplied, not versus anticipated forward demand). The average days coverage at end November (1996-2011) is 52.8 days. Thus days coverage is nearly five days above average. The record end November high is 1998's 59.1 days. End November 2009 and 2010 both nearly matched that with their 58.0 days.

The petroleum days coverage inventory overhang (“excess”) in the OECD in general and the US in particular probably is not as severe as the five day number suggests. Why? Due to somewhat greater supply interruption fears, many oil refiners and marketers in the past few years probably shifted from a just-in-time to a just-in-case inventory management approach. Thus they may wish to hold more supplies around (increase desired days coverage holdings). Moreover, in recent years, substantial alternative “investment” in the petroleum domain (as in the realm of commodities in general) probably has reduced petroleum free supply and thus “tightened” the oil marketplace to some extent. So if alternative investment reduces free supply, the oil industry needs to acquire and hold more nominal stocks to compensate for the consequences of alternative investment. For a commodity with rather low (and declining) output (picture Brent/NSea), such alternative investment can have significant price implications.

Nevertheless, despite these just-in-case and alternative investment factors, the current statistically substantial (relative to longer run history) petroleum days coverage level still indicates that overall crude and products supplies are at least around average (adequate, sufficient) from the OECD advanced nation perspective.

In addition, current patterns suggest worldwide petroleum inventories will continue to build. The International Energy Agency (“Monthly Oil Report”, Table 1; next MOR is 12/12/12) estimates calendar 2012’s call on OPEC crude oil at 30.2mmbd, with calendar 2013’s call 29.8mmbd. The 3Q12 OPEC crude oil production (Table 3) of 31.5mmbd (Saudi Arabia 9.6mmbd) exceeds those levels; all else equal, that production level for 2013 would build stocks and further burden petroleum prices.

Saudi Arabia increased crude oil supplies in an accommodative policy action analogous to the low interest rate and money printing policies of the Federal Reserve and other central banks.

Note as well the timing of recent Saudi comments in relation to the mid-September (or early October) 2012 highs in Brent/NSea and NYMEX crude oil and intramarket and crack spreads discussed above. On 10/9/12, the Saudi oil minister stated he wanted Brent to decline “closer to \$100 a barrel” (Bloomberg). The Financial Times had a similar report regarding Saudi policy a few weeks earlier (9/19/12, p1; recall the Fed unveiled QE3 on 9/13/12).

However, some regions from the petroleum supply/demand perspective may be tighter than others. Keep in mind that the non-OECD petroleum situation (as in China) is not as transparent as in the US and other OECD nations. Also, supplies may be less ample in one or more refined products than crude oil in general. Crude grades do not necessarily display the same supply/demand picture. In recent years, think of high gravity low sulfur availability.

A substantial petroleum supply interruption of course could cause spot petroleum prices to spike (for intramarket spreads in both crude oil and refined products, this initially- and perhaps for a while thereafter- probably would cause nearby prices to rally more than deferred ones). Hence the current fears about the Middle East political scene, and especially the Iranian nuclear situation. Will Israel attack Iran’s nuclear facilities, and will America join it? If such an attack occurs, will Iran cut off its oil supplies or try to interrupt production elsewhere in the region?

Suppose this assault on Iran occurs. Suppose further that Iranian or other Middle East crude oil production is cut significantly (or faces severe threats of being slashed). Isn't there a substantial likelihood of a Strategic Petroleum Reserve release by America (and its allies)?

Not only does the Israel/Palestine situation show little if any signs of improvement. The so-called Arab Spring has encouraged democratic movements throughout much of the Middle East. Some of these (as in Egypt) have a rather religious aspect. What risks face oil output if pressure for democracy increases within the Kingdom of Saudi Arabia (or other monarchical Gulf States). Though Jordan is not a notable oil producer, it is a kingdom; note recent demonstrations there.

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