<u>COMMODITIES: CAPTIVATING AUDIENCES</u> © Leo Haviland, 646-295-8385

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"Like I said, in prison a man will do most anything to keep his mind occupied." Red, in the film "The Shawshank Redemption" (Frank Darabont, director; Stephen King story)

OVERVIEW AND CONCLUSION

The Federal Reserve Board is a widely-watched star economic performer. Elvis Presley sings in "Jailhouse Rock" that "Everybody in the whole cell block Was dancin' to the Jailhouse Rock". The Fed's actual and anticipated soulful lyrics and mesmerizing policy moves likewise attract, enthrall, and inspire Wall Street, Main Street, and political audiences. The Federal Reserve Board congregates 10/27-28/15 and 12/15-16/15.

Though major stock, interest rate, and currency marketplaces typically grab the lion's share of marketplace and media attention, recently commodities "in general" have marched to center stage alongside them. Central bankers, finance ministers, and other leading economic players pay close attention to the analysis and forecasts of the International Monetary Fund. October 2015's featured cover page titles of the IMF's "World Economic Outlook" ("Adjusting to Lower Commodity Prices") and "Fiscal Monitor" ("The Commodities Roller Coaster") evidences this increased fascination with commodities.

Individual commodities such as crude oil, copper, and corn, as well as commodity sectors such as the petroleum complex, of course have their own supply/demand and inventory pictures. Perspectives on these can and do differ between observers. Yet commodity price trends in general are hostage not only to their own supply/demand situation and general economic growth trends, but also to movements in equities, interest rates, and foreign exchange. Particularly over the past several months, stock and other financial playgrounds more closely have intertwined with noteworthy travels in crucial commodity theaters such as petroleum and base metals. Such increasingly strong ties developed in the past during similar sustained dramatic commodity price adventures.

The current significant link between commodities in general (use the broad Goldman Sachs Commodity Index as a benchmark; the "GSCI" is heavily petroleum-weighted) and other key arenas such as the S+P 500, emerging stock marketplaces in general ("MXEF"; MSCI emerging stock markets index, from Morgan Stanley), and the broad real trade-weighted United States dollar ("TWD") probably will persist at least for the next several months. Stocks, the dollar, and the GSCI probably will all move in a sideways path for the near term. The Fed and its allies do not want the S+P 500 to collapse twenty percent or more (and maybe not even much more than ten percent) from its May 2015 summit. They also do not want the TWD to break out above its September 2015 high (that barrier slightly exceeds the crucial March 2009 major top).

However, the bear move in the S+P 500 that emerged in May 2015 eventually will resume. The US dollar, though its rally from its July 2011 major low has paused, will remain relatively strong. OECD petroleum industry inventories in days coverage terms are very high from the historical perspective. Despite some crude oil production cuts in the United States and elsewhere, overall oil industry inventories likely will remain quite elevated through calendar 2016. So even if in the near term the broad GSCI rallies further from its current level (which likely would occur

alongside a further modest S+P 500 ascent and dollar slide from their current altitudes), it probably ultimately will challenge its late August 2015 low.

COMMODITIES AND OTHER ENTERTAINING MONEY GAMES

George Lang says in the movie "The Spanish Prisoner" (David Mamet, director): "We must never forget that we are human, and as humans we dream, and when we dream we dream of money."

Commodities, as are stock and debt securities, obviously are convertible to and thus are forms of (equal) money. In recent years, the commodity field increasingly has been viewed as an asset class, a universe capable of returns ("yields"), worthy of "investment" and potentially attractive to financial pilgrims seeking portfolio diversification.

Economic and political guardians as well as Wall Street and Main Street dwellers nowadays avidly monitor China's economic growth level and prospects. Assorted experts underline China's growing role in the interconnected global economy and its substantial demand for commodities. Thus to some extent, the so-called China story in recent years has been chained to a commodities tale.

As the enrapturing Goldilocks Era ended, stocks peaked before commodities. The S+P 500's major high was 10/11/07's 1576, with that in emerging marketplaces (MXEF) alongside it on 11/1/07 at 1345. The broad GSCI made its major peak on 7/3/08 at 894 (the Bloomberg Commodity Index ("BCI") top also was on 7/3/08, at 238.5). However, this was close in time to the S+P 500's final peak at 1440 on 5/19/08 (and the MXEF's final top at 1253 on 5/19/08), and not long after the TWD's important April 2008 low near 84.2 (Fed H.10; monthly average). The GSCI's 2/19/09 major low at 306 (BCI bottom 2/26/99 at 74.2) occurred near the S+P 500's major bottom, 3/6/09 at 667, which occurred alongside the TWD's March 2009 major top at 96.9. The MXEF's major trough occurred 10/28/08 at 446, its final low 3/3/09 at 471.

During the worldwide economic recovery that set sail around 2009, neither commodities in general nor the MXEF surpassed their 2008 plateau.

The following table evidences the major relationship between the commodity universe (see the broad GSCI and the Bloomberg Commodity Index), emerging marketplace stocks in general (MXEF), and the broad real trade-weighted dollar since spring 2011. The price fluctuations of the various battlefields of course were not precisely the same. However, as the TWD bull move commenced and accelerated, so did bear moves in emerging marketplace stocks and commodities, crashing from interim tops built in mid-year 2014.

The major high in commodities in general and the MXEF (spring 2011) and their important 2014 interim tops occurred before the S+P 500's May 2015 height. This pattern differs from the 2007-08 one. In late spring 2015, the S+P 500 (as did China's Shanghai Composite stock index) nevertheless joined (encouraged) the slump in the MXEF and commodities alongside an acceleration of US dollar strength. Thereafter, as in the speeding up of the global economic crisis after around mid-2008, the S+P 500, MXEF, and broad GSCI retreated together in conjunction with TWD appreciation. Also note the similar late August 2015 troughs in commodities and stocks. Though more recent data from the Fed on the TWD eventually will emerge, key US dollar cross rates in the past couple of weeks hint the broad TWD perhaps has slipped a bit since its September 2015 high.

	Broad GSCI	Bloomberg <u>Comm. Index</u>	Emerging Market Stocks <u>MXEF</u>	US Dollar ("TWD")
Peak 2011	762 (4/11 and 5/2/11)	175.7 (4/25/11)	1212 (4/27/11)	Major low 80.5 July 2011
Recent High	673 (6/23/14)	138.7 (4/29/14)	1104 (9/4/14)	86.6 in Sept 2014 escaped over 86.2, June 2012's interim top
Recent Low	334 (8/24/15)	85.1 (8/26/15)	763 (8/24/15)	97.9 (September 2015)
Percent Fall From 2014 Hi	50.4 gh	38.6	30.9	TWD rally 21.6pc since July 2011 bottom

[The nominal broad TWD, which has daily data, did not stop rising with its 8/26/15 height at 120.2. It reached 120.6 on 9/7/15. Though it eroded slightly, it reached a new high on 9/23/15 near 121.2. Daily data currently is available through 10/2/15, when it settled around 120.2.]

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		China	
<u>S+P 500</u>		<u>Shanghai Composite</u>	
			TWD initial advance
Recent High	2135	5178	beyond October 2008's
	(5/20/15)	(6/12/15)	important 93.8 level
Recent Low	1867	2851	in March 2015 (94.9);
	(8/24/15)	(8/26/15)	decisively over with
			July 2015's 95.7
Percent Fall	12.6	44.9	-

The interim low in the nominal TWD occurred 5/15/05 at 112.8, shortly before the S+P 500's May 2015 summit.

The MXEF attained a second low near its late August 2015 one, 9/29/15's 769.7. So did the S+P 500, at 1872 on 9/29/15 (the VIX volatility index high was 8/24/15 at 53.3). Trends in the SXXP (Stoxx 600 European stock index) generally have been attached to those in the S+P 500. The SXXP touched its 332.0 low on 8/24/15, with a nearby second one 9/29/15 at 335.4.

Although commodities in general and the MXEF failed to break over their spring 2011 highs whereas the S+P 500 paraded to record heights, the S+P 500 often made important turns around the same time as these two marketplaces. For example, recall the S+P 500's interim top on 5/2/11 at 1371. It tumbled 21.6 percent to 1075 on 10/4/11. The nominal TWD established a related daily low on 5/2/11 near 93.9, only slightly broken by 7/26/11's 93.7.

WALKING IN STEP: RECENT LOWS IN COMMODITIES

In Alexandre Dumas's novel, "The Count of Monte Cristo", the Count declares: "Do you not know, steward, that everything is for sale to him who cares to pay the price?""

In addition to the overall moves in benchmark commodity indices such as the GSCI and the BCI, recent lows in petroleum and many other important commodity sectors occurred at roughly the same time, around late August 2015. This emphasizes that many diverse individual commodities are bound up and thus tending to trade together.

The concerted effort by the Federal Reserve and its allies to support the S+P 500 (vociferously applauded by stock investors) and halt the US dollar's bull charge played an important part in enabling commodities in general to find support around the same time in late summer 2015. Also, many commodity bulls conjecture that non-OPEC petroleum producers (of US shale, for example) have begun cutting their output even more significantly. Some metal mining firms plan to reduce production.

NYMEX crude oil (nearest futures continuation): \$38.16 on 8/25/15 ICE Brent/North Sea crude oil (nearest futures): \$42.23 on 8/24/15 OPEC daily basket: \$40.47 on 8/24/15 USGC regular gasoline: 125.1 on 8/27/15 USGC diesel: 132.0 on 8/26/15 USGC 3.0pc residual fuel: \$29.13 on 8/24/15.

NYMEX natural gas (nearest futures continuation): 2.403 on 10/2/15. This occurred relatively near in time to the S+P 500's second low, 9/29/15's 1872.

[Appalachian coal (NYMEX first futures): an earlier low, 6/29/15's 4073. However, its price presently stands not much above this.]

Base metals (in general; London Metal Exchange), LMEX index: 2276 on 8/26/15. Silver: \$13.98 on 8/26/15.

[Iron ore (delivered to China): its low around 44.6 on 7/8/15 preceded those in the petroleum complex and base metals. However, iron ore prices in the mid-50s remain depressed in comparison with 7/17/11's 191.7 apex.]

Gold's weakness since its 9/6/11 record at \$1921 interrelates the TWD's long run bull move since July 2011 and the related bear move in commodities in general. In the recent past, the minor low in gold, 7/24/15's \$1072, occurred before the late August ones in petroleum and base metals. Yet fears of international financial meltdown still can spark rushes into gold; the 8/24/15 minor high at \$1169 occurred alongside the S+P 500, MXEF, and GSCI lows.

Agriculture "in general": the S+P Goldman Sachs Agriculture Index's recent low is 9/4/15's 273.2. Its major peak was 3/4/11 (at 570.5)/4/8/11 (566.5), with an important interim high 5/1/14 at 424.6.

For energy commodity marketplace watchers, monitor the timing of lows in related stock sectors. For example, see the XLE (Energy Select Sector Index): 8/24/15 at 58.74 and 9/29/15 at 59.39; OSX (Oil Service Sector): 154.1 on 8/24/15, 153.7 on 9/29/15, and 153.6 on 10/2/15.

PETROLEUM'S ALLURE

"It is not unusual for a quiet country gentleman to be more taken with such a venture than a speculator who has had more experience in its uncertainty. It was astonishing how many New England clergymen, in the time of the petroleum excitement, took chances on oil." "The Gilded Age", by Mark Twain and Charles Dudley Warner

Oil's importance within the world economy, for global and United States inflation levels and expectations, and as part of many benchmark commodity indices is especially well-advertised nowadays. Therefore the current and prospective petroleum supply/demand and inventory situation should capture the attention of marketplace monitors not only in the petroleum realm in particular and the commodity domain in general, but also in stock, debt, and foreign exchange territories. Let's briefly survey the global and American petroleum scene.

Is OPEC's new policy of reducing high-cost (non-OPEC) production succeeding? Some, but not a great deal so far. Despite the dive in drilling rig counts, OECD days coverage levels and the worldwide supply/demand balance for 2015 and 2016 reveal plentiful petroleum.

According to the International Energy Agency's "Oil Market Report", end 2Q15 OECD industry stocks were 63.0 days of forward demand (9/11/15, Table 5; next release 10/13/15). The IEA believes the arithmetic inventory total probably increased in July and August (p1).

For 1996-2014, end year OECD inventory (relative to forward quarter average daily petroleum product demand) averaged about 54.2 days of consumption (see the IEA's "Annual Statistical Supplement" and monthly "Oil Market Report"). Thus the 2Q15 inventories leap about 8.8 days beyond the 1996-2014 end year average. Perhaps the desired industry stock holding level shifted upward in recent years. The 2008-2013 span averaged was about 57.0 days coverage, with 4Q14 at 59.0 days. Thus current OECD inventories look high regardless of the recent historical time horizon selected.

IEA statistics indicate a 30.8 million barrel per day call on OPEC crude oil in 4Q15 will balance supply and demand (Table 1). Suppose OPEC maintains production at around recent levels (31.5mmbd in 2Q15, 31.8mmbd July 2015, 31.6mmbd August 2015; Table 3). Stocks should keep building for the balance of calendar 2015.

What about calendar 2016? The IEA predicts global oil consumption will hop up 1.5 percent in calendar 2016 to 95.8mmbd. This guru forecasts total non-OPEC supply will decline modestly from calendar 2015's 58.1mmbd to 2016's 57.7mmbd. Yet for full year 2016, the implied call on OPEC crude oil is about 31.3mmbd, slightly below recent OPEC crude oil output levels. These statistics indicate the massive OECD industry stock overhang probably will not be reduced substantially in the near term.

The non-OECD region of emerging and developing nations is very important for assessments of the overall petroleum situation. However, what's happening in China (including the extent to which it is building strategic stocks) and elsewhere is much murkier than in the OECD.

Will Saudi Arabia and its allies curtail production with prices of Brent/North Sea at \$40-\$45 or higher? Probably not anytime soon, unless non-OPEC members significantly cut production, or Russia or Mexico or other key non-OPEC members agree to a production restriction regime in conjunction with OPEC. The Saudis have sufficient financial reserves to wait for quite some time.

OPEC next meets 12/4/15.

Will US shale oil and other non-OPEC crude oil production be cut back more drastically than recent statistics suggest?

The US Energy Administration Administration's Short-Term Energy Outlook ("STEO"; 10/6/15) indicates how lower prices have helped to induce modest petroleum cuts in American crude oil output in recent months. It forecasts some further output reduction in upcoming months.

Led by the shale drilling revolution, America's crude oil production climbed from around 5.6 million barrels per day in June 2011 to crest at nearly 9.6mmbd in April 2015. The actual and anticipated production slide since April 2015 is notable but not huge. The October 2015 STEO (Table 4a) indicates September 2015 production at around 9.0mmbd, a moderate 6.7 percent fall versus April 2015. Output slides about .3mmbd over the next several months, reaching about 8.7mmbd in September 2016, around a 9.1pc drop from April 2015. It rises to about 9.1mmbd in December 2016.

For the lower 48 states only (excluding the Gulf of Mexico), production peaked at 7.6mmbd in March 2015. It was about 7.2mmbd in September 2015. The EIA predicts it will fall to just over 6.7mmbd in mid-2016. It thereafter edges higher to about 6.9mmbd in December 2016.

Production cuts or increases of course partly depend on price. The US EIA price estimate for spot West Texas Intermediate crude oil in calendar 2016 is \$53.57 (2015's is \$49.53; STEO, Table 2).

Perhaps these actual and anticipated US crude oil production cuts unveiled in the STEO will inspire downward revisions in non-OPEC output estimates by the International Energy Agency and other wizards. However, keep in mind the IEA's current 31.3mmbd call on OPEC crude oil for calendar 2016 is less than OPEC's August 2015 crude production of over 31.5mmbd. So taken alone, any revisions in current IEA numbers to account for reduced US crude oil output probably will not substantially reduce the likely days supply overhang for calendar 2016.

In addition, suppose that in the aftermath of Iran's nuclear deal, its crude oil production climbs a few hundred thousand barrels a day. Other OPEC producers are unlikely to cut back to accommodate this output. Libyan output remains depressed, but suppose its political situation improves.

Within the US, many significant oil producers and others have battled to end the nearly complete ban on US oil exports (NYTimes, 10/6/15, ppB1, 10). Freeing crude oil for export might boost

US crude oil output on a sustained basis if America found incremental buyers for such new supply. However, even if the current prohibition were substantially eliminated, any jump in US crude oil exports probably would not trim world supply much, if at all. US exports indeed could displace some more expensive foreign crude in regions close to America. However, OPEC and other low-cost producers probably will not readily reduce their production and thereby surrender part of their marketplace shares.

Let's focus on the United States petroleum industry marketplace in days coverage terms. This days coverage perspective is relative to demand for the given calendar month, not forward demand.

For the United States, for all petroleum inventories (commercial crude oil and products combined; based on Energy Information Administration data), end September 2015 days coverage was about 67.3 days (67.6 days the week ending 10/2/15, 66.7 days for the week 9/25/15). This 67.3 day amount skyrockets 12.6 days over the 54.7 day 1996-2014 average for end September (the 1973-2014 end September average is 62.2 days). For the six years for end September from 2009 through 2014, average end September inventory is about 59.6 days; end September 2015 soars 7.7 days above this. For the end September history from 1996-2014, end September 2015 is a record (compare September 2012's 62.2 days). It is the highest end September since 1986's 69.9 days.

For 1996-2014, crude and product inventories combined average 51.7 days coverage at end March and 53.4 days for end June. For the week ending 3/27/15, coverage stood at 63.2 days. For the week ending 6/26/15, days coverage for crude and products combined was 62.8 days. Thus the modest reduction in US domestic crude oil output in recent months has not reduced the monumental overall petroleum stock overhang in days coverage terms.

For 1996-2014, for crude and products combined, US end October days coverage averages 53.1 days, with average end December days coverage 51.6 days.

US crude oil stocks at end September 2015 equaled about 28.3 days coverage (using 9/25/15 EIA weekly data; they rose to 28.7 days for the week ending 10/2/15). This blasts 7.1 days over the 21.2 day 1996-2014 average as well as the prior record over those years for that calendar month, September 2012's 24.8 days.

Some petroleum types are more oversupplied than others. What about total gasoline? Days coverage relative to consumption for the week ending 9/25/15 was 24.5 days (10/2/15 coverage was 24.8 days). This stands slightly high in relation to the 1996-2014 average of 23.7 days.

[For the history of the past few years, some may wish to account for ethanol stocks in the context of gasoline. So for the current and past several years, marketplace weathervanes probably should add a couple of days coverage based on ethanol inventories to a given total gasoline days coverage number.]

As of 9/25/15, US distillate inventories represented 40.1 days of demand (for 10/2/15, about 37.9 days). For the 1996-2014 vista, end September days coverage averaged 36.6 days.

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