Notes at the Margin

Philip K. Verleger, Jr. **Volume XVI, No. 43** **October 29, 2012**

Katritandy

The title of this week's *Notes at the Margin* is a word you have never seen. The first third of it is "Kat." The second part is "Rita." The last bit is "ndy." You might recognize these segments if they were spelled out: Katrina, Rita, and Sandy.

Hurricane Katrina wreaked havoc on the US Gulf Coast in 2005. Most people remember it for the damage to New Orleans. Katrina is also remembered by many in the oil industry for the harm it did to the oil and gas-producing infrastructure. That destruction, though, was ultimately not important because the lost supplies could be replaced with imports or strategic stocks.

Rita struck the Gulf Coast two weeks after Katrina, taking dead aim at Houston. It took out refineries that had survived the previous storm.

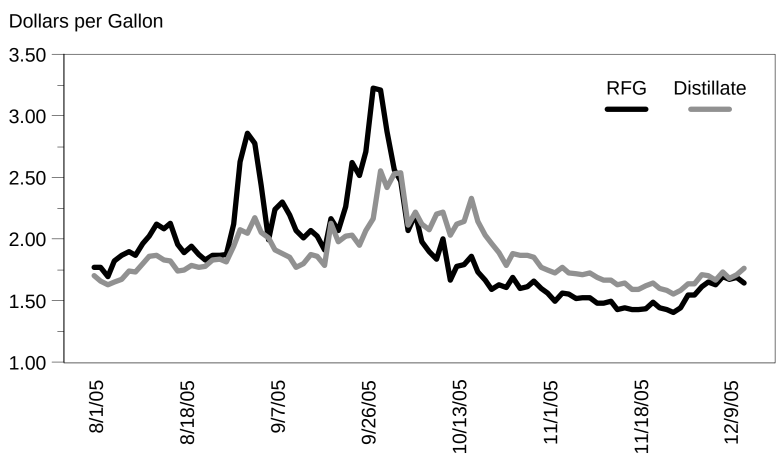
Katrina and Rita's real and lasting impact was felt from the utter chaos they created for US refiners in Middle America. Many had to shut down for several weeks. PADD III gasoline and distillate production dropped twenty percent (roughly six hundred thousand barrels per day for gasoline) in Katrina's aftermath. Output fell further two weeks later when Rita hit the Gulf. The aftereffects continued until January 2006.

Prices shot higher right after Katrina. Spot gasoline rose from $1.87 per gallon to $2.86. Distillate climbed from $1.86 per gallon to $2.06. Prices surged again later in the month when Rita savaged markets. Spot prices only returned to pre-hurricane levels sixty days after the crisis. Figure 1 tracks Gulf Coast spot product prices movement from August to October 2005.

Futures markets were affected as well. December 2005 distillate futures rose twelve percent in one week.

Prices would have remained high longer than they did had the United States' partners

Figure 1
US Gulf Coast Spot Prices, August to December 2005



Source: PKVerleger LLC.

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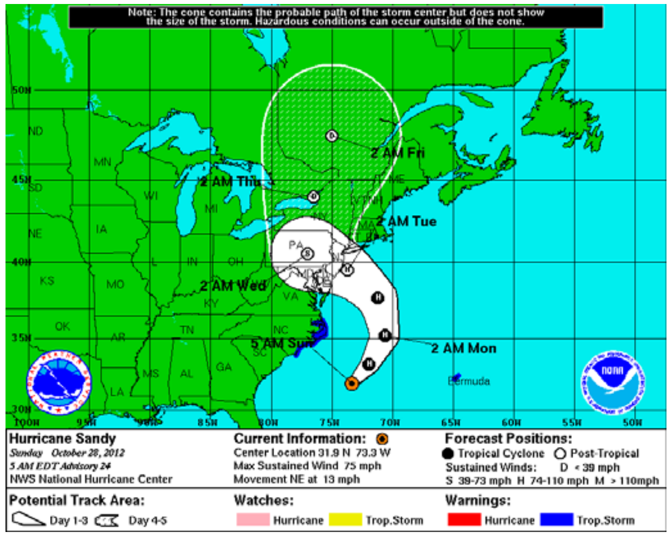
in the International Energy Agency not rushed gasoline and heating oil supplies to the US. In 2005, we benefited from the IEA sharing program, possibly the first nation to do so.

Markets also eased because the EPA allowed refiners to sell diesel fuel containing five hundred parts per million (ppm) sulfur to truckers.[1] This regulatory action was resisted by states that did not want fuel because it did not include the taxes they used to build and maintain roads. In addition, the relief effort did not fully succeed because high-sulfur diesel use could harm the very expensive catalytic systems in new trucks.

The economic impact associated with Katrina and Rita, as large as it was, will likely pale in comparison to the coming one from Sandy. The East Coast petroleum market faces a catastrophic disruption if the storm comes ashore in New Jersey early Tuesday morning, as the National Oceanic and Atmospheric Administration (NOAA) has forecast (see Figure 2 above). If this occurs, two or three major refineries will cease operations for a significant time due to flooding and power loss. The situation could be worse if the docks used to move products by barge around the East Coast are damaged.

Figure 2. Hurricane Sandy Storm Track



Source: NOAA.

Sandy's huge economic blow will occur because the US East Coast is totally unprepared for this disaster. Inventories held by firms in the area are well below prior years. This has occurred in large part thanks to the efforts of Obama CFTC appointees Gary Gensler and Bart Chilton to curb the nonexistent impact of speculation on petroleum prices.[2] Their efforts have discouraged or prevented passive investors and speculators from accumulating long positions in distillate and gasoline, which has pushed markets into backwardation. The backwardation has prevented the entrepreneurial firms, which acquired storage facilities from staid oil suppliers such as ExxonMobil, from building stocks.

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[1] "EPA Waives RVP, Diesel Standards in States Affected by Katrina," *Platts Global Alert*, August 30, 2005.

[2] Democrats need look no further than Bart Chilton and Gary Gensler if they lose the coming election. For example, Sandy's impact could move Pennsylvania into the Romney column if voters there cannot get fuel to vote. From my vantage point, there will be no better payback to these two extremists, who have consistently refused to examine data in favor of perpetuating their ideological views.

As a consequence, Sandy will hit the East Coast when tanks are empty. The bidding for the dregs that remain will send product prices to record levels.

Before beginning the analysis, I must disparage the designation chosen for the coming storm. I know many Sandys. All are pleasant and smart. None are destructive. Thus I propose the storm be renamed Bart or Gary. It would be appropriate to name it for one of the two individuals who, more than anyone else in the world, laid the foundation for the havoc about to occur in the East.

Analysis

Figures 3a and 3b capture the difference between the Gulf Coast situation in 2005 and the US East Coast in 2012. Figure 3a shows weekly US Gulf Coast gasoline inventories for 2003, 2004, and 2005. Note that 2005 stocks tracked prior-year levels closely except for the period after Katrina, when they dropped briefly from sixty to fifty-five million barrels. The decrease occurred because refinery gasoline output fell.

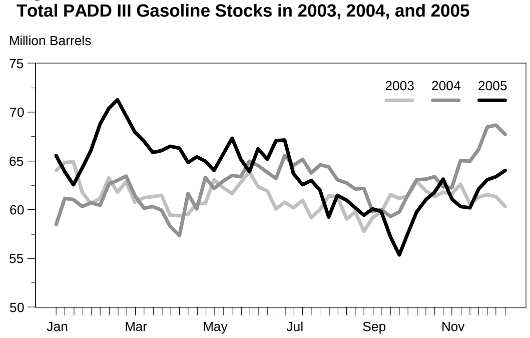
Compare Figure 3a to 3b, which shows PADD I gasoline stocks for 2010, 2011, and 2012. Stocks prior to Sandy's arrival are already ten percent below 2011 levels and eleven percent below 2012 levels. Stocks are so low because ownership of terminal facilities and tanks has been transferred from Conoco, ExxonMobil, and Shell to firms such as George E. Warren, Gulf Oil, Sprague Oil, and even Delta Airlines. Few if any of these firms will hold significant inventories today without off-take contracts with buyers or contango in the futures markets.

Two weeks from now, stocks may be twenty-five percent below year-ago levels and spot gasoline may fetch $4 to $5 per gallon if anyone is willing to sell it. (If markets follow the Katrina/Rita pattern, cash prices will peak at $4.75 per gallon.)

The situation is very similar for diesel and distillate prices. PADD I distillate stocks are well below prior-year levels, as Figure 4 (page 4) illustrates. Stocks are thirty-three percent under 2011 levels and forty-eight percent lower than in 2010. The low stocks leave markets vulnerable to very large price increases. A Katrina/Rita type price surge could take distillate to $6 per gallon.

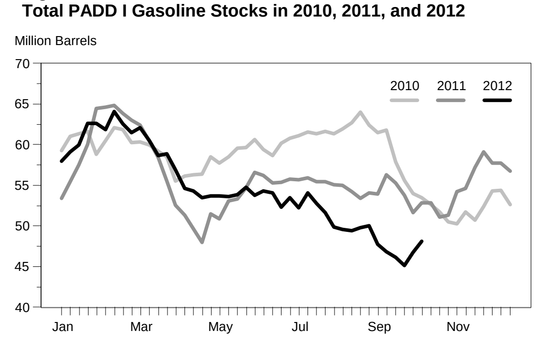
The increases could be magnified if refinery production falls or if coastal terminals used to bring in products from other areas are out of commission. PADD I refineries provide thirty-one percent of the distillate consumed in the region. Refineries and blenders supply fifty-three percent of the gasoline used there. Loss of capacity to un-

Figure 3a
Total PADD III Gasoline Stocks in 2003, 2004, and 2005



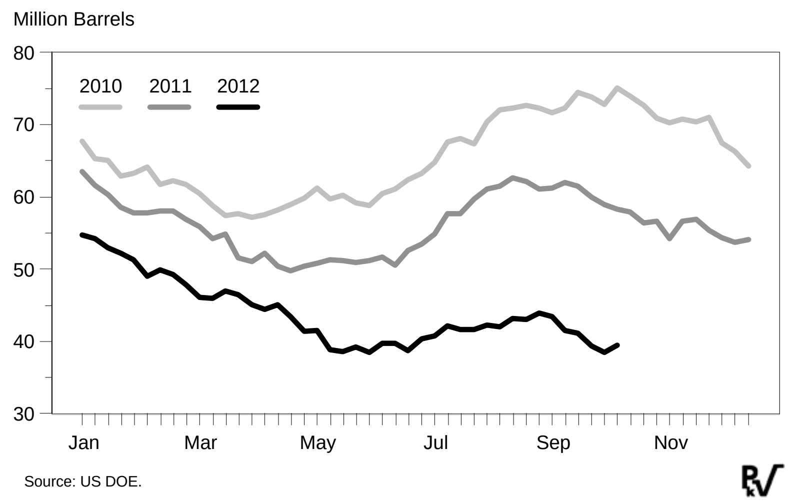
Source: US DOE.

Figure 3b
Total PADD I Gasoline Stocks in 2010, 2011, and 2012



Source: US DOE.

Figure 4
Total PADD I Distillate Stocks in 2010, 2011, and 2012



Source: US DOE.

load ships due to tidal flooding could pose a far greater risk to the area.

A prolonged disruption of electric power in the New Jersey/New York area might be the greatest threat since it would shutter much of the petroleum infrastructure and delay recovery operations. For example, a power loss would prevent the Colonial and Buckeye pipelines from moving product into the region and then on to other consuming areas. A power loss could also slow or stop loading and unloading of barges used to move product between New York, New Haven, and Boston. In such circumstances, markets would be forced to survive using their own piddling or nonexistent inventories.

In addition, limited supplies of ultra-low-sulfur diesel (ULSD) fuel could complicate the recovery effort. This will be the first major disaster following this fuel's introduction. As noted above, Katrina and Rita hit just as the trucking industry was shifting from fifty-ppm sulfur diesel to ten ppm. In that episode, the government relaxed standards to allow distribution of off-road fuel to trucks. At the time, this only bothered the few truckers who had purchased new tractors with very expensive catalytic systems.

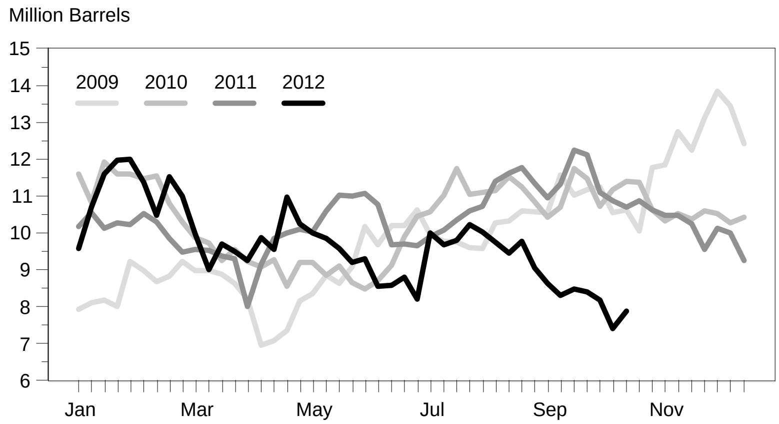
Today, most over-the-road trucks have those systems and almost all require ULSD. Relaxing fuel rules would make a fuel available that would likely ruin the catalysts and require extensive repairs. Thus most firms and individual truckers will likely park rather than purchase it, which could slow recovery.

As Figure 5 (page 5) shows, Mid-Atlantic ULSD stocks as of mid-October were more than twenty percent below year-ago levels despite New York boosting demand by requiring low-sulfur heating oil. (This requirement could be waived without causing problems. No doubt, Governor Cuomo will take such action.)

Trading in futures markets next week could compound the problem. Hurricane Bart/Gary will arrive three days before November heating oil and gasoline futures contracts expire. Those holding long contracts may elect to go to delivery rather than offsetting. Those who are short and do not have product or do not have product at delivery locations may bid prices up in a desperate effort to get out of their positions.

The possibility of a short squeeze in November gasoline and heating oil contracts between Monday and Wednesday appears to be extraordinarily high if the meteorological situation is bad. Data released Friday showed twenty-two thousand November gasoline contracts open and nearly twenty-seven thousand distillate contracts open. For reference, this compares to twenty-two thousand gasoline contracts open on October 27, 2011 and over twenty thousand contracts open two years ago.

Figure 5
Total Mid-Atlantic Distillate Stocks with 0-15ppm Sulfur, 2009-2012



Source: US DOE.

The comparison of open interest on the last Friday in October points to a potential problem. (I note, however, that three days remain in October trading in 2012, while only one remained at end-October 2011 and none in 2010.) Table 1 shows open interest for November gasoline and distillate contracts on October 27, 2010, 2011, and 2012. One can observe that open interest in gasoline in each year totaled roughly twenty thousand contacts. This seems to imply that gasoline liquidation is following the normal pattern.

Table 1. Remaining November Gasoline and Distillate Contracts at Close of Trading on October 27 in 2010, 2011, and 2012

Contract	2010	2011	2012
Gasoline			
First	85,807	78,967	97,681
Second	58,459	57,076	72,652
Third	38,156	40,807	42,097
Fourth	6,902	12,498	22,088
Oct 27 in Year Shown	20,650	21,522	22,088
Distillate			
First	91,699	89,217	90,532
Second	64,563	62,067	80,759
Third	35,674	47,403	62,184
Fourth	7,685	14,454	26,865
Oct 27 in Year Shown	21,500	18,418	26,865

Source: NYMEX

One can also observe that fewer November contracts were open in distillate on October 27, 2011, or 2010 than on Friday. A year ago, for example, only 18,500 contracts were open versus almost twenty-seven thousand contracts now. This suggests that distillate markets may be extraordinarily volatile to the up side next week as shorts scramble to liquidate.

I should add that the market backwardation increases the risk of a squeeze because a surge in demand combined with backwardation will give longs every incentive to demand performance—and to demand performance early in November. Such behavior is not new. There was a very long litigation between Apex and a group of suppliers over an identical market situation in 1982.

The distillate market will be exciting next week.

Ultimately, the problems created by Hurricane Bart/Gary will be resolved by suspending the Jones Act. The limited product availability on the East Coast will be eased by allowing foreign-flagged tankers to move gasoline and low-sulfur diesel to East Coast terminals once these facilities reopen. It will be surprising if the inventory situation is not fixed by December 1 in such a manner if other measures prove insufficient.

November, however, could expose several problems in the US petroleum logistical system. No doubt policies will be changed as a result, quite likely in the wrong way.