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ENERGY INVESTMENT BANKING

MUSINGS FROM THE OIL PATCH

March 13, 2012

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Note*: Musings from the Oil Patch reflects an eclectic collection of stories and analyses dealing with issues and developments within the energy industry that I feel have potentially significant implications for executives operating and planning for the future. The newsletter is published every two weeks, but periodically events and travel may alter that schedule. As always, I welcome your comments and observations.* Allen Brooks

High Gasoline Prices Revive Traditional Speculation Claims

Politicians are calling for investigations of speculator activity in the commodity trading pits

Gasoline pump prices have climbed to unsettlingly high levels on the back of rising global crude oil prices. Why crude oil prices have risen is receiving less attention from politicians than the anti-oil and anti-speculator claims that they believe are driving gasoline prices. Politicians are calling for investigations of speculator activity in the commodity trading pits and demanding that President Obama release oil from the Strategic Petroleum Reserve to stop the further rise in pump prices. Because the Obama administration helped engineer a coordinated release of oil from U.S. and OECD reserves last year when gasoline prices were hitting $4 per gallon and prices subsequently declined, the politicians believe that using our strategic petroleum supplies to manipulate gasoline pump prices is an appropriate governing strategy.

According to the report's authors, "speculation played a significant role in the oil price increase between 2004 and 2008 and its subsequent collapse

The speculator claims are trotted out every time gasoline prices rise sharply. This time the claims are coming in a letter to President Obama from 68 members of Congress organized by Vermont's Senator Bernie Sanders (I-VT). The letter cites a study by the Federal Reserve Bank of St. Louis updating a previous study of the drivers behind changes in oil prices during the five year period 2004-2008. According to the report's authors, "speculation played a significant role in the oil price increase between 2004 and 2008 and its subsequent collapse. Our results support the view that the financialization process of commodity markets explains part of the recent increase in oil prices."

The St. Louis Fed study admits that "global demand shocks account for the largest share of oil price fluctuations." They also conclude that during the five-year period studied, "speculation contributed around 15 percent to oil price increases." We found their choice of words interesting. Just how much is "around?" While speculation

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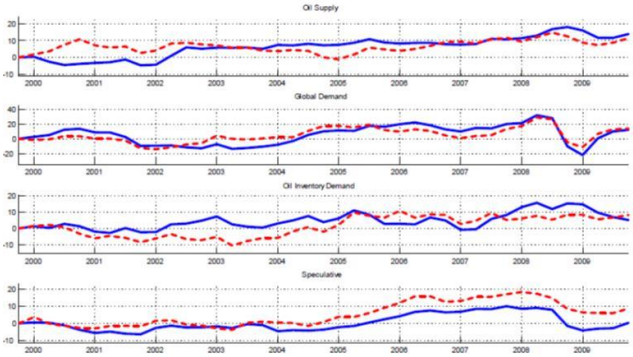
was determined to be the second most important driver for oil prices, the 15% figure seems to be the mid-point of the estimated impact on inventory changes calculated by a regression model based on data starting in 1986. When a longer time series was used (from 1960s), the impact never exceeded 10%. The calculation is displayed in a chart in Exhibit 1. The blue line is based on the long time series data while the red line is from the 1986 data series. If you look at the "Speculation" graph (bottom one) the blue line gets to 10% only in 2008. Most of the historic period (pre 2004 when financialization of the commodity market began) and in 2009, the percentage is closer to zero.

Exhibit 1. Forces Influencing Oil Price Changes



Source: St. Louis Federal Reserve Bank

The authors rely on oil company well drilling activity back in the early 1970s

We also were intrigued by the data used to substantiate the supposed behavior of oil companies to withhold oil supplies from the market when the future oil price is expected to rise. The authors rely on oil company well drilling activity back in the early 1970s when the Nixon administration instituted oil price controls as part of a nationwide wage and price controls policy. The following is the paragraph the authors wrote to justify their belief.

"Given that futures markets were not developed until the 1980s, it is natural to ask whether speculation would have the same characteristics in the absence of futures market. We refer to speculation in the oil market as speculation motivated by the recent trend of investment in commodity markets. However, the same pattern can arise in the absence of developed futures markets if the oil price is expected to increase relative to production costs and current production is reduced as producers withhold some energy resources to sell at a greater "discounted" price at a future date (see Davidson et al., 1974). In fact, there is evidence supporting the presence of speculative activity in the absence of futures markets. Davidson et al. (1974) describe that after President Nixon imposed temporary price controls on oil produced in the US in 1971, the number of shut-in oil-producible zones on the US outer continental shelf jumped from 14.3 per cent of the total completions of oil-producible zones in 1971 to 44.4 per cent in 1972 and 44.5 per cent

in 1973. This suggests an explicit decision by producers to restrict available production flows. The only role that futures markets are playing now is to fuel the expectations."

Many people fail to remember that in 1969, the U.S. interstate pipeline companies nearly ran out of natural gas from the Gulf of Mexico due to a lack of drilling in response to low gas prices

We would love to have more time to research that time period, but we remember distinctly there were a multiple factors that impacted the number of shut-in well completions such as a shortage of drilling rigs, equipment and personnel as the industry had been unprepared for the increase in activity driven by rising oil prices. Many people fail to remember that in 1969, the U.S. interstate pipeline companies nearly ran out of natural gas from the Gulf of Mexico due to a lack of drilling in response to low gas prices. The response of the Federal Power Commission that regulated the interstate pipelines at that time was to create the "advance payments" scheme to move money from pipelines (customers) to producers in order to incentivize them to drill more. This was also the time frame when U.S. crude oil production topped out and global oil demand was climbing rapidly shifting the world's oil pricing power from the U.S. and the Seven Sisters international oil companies to the Middle East members of OPEC. As a result of this history, we're not sure you can assume that all those well shut-ins were due solely to oil companies holding production off the market in anticipation of higher oil prices.

Vocal politicians and the media are promoting the perception that commodity speculators are primarily responsible for driving up crude oil prices, when in fact the Fed study puts that pressure at somewhere between 10% and 15%

Vocal politicians and the media are promoting the perception that commodity speculators are primarily responsible for driving up crude oil prices, when in fact the Fed study puts that pressure at somewhere between 10% and 15%. Supposedly these speculators are the primary reason American consumers are paying high prices at the gasoline pump. We aren't sure exactly how many studies have been undertaken to examine the role of speculators in commodities, but we don't recall any showing that speculators cause higher pump prices, which even the Fed study doesn't conclude. The term "speculator" is easy to throw around but very complicated to understand, leading to the term's misuse.

Less than two weeks ago, Commodity Futures Trading Commission (CFTC) member Bart Chilton, a leader in the movement to vilify financial traders buying commodities by calling them "speculators" and accusing them of driving up oil and gasoline prices wrote a blog article promoted by ABC News. In it Commissioner Chilton discussed how he is continuing to make the same point he made in a presentation to financial industry executives back on March 16, 2011. In that presentation he concluded that speculators were responsible for the large rise in crude oil and gasoline prices last spring. His argument was behind the effort by the CFTC to put limits on traders to prevent speculation. He commented in his recent blog that financial industry trade associations have sued the CFTC, which has prevented it from implementing the Congressionally-mandated position limits designed to stop excessive speculation in commodities and therefore was allowing the latest rise in energy prices. To support his argument, Commissioner Chilton listed 48

academic studies, reports and citations supporting his contention that speculators have had some effect on commodity prices. A majority of the citations, however, were quotes and interviews with media types commenting on the role of speculation. Last year, the UN issued a report calling speculation the cause for the rise in food and energy prices during 2007-2008. The UN would like to see rules instituted globally to prevent this speculation. Its report was cited by Commissioner Chilton.

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In an interesting rebuttal, Markus Henn of WEED, which stands for World Economy, Ecology and Development, a German non-governmental organization, compiled a list of 95 articles, studies, and reports prepared by academics, analysts and public institutions showing a negative impact from speculation on commodity prices. A number of the academic studies cited by Commissioner Chilton were also on Mr. Henn's list. We examined some of them and found that they mostly support Mr. Weed. I'm sure they landed on Commissioner Chilton's list because they mentioned speculation.

In his blog, Commissioner Chilton also cited a research note issued last year by Goldman Sachs (GM-NYSE) citing the idea that speculators were responsible for influencing oil prices. They said they calculated that for every one million barrels of net crude oil contracts held by financial players, this could translate into 8¢ -10¢ of price increase. Commissioner Chilton used that relationship to estimate the impact of speculators on gasoline prices. The February 23, 2012, CFTC Commitment of Traders Report showed that "managed money" held net positions in NYMEX crude contracts equal to 233.9 million barrels. Commissioner Chilton used a 10¢ price impact to determine that there was a premium of $23.39 in the current price of a barrel of crude oil due to speculation. Based on a determination by Information Handlings Services, every $10 per barrel price increase equates to a $0.24 per gallon increase in the price of gasoline. Using the $23.39 per barrel speculation premium for crude oil means there is a corresponding $0.56 per gallon premium in the retail price of gasoline.

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Commissioner Chilton went on to calculate that for a Honda Civic with a 13.2 gallon fuel tank, the speculation premium was costing its owner $7.39 per fill-up. A Ford Explorer with an 18.6 gallon tank costs its owner an extra $10.41 for each fill-up. For a Ford F150 truck, the most popular truck model in the country, its 26 gallon fuel tank carries a $14.56 per fill-up premium. If one assumes that each of these representative vehicles fills up once a week, the annual speculation premium costs the American driver of the Civic $384.28; the Explorer $541.32; and the F150 $757.12. These costs have become a rallying cry for politicians to attack financial players for investing in commodity futures, something to which the St. Louis Fed study alludes, also. Little mention is ever made about the reason why financial players have become more active in the commodity markets over the past two decades. It was in 1991 that Goldman

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Sachs' Aron commodity trading unit constructed the first commodity investment vehicle for institutional money managers interested in participating in the global demand increase for commodities and to hedge against the risk of debasement of currencies by governments printing money.

An interesting aspect of this debate was the response from Goldman Sachs to the use of its research report's conclusions to make the case against commodity speculators. Goldman Sachs issued the following statement: "We do find that buying and selling in the oil futures markets exerts an influence on oil prices. Buying and selling is how information about current and expected future oil supply and demand conditions is transmitted through the market, allowing the oil market to adjust the oil price in order to balance supply and demand. This is how a market works. Commissioner Chilton characterizes this as "speculation," with the suggestion it is unrelated to supply and demand conditions in the oil market. We disagree. In our view, this is the mechanism by which the oil market becomes better informed and reaches a consensus on issues such as the likely impact of the improving world economic outlook on oil demand and the increasing tensions with Iran on crude oil supplies. To say that "speculation" is contributing to higher oil prices is no different than to say that oil prices are rising on the expectation that the improving world economic outlook will lead to more oil demand and that tensions with Iran could lead to a disruption in crude oil supplies."

"Commissioner Chilton characterizes this as 'speculation,' with the suggestion it is unrelated to supply and demand conditions in the oil market. We disagree"

Goldman Sachs' statement is an accurate definition of the role speculators play in providing liquidity to commodity markets and helping the market with pricing indications. They acknowledge that speculators do play a role in boosting commodity prices, but it is not possible to decree that by preventing speculators from engaging in commodity market trading, prices will be lower. They could be lower, but they might also become more volatile making it that much more difficult for users of the commodity to plan and operate their businesses. The way for them to protect against increased volatility would be to either buy greater physical supplies (inventory), which brings with it increased operating costs, or to create a more responsive operational and pricing strategy, which is not necessarily good for consumers.

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In one regard, we believe President Barack Obama understands the realities of the oil market and its impact on Americans. He demonstrated that understanding in his Saturday morning weekly radio talk and Internet address a couple of weeks ago when he said, "We know there's no silver bullet that will bring down gas prices or reduce our dependence on foreign oil overnight." He went on to say, however, "But what we can do is get our priorities straight and make a sustained, serious effort to tackle this problem." The problem is Mr. Obama's solution is to promote an unrealistic renewable fuel agenda while at the same time attacking the fossil fuel industry. Furthermore, he endorses the political ranting of

"We know there's no silver bullet that will bring down gas prices or reduce our dependence on foreign oil overnight"

The current political reaction to rising gasoline prices advocates the equivalent of amputating fingers to cure hangnails

politicians such as Senator Chuck Schumer (D-NY) who wants to go after those "speculators." Maybe someday Sen. Schumer will feel better when he decides to stop beating his head against the wall of ignorance about the workings of commodity markets and the role reckless government spending and monetizing our debt is having on the value of the U.S. dollar and its role in pushing commodity prices ever higher. Unfortunately, the current political reaction to rising gasoline prices advocates the equivalent of amputating fingers to cure hangnails.

The Issue Of Renewable Fuel Subsidies Revisited In England

A recent study published by the Global Warming Policy Foundation in the UK has created a firestorm over its conclusions regarding the cost of meeting the government's renewable generation target and whether there are other cheaper alternative strategies available. The study, entitled Why Is Wind Power So Expensive? – An Economic Analysis was prepared by Dr. Gordon Hughes, a professor at the University of Edinburgh where he teaches courses in the Economics of Natural Resources and Public Economics. Dr. Hughes previously was a senior advisor on energy and environmental policy matters at the World Bank until 2001. He was involved in designing and implementing some of the World Bank's most significant environmental guidelines. Dr. Hughes previously authored a report dealing with the myth of green jobs. In other words, this professor is willing to challenge sacrosanct pillars of the environmental and anti-fossil fuel movements.

The comparative investment outlays would be about £120 ($188) billion in the case of wind power as compared to £13 ($20) billion for the natural gas powered plant scenario

According to Dr. Hughes' work, in order to meet the UK Government's target for renewable generation in 2020, the country will need total wind generation capacity of 36 gigawatts (GW) backed up by 13 GW of gas plants plus large complementary investments in transmission capacity. The same electricity demand could be met from 21.5 GW of combined cycle gas plants. Allowing for the shorter life of wind turbines, the comparative investment outlays would be about £120 ($188) billion in the case of wind power as compared to £13 ($20) billion for the natural gas powered plant scenario.

A recent study in the U.S. puts wind turbine operating and maintenance costs at $0.027 per kilowatt-hour (kWh)

Another aspect of the wind power scenario is that wind turbines have relatively high operating and maintenance costs, however they require no fuel. Overall, the net saving in fuel, operating and maintenance costs for wind turbines relative to gas power plants is less than £500 ($784) million per year, which represents a very poor return on an additional investment of over £107 ($167) billion. A recent study in the U.S. puts wind turbine operating and maintenance costs at $0.027 per kilowatt-hour (kWh). This compares to current total power costs of about $0.06 to $0.08 per kWh.

The introduction to Dr. Hughes' study was written by Baroness Nicholson of Winterbourne, a Member of Parliament from 1987-1997 and a representative of England to the European Parliament from 1999-2009. In her forward she pointed out that a typical wind turbine generates power worth around £150,000 ($235,050) a year, but attracts subsidies of more than £250,000 ($391,750) a year. As these subsidies are added to consumers' bills, the cost for this Renewables Obligation scheme has risen from £278 ($435) million in 2002 to more than £1 ($1.57) billion in 2011.

Nearly half of all the onshore wind farm permits requested in England and Wales last year were refused planning permission

The troubling fact for English citizens is that the wind pattern onshore insures only between 10% and 20% of the rated capacity as actual electric power output. Equally troubling is that people have decided they do not like or want wind turbines in their neighborhoods. As a result, nearly half of all the onshore wind farm permits requested in England and Wales last year were refused planning permission. These concerns have bubbled up to their representatives prompting more than 100 MPs to write the Prime Minister to criticize the economic and environmental folly of wind farms. They are also demanding that the government cut the subsidies.

The total consumer bill for wind subsidies by 2030 is estimated to amount to nearly £130 ($204) billion. Moreover, a recent analysis of UK wind farms revealed that collectively a dozen of the biggest landowners will receive almost £850 ($1,332) million in subsidies, paid by homeowners through taxes on their electricity bills.

So one can question whether wind power and other renewable energy sources are being undertaken for investors or consumers?

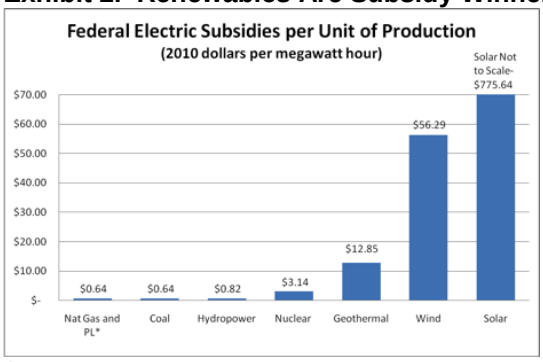
As expected, this report has drawn sharp criticism from wind farm owners and developers and wind power supporters. Adam Bell, RenewableUK's spokesman said, "While there is some unhelpful rhetoric coming from the back benches, the Government has repeatedly affirmed its commitment to the sector, and it's a case of working out how we develop the green economy, rather than whether we should." At the same time, the Department of Energy and Climate Change (DECC) pointed to the UK's ascent up Ernst and Young's global renewable energy attractiveness rankings. "We remain top of the pile for offshore wind, and fifth overall for all renewables – up one place on last year. We're in this market to win it for the UK, and this is welcome proof that investors see the UK as a leading clean energy destination." So one can question whether wind power and other renewable energy sources are being undertaken for investors or consumers?

Recently, the battle over energy subsidies has surfaced again in the U.S. President Obama is campaigning on an agenda that fossil fuel subsidies should be eliminated and the funds directed to subsidize renewable energy technologies. The problem is that while the dollar amounts for "subsidies" for fossil fuels are large, it merely reflects the fact these fuels account for nearly 88% of all energy used in America. Moreover, the so-called subsidies are generally those

Wind power receives nearly 100-times the support of oil, natural gas and coal

allowed for all manufacturing businesses in this country, so eliminating them would be an attack on a specific industry. A bigger problem is that a new study on government tax benefits and subsidies for fuels shows that renewables are given huge support per unit of electricity output. On that measure, wind power receives nearly 100-times the support of oil, natural gas and coal.

Exhibit 2. Renewables Are Subsidy Winner



Source: EIA

The EWEA concludes that based on virtually every measure, gas comes out the winner

The debates over fuel subsidies will continue as long as governments try to solve multiple energy agendas at once while not being willing to let market forces work. An analysis of the cost of power by fuel source by the European Wind Energy Association (EWEA) uses a concept called the levelized cost of electricity (LCOE), which determines the present value of all the cost components in producing power. The EWEA concludes that based on virtually every measure, gas comes out the winner. They calculate that gas costs £38/kWh ($60), with coal at £51/kWh ($80). Onshore wind is estimated to cost £60/kWh ($94) while offshore wind is at £90/kWh ($141). Under this methodology, nuclear power is the most expensive at £100/kWh ($157). For the U.S. wind industry, securing continued government subsidies is critical, and the industry is lobbying hard for an extension of the current production tax credit due to expire at the end of this year. They are also pushing for restoration of another tax subsidy that expired last year. The fact that natural gas now beats wind in every scenario helps explain why gas is now a target rather than a friend of environmentalists.

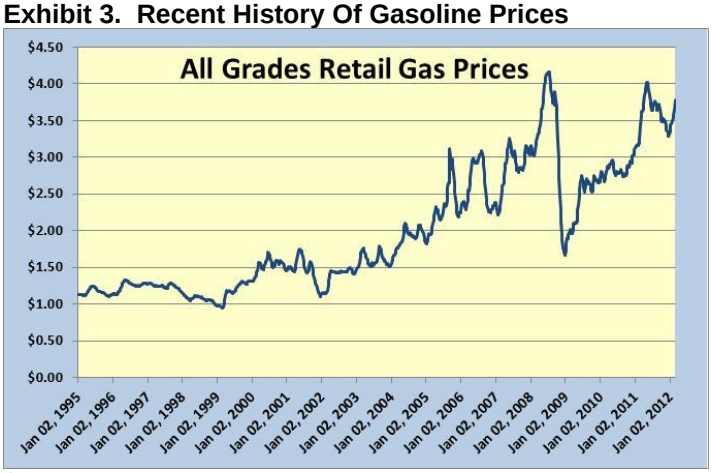
Americans Learning About Economics Of Gasoline Prices

Gasoline prices have been on the rise since last fall. Much of that rise has been driven by a tightening crude oil market being partially driven by the fear of a major military conflict involving Iran breaking out in the Middle East soon. There are other logistical factors such as refinery outages and closures and the global imbalance of gasoline and diesel fuel supplies. Over the past 16 years, gasoline prices in America have gone from consistently low and stable to very

It wasn't until 2005 that gasoline prices started to climb in response to the growing demand for crude oil globally and the push for commodity prices to climb in response to growing inflation

high and volatile. Exhibit 3 shows how the weekly price for the average of all grades of gasoline at retailer outlets has trended over the past 16 years. As can be seen, gasoline prices stayed between $1.00 and $2.00 per gallon for nearly a decade. It wasn't until 2005 that gasoline prices started to climb in response to the growing demand for crude oil globally and the push for commodity prices to climb in response to growing inflation. Since that time, as gasoline prices have trended higher they also became more volatile – responding to economic and political trends and then the financial and global liquidity crisis. In recent times, we experienced a sharp run-up in gasoline prices during the end of 2010 and early 2011 only to see them drop throughout much of last year before rallying higher toward the end of 2011 and the first weeks of 2012.

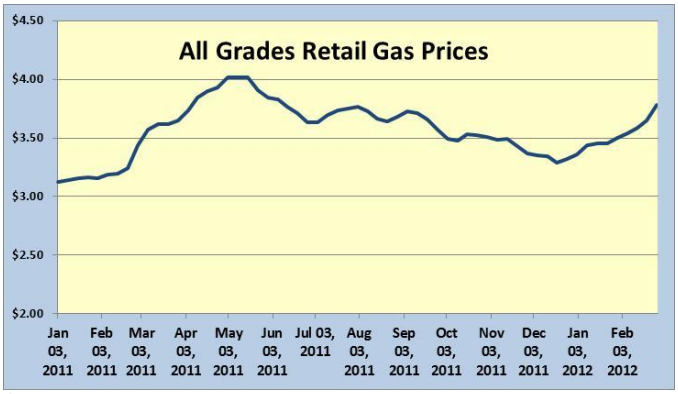
Exhibit 3. Recent History Of Gasoline Prices



Source: EIA, PPHB

To see more clearly what has happened over the past 14 months, the chart in Exhibit 4 shows retail gasoline prices during that period. What we see is the very sharp price rise last spring as gasoline prices soared from about $3.25 per gallon in January and early February of 2011 to the $4.00 per gallon level by May. As the

Exhibit 4. Current Gas Price Still Below Last Year Peak



Source: EIA, PPHB

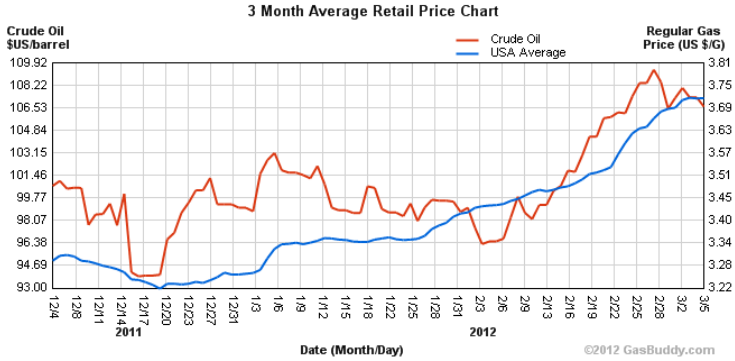
Even now gasoline costs less than it did at its peak last year

economy began weakening last spring and summer, gasoline prices slumped initially and then began a slide reaching bottom during last December. Since then we have seen a steady increase in pump prices, but even now gasoline costs less than it did at its peak last year. What is different about this year's pump price rise is that it is coming earlier in the year and is stronger than most had expected.

Gasoline prices rose in sympathy with the climb in oil prices

To understand better what is driving gasoline prices, we examined a chart of retail gasoline prices compared to West Texas Intermediate crude oil prices. High oil prices have driven a corresponding response in the refined product market. Gasoline prices bottomed out just after crude oil prices did in mid-December. They began rising slowly after crude oil price rebounded. As gasoline prices were climbing slowly, crude oil prices were sliding until they bottomed out in early February. From that point forward crude oil prices have risen steadily on the geopolitical developments involving Iran and its threat to block the Strait of Hormuz. That threat and Iran's continued insistence on developing a nuclear energy industry contributed to an announced crude oil boycott from European countries and Iran's threat to stop selling oil to certain European countries. All the while, gasoline prices rose in sympathy with the climb in oil prices. Where gasoline pump prices go from here will depend on both geopolitical developments and domestic gasoline demand, which is somewhat tied to the recovering economy.

Exhibit 5. Recent Gas And Crude Oil Prices



Source: ***GasBuddy.com***

The tax is a gross receipts tax levied on the wholesale price of gasoline and handed down from the wholesaler to the retailer and ultimately to the consumer

One thing the rise in gasoline prices has prompted is the education of American consumers. While a recent poll showed that seven of ten Americans feel threatened by the rise in gasoline prices, which forced decisions about driving versus other consumer expenditures, they also recognize that there is really little the President can do about oil prices in the near term. In Connecticut, however, the citizens are learning about what has become referred to as a "secret" tax. This secret tax is known by gasoline retailers but not by consumers. The tax is a gross receipts tax levied on the wholesale price of gasoline and handed down from the wholesaler to the retailer and ultimately to the consumer.

The impact of Connecticut's two taxes is to make it the second most expensive state for gasoline with a tax take of $0.486 per gallon

In Connecticut, the tax is 7% of the wholesale price, or about 20 cents per gallon, which is added to the state's 25-cents per gallon gasoline tax. This tax, which is slated to rise to 8.1% in 2013, increases with the price of gasoline rather than remaining fixed like most excise taxes. The impact of Connecticut's two taxes is to make it the second most expensive state for gasoline with a tax take of $0.486 per gallon. Connecticut is tied with California, which also levies a sales tax on gasoline. The other states with this type of sales tax levy include number one New York ($0.49 per gallon total state tax on a gallon of gasoline), number five Michigan ($0.394), tied for number seven Illinois and Indiana ($0.389), and number 18 Georgia ($0.294).

For a point of reference, four major energy producing states that happen not to levy a sales tax on gasoline, include Montana at number 21 ($0.278 per gallon), tied at number 38 Texas and Louisiana ($0.20), and Oklahoma at number 46 ($0.17).

Exhibit 6. State Gas Taxes Are About To Rise

State Gasoline Tax Rates,
as of January 1, 2012
(Cents Per Gallon)

State	Excise Tax	Other Taxes and Fees	Total	Rank
Ala.	16.0	4.9	20.9	37
Alaska	8.0	0.0	8.0	50
Ariz.	18.0	1.0	19.0	42
Ark.	21.5	0.3	21.8	35
Calif.	35.7	12.9	48.6	2
Colo.	22.0	0.0	22.0	33
Conn.	25.0	23.6	48.6	2
Del.	23.0	0.0	23.0	31
Fla.	4.0	31.0	35.0	10
Ga.	7.5	21.9	29.4	18
Hawaii	17.0	30.1	47.1	4
Idaho	25.0	0.0	25.0	25
Ill.	19.0	19.9	38.9	7
Ind.	18.0	20.9	38.9	7
Iowa	21.0	1.0	22.0	33
Kans.	24.0	1.0	25.0	25
Ky.	26.4	1.4	27.8	21
La.	20.0	0.0	20.0	38
Maine	30.0	1.5	31.5	16
Md.	23.5	0.0	23.5	29
Mass.	21.0	2.5	23.5	29
Mich.	19.0	20.4	39.4	5
Minn.	28.0	0.1	28.1	19
Miss.	18.0	0.8	18.8	44
Mo.	17.0	0.3	17.3	45
Mont.	27.0	0.8	27.8	21
Nebr.	26.7	0.9	27.6	23
Nev.	23.0	10.1	33.1	12
N.H.	18.0	1.6	19.6	41
N.J.	10.5	4.0	14.5	48
N.M.	17.0	1.9	18.9	43
N.Y.	8.1	40.9	49.0	1
N.C.	38.9	0.3	39.2	6
N.D.	23.0	0.0	23.0	31
Ohio	28.0	0.0	28.0	20
Okla.	16.0	1.0	17.0	46
Ore.	30.0	1.0	31.0	17
Pa.	12.0	20.3	32.3	15
R.I.	32.0	1.0	33.0	13
S.C.	16.0	0.8	16.8	47
S.D.	22.0	2.0	24.0	28
Tenn.	20.0	1.4	21.4	36
Tex.	20.0	0.0	20.0	38
Utah	24.5	0.0	24.5	27
Vt.	19.0	7.1	26.1	24
Va.	17.5	2.3	19.8	40
Wash.	37.5	0.0	37.5	9
W.Va.	20.5	12.9	33.4	11
Wis.	30.9	2.0	32.9	14
Wyo.	13.0	1.0	14.0	49
D.C.	23.5	0.0	23.5	(29)

Source: Tax Foundation

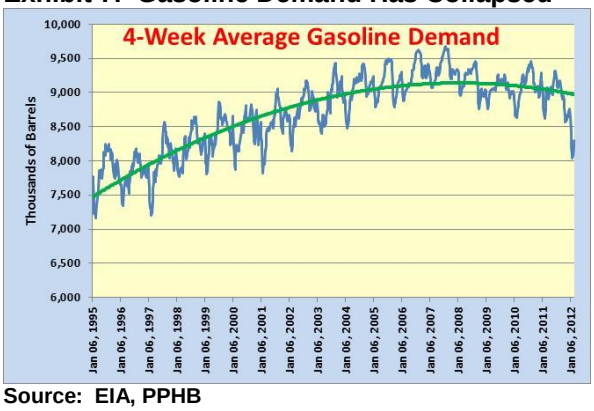
About 70% of the cost of a gallon of gasoline is attributable to the price of crude oil and Connecticut has benefitted from the climb in oil prices

Connecticut consumers are growing angry at this secret tax. Their anger is driven partly by the fact that most citizens were unaware of the tax and how it increases with the rising price of wholesale gasoline, which is tied to crude oil prices. About 70% of the cost of a gallon of gasoline is attributable to the price of crude oil and Connecticut has benefitted from the climb in oil prices. Connecticut anticipated collecting $273 million from the gross receipts tax last year, but ended up with $334.5 million in June. Of that sum, $169.2 million was deposited into the state's General Fund, and $165.3 million was set aside for transportation spending, according to Thomas Fiore, a fiscal and policy director in Connecticut's Office of Policy and Management. So far this year, the state anticipated it would collect $320 million, but has already raised its estimate to $363.5 million. This windfall will help the state with its growing financial deficit. Connecticut is like many states that is benefitting from higher crude oil and gasoline prices, but at the expense of motorists. As in Connecticut, not all states are putting all that money toward highway and bridge maintenance. Maryland is about to implement a receipts tax of 6% that will be phased in at a rate of 2% per year, as long as gasoline prices do not rise by more than 15% during the year. Many other states are scheduled to raise their excise and/or receipts tax to gain more revenue. Welcome to the world of $5 per gallon gasoline pump prices!

The magnitude of the drop in gasoline demand is surprising

The rise in gasoline prices and the discovery of this disproportionate impact of sales tax calculations on pump prices has come at a time when gasoline consumption is falling. In fact, the magnitude of the drop in gasoline demand is surprising. Moreover, the reasons for the drop are not totally clear. Do they reflect merely the economic impact of higher prices on consumers, which is limiting their ability to spend on non-essential driving? Or does the fall in gasoline consumption reflect other forces at work in both the economy and our lifestyles?

Exhibit 7. Gasoline Demand Has Collapsed



Source: EIA, PPHB

Because weekly gasoline demand is quite volatile due to factors such as weather and the timing of holidays, we have calculated the

four-week average for gasoline demand. The chart in Exhibit 7 shows this demand from the beginning of 1995 to the end of February. We have also plotted in green a parabolic trendline showing the rising demand in the late 1990s and early 2000s and the falling demand in recent years. As can be seen, demand was growing faster than the trendline during the mid-2000s, up to the financial crisis in 2008. The entire 1995-2008 period represented boom times for the U.S. economy and consumer spending. That boom ended with the economic crisis of 2008 and the resulting 2009 recession causing gasoline demand to decline. Gasoline demand recovered in 2010 and early 2011 as signs emerged that the economy was starting to recover. Then gasoline demand seemed to collapse in what appears to be a free-fall that is difficult to tie to the performance of the economy.

Demand was growing faster than the trendline during the mid-2000s, up to the financial crisis in 2008

There are many factors at work in the automobile market – more fuel-efficient vehicles replacing older less efficient ones; a shifting population mix with different driving records; and altered social patterns eliminating the need to drive – that have cut vehicle miles driven. There is also the distinct possibility that the decline in driving is a more accurate barometer of the health of the economy as it may reflect true employment trends. We have been collecting data to prepare an analysis of these various factors in an attempt to better understand the forces driving gasoline demand in this country. Based on our preliminary results, we believe many of the factors have combined to translate into a permanently lower demand for gasoline in the future.

There is also the distinct possibility that the decline in driving is a more accurate barometer of the health of the economy as it may reflect true employment trends

Exhibit 8. American's Gasoline Surprise Not Over

"Ooo, a flower!"

Source: Clayton Liotta

Lower future gasoline demand certainly justifies the oil industry shutting down refining capacity, which will cause a shift in many of the older supply trends and increase the risk of future supply disruptions as industry adjusts to these new patterns. This spring and summer could produce some interesting supply and pricing

events that will produce political outcries and further demonizing of the oil and gas industry. Watch for this fire-storm during the upcoming presidential election race.

Is The President's Pledge To Buy A Volt The Kiss Of Death?

"Five years from now when I'm not president anymore, I'll buy one and drive it myself," President Barack Obama promised 1,600 auto workers at a United Auto Workers union event in Detroit recently. "Yes, that's right," he reiterated. The President's promise to buy a Chevy Volt came merely days before General Motors (GM-NYSE) decided to shut down its Volt production line to bring its inventory levels in line with normal sales/inventory ratios.

Exhibit 9. Would You Buy A Car From This Man?

Source: ***Newsrealblog.com***

The average income of Volt buyers so far is $176,000, suggesting it is appealing to a tiny minority of car buyers and people more interested in making an environmental statement than driving a fuel-efficient vehicle

Even with the $7,500 per vehicle tax subsidy, and a proposal to increase it to $10,000 in President Obama's new budget, customer demand for the electric vehicle has not materialized What is interesting is that the average income of Volt buyers so far is $176,000, suggesting it is appealing to a tiny minority of car buyers and people more interested in making an environmental statement than driving a fuel-efficient vehicle. The lack of sales is somewhat surprising given the increase in gasoline prices, coupled with the media's talk about $5 per gallon prices in the near future. High pump prices so far have failed to bolster demand for the Volt. So is the problem simply the battery fires the car experienced last year following crash tests by the National Highway Transportation Safety Administration? The investigation that followed those fires ended with a safety declaration from the agency. So why aren't buyers flocking to the car?

During the plant shutdown, some 1,300 GM workers will be idled. That is not good news for the President's employment outlook, since green jobs were supposed to be a major impetus for reducing unemployment. It was also ironic that the production suspension came at the same time the Volt and its European counterpart, the

Opel Ampera, were named European Car of the Year at the Geneva Automobile Show. An international panel of automobile judges awarded the Volt 330 points in the competition, more than its nearest competitor, the Volkswagen Up!, which was given 281 points, and considerably more than the updated Ford Focus that received 256 points. The Volt had previously won the North American Car of the Year award last year, when it also was named the U.S. and global "Green Car of the Year."

At the end of last month, there were 3,600 Volts on dealers' lots, a count that would be much higher if the cars in transit from the manufacturing plant were included

Despite being an award-winning car, consumers don't seem to be drawn to Chevy dealerships. The Volt missed its U.S. sales target last year when slightly less than 8,000 cars were sold against the target of 10,000 units. At the end of last month, there were 3,600 Volts on dealers' lots, a count that would be much higher if the cars in transit from the manufacturing plant were included. Even with a strong response in Europe, Volt is on track to sell only about half the 60,000 units GM was planning to produce this year. On winning the European car award, GM Vice Chairman Steve Girsky commented, "There's a case to be made that it [the Volt] will do better in Europe than in the U.S. because fuel costs are so much higher and I think the governments are very committed to infrastructure here. We'll see." Those last two words certainly don't demonstrate a high level of conviction about the imminent success of the Volt. The statement is especially telling since higher gasoline prices in the U.S. so far haven't helped demand.

Wishing MSM Understood Difference Of Product And Crude

The debate over who is responsible for high gasoline prices is missing the point about a significant shift in U.S. energy output

The New York Times columnist Thomas Friedman wrote a column in late February about an email he received from energy economist Phil Verleger with the enticing title "Should the United States join OPEC?" The email outlined some of Mr. Verleger's thoughts about how the debate over who is responsible for high gasoline prices is missing the point about a significant shift in U.S. energy output that has once again made us a major oil producer and potentially an exporter. We have not seen a copy of this email, but it appears evident from reading the column that Mr. Friedman, who professes to be a student of energy and the environment, doesn't understand the difference between crude oil and refined petroleum products, a critical failing when making this argument.

The ethanol in gasoline mandate, coupled with the auto industry's embracing higher fuel-efficiency requirements, has been in driving down gasoline demand

Mr. Friedman starts with a discussion about how successful the ethanol in gasoline mandate, coupled with the auto industry's embracing higher fuel-efficiency requirements, has been in driving down gasoline demand. As Mr. Friedman writes, "When this [the ethanol mandate] is combined with improved vehicle fuel economy — in July, the auto industry agreed to achieve fleet averages of more than 50 miles per gallon by 2025 — it will inevitably drive down demand for gasoline and create more surplus crude to export." Mr. Friedman would be smart to research that fuel-efficiency deal in order to understand the perversion of the rules to enable "green

cars" to be counted multiple times toward the overall fleet fuel-efficiency rating. With that gimmick the auto manufacturers, especially the Big Three in Detroit, will be able to sell more pickup trucks and big cars diluting the actual mile-per-gallon measure to about 44, some 12% less than the target.

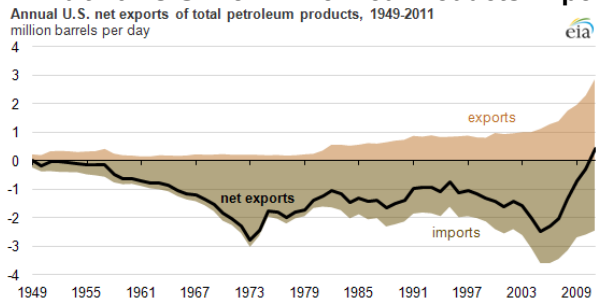
It seems that neither Mr. Friedman nor Mr. Verleger understand the difference between crude oil and product

Mr. Friedman goes on to quote from Mr. Verleger's email about how this surplus crude position can increase. He wrote, "Add to that, says Verleger, 'the increase in oil production from offshore fields and unconventional sources in America,' and that exportable U.S. surplus could grow even bigger." Whoa! It seems that neither Mr. Friedman nor Mr. Verleger understand the difference between crude oil and product.

It has been achieved largely by the decline in our gasoline consumption, which over the past few years has allowed the U.S. to reduce gasoline imports from Europe

It seems everything has been driven by the Energy Information Administration's (EIA) report that the United States has become an exporter of petroleum products for the first time since 1949. The chart from the EIA in Exhibit 10 shows the history of our petroleum product imports and exports and how in 2011 we achieved this net export position. It has been achieved largely by the decline in our gasoline consumption, which over the past few years has allowed the U.S. to reduce gasoline imports from Europe. The impact can be seen by the decline in imports that commenced in the mid-2000s. At the same time, the U.S. increased its distillate exports in response to the colder winters and the need for more home heating oil and increased use of diesel fuel for vehicles that cannot be met from European refineries.

Exhibit 10. U.S. Now A Refined Products Exporter



Source: EIA

You can see why America "will want to consider joining with other energy-exporting countries, like those in OPEC, to sustain high oil prices"

Mr. Friedman goes on to bring in the growth of natural gas production as a factor changing the domestic energy market. He writes, "Then, add the recent discoveries of natural gas deposits all over America, which will allow us to substitute gas for coal at power plants and become a natural gas exporter as well. Put it all together, says Verleger, and you can see why America 'will want to consider joining with other energy-exporting countries, like those in OPEC, to sustain high oil prices. Such an effort would support domestic oil and gas production and give the U.S. a real competitive advantage over countries forced to pay high prices for imported energy — nations such as China, European Union members, and Japan.'"

"This transformation could make the U.S. the world's top energy producer by 2020, raise more tax revenue, free us from worrying about the Middle East, and, if we're smart, build a bridge to a much cleaner energy future"

This point leads Mr. Friedman to quote from a Bloomberg News article that stated "'the U.S. is the closest it has been in almost 20 years to achieving energy self-sufficiency. ... Domestic oil output is the highest in eight years. The U.S. is producing so much natural gas that, where the government warned four years ago of a critical need to boost imports, it now may approve an export terminal.' As a result, 'the U.S. has reversed a two-decade-long decline in energy independence, increasing the proportion of demand met from domestic sources over the last six years to an estimated 81 percent through the first 10 months of 2011.' This transformation could make the U.S. the world's top energy producer by 2020, raise more tax revenue, free us from worrying about the Middle East, and, if we're smart, build a bridge to a much cleaner energy future." The key for creating this energy nirvana is for environmentalists and the oil and gas industry to embrace safer ways to produce domestic energy. Mr. Friedman is hopeful that President Obama can make this happen. If we believe Mr. Friedman, then President Obama's lobbying Democratic Senators to vote against an amendment that would have removed presidential approval of the Keystone pipeline permit was the correct thing to do since we can achieve this energy nirvana without any help from Canada.

Domestic crude oil production peaked in 1971, yet the United States was a net importer of refined product starting in the mid-1950s

While Mr. Friedman's scenario is interesting to contemplate, his failure to understand the difference between crude oil and refined petroleum products is a major flaw in the analysis. Domestic crude oil production peaked in 1971, yet the United States was a net importer of refined product starting in the mid-1950s, meaning that despite the country being self-sufficient in crude oil supplies, it was not self-sufficient with refined product. This meant that from the 1950s until the early 1970s, America lacked adequate capacity to refine all its oil into the necessary volumes of petroleum products – gasoline, diesel and jet fuel – needed by the economy. One must remember that the post-World War II period marked the beginning of an economic boom in America that created our modern consumer economy.

What this demand statistic means is that our crude oil imports represented 48.6% of total petroleum product demand

We understand that Mr. Friedman is admired and followed by many people – the same people who are now repeating this misleading fact that the United States is an oil exporter. According to the EIA, for the week ending March 2nd, the U.S. imported 8.7 million barrels per day (bpd), a decline of 475,000 bpd from the prior week. However, the EIA also pointed out that the latest four-week average of crude oil imports was 8.9 million bpd, up 766,000 bpd over the same four-week period in 2011. Quoting from the EIA's weekly report, "Total products supplied over the last four-week period have averaged 18.3 million barrels per day, down by 6.1 percent compared to the similar period last year." What this demand statistic means is that our crude oil imports represented 48.6% of total petroleum product demand. That certainly doesn't put the U.S. close to being a crude oil exporter.

History, however, doesn't excuse the failure of pundits such as Mr. Friedman from doing some basic research

All of the twisted logic of Mr. Friedman's column leads him to argue that the U.S. is on the cusp of becoming an energy exporter and thus the government should institute a policy that puts a floor under current high oil prices such that should they decline, consumers would have to pay the current high price with the difference being taxed and sent to the government. It is amazing what government policies can come from misunderstanding the basics of an industry, but that has happened for almost the entire history of our country. History, however, doesn't excuse the failure of pundits such as Mr. Friedman from doing some basic research. Unfortunately, we know this to be a failing of Mr. Friedman's since he admonished his reader to ignore the scientific evidence (ice cores) about global warming when it didn't fit with his preconceived ideas. Our advice is: read Mr. Friedman's columns with a ton of salt.

Markets Can Remain Irrational Longer Than You Can Imagine

A more important driver, however, was the romance among investors shale gas was creating and the seemingly insatiable flow of capital it was generating

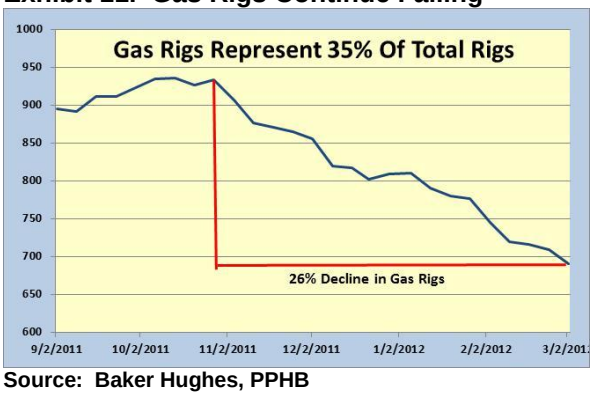
A few issues ago we wrote an article questioning whether natural gas producers were about to come to their senses with regard to drilling still more dry-gas wells. A shift in drilling focus seemed to be underway at that time in response to lower gas prices. But the shale gas drilling boom was well entrenched, driven partially by the euphoria of huge initial production volumes from wells and the requirement to drill wells and establish production in order to retain acreage positions companies had leased. A more important driver, however, was the romance among investors shale gas was creating and the seemingly insatiable flow of capital it was generating. While producers boasted of extremely attractive gas drilling economics despite low gas prices, most producers assumed those low prices were temporary and would end once the economy improved; we experienced another super-cold winter; and/or new markets for burning gas emerged. The reality was that none of the drivers for higher natural gas prices materialized and thus gas prices sank lower.

Gas prices have responded by dropping further in an effort to stimulate demand

At the start of October 2011 there were 935 drilling rigs targeting natural gas formations in the U.S. By that time, natural gas futures prices had already fallen to $4.00 per thousand cubic feet (Mcf) from $7.38 at August 31, 2007, when there were 1,523 gas-oriented drilling rigs working. Since the October 2011 peak in gas-drilling rigs, with gas production continuing to grow and natural gas storage volumes building, gas prices have responded by dropping further in an effort to stimulate demand. Last week (March 6, 2012) natural gas futures traded at $2.36/Mcf. During that week, the number of rigs targeting gas had declined 26% from October 2011 to 691 (as of the week ending March 2nd).

Wall Street, previously un-moved by weakening natural gas prices, suddenly shifted its emphasis on what made for a successful E&P investment from companies determined to grow their reserves and production regardless of the economic impact on profitability in favor

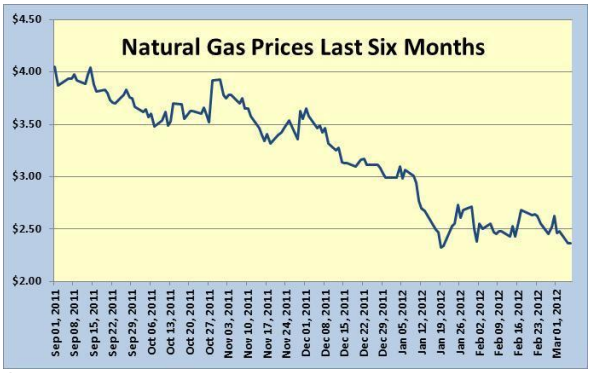
Exhibit 11. Gas Rigs Continue Falling



Source: Baker Hughes, PPHB

of those companies demonstrating capital discipline by either reducing their dry-gas drilling activity in favor of more crude oil and liquids-rich prospects, or else were cutting their total drilling expenditures.

Exhibit 12. Gas Prices Have Slowed Their Fall

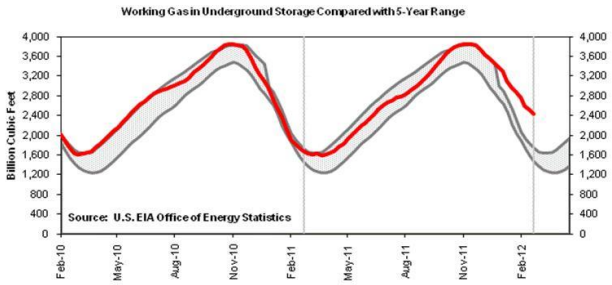


Source: EIA, PPHB

Consumers have benefitted as the Energy Information Administration (EIA) has just reported that natural gas heating bills for this winter will be the lowest they have been since the winter of 2002-3

As pointed out above, at the end of last August, the start of the heating season, natural gas futures prices were at $4/Mcf. By the end of December, some four months later, gas prices dropped through the $3/Mcf barrier, a 25% decline, and were heading lower. The absence of cold weather this winter has contributed to abnormally high seasonal inventories as seen clearly in the chart of storage volumes. This year's volume is in red in the chart in Exhibit 13 and is compared to the five-year range of storage volumes. Storage volumes are well above that historic range. In turn, consumers have benefitted as the Energy Information Administration (EIA) has just reported that natural gas heating bills for this winter will be the lowest they have been since the winter of 2002-3. High gas inventories and continuing gas production growth have driven spot gas prices to sub-$2/Mcf levels on certain days recently, which is the lowest they have been since 1999, some 12 years ago.

Exhibit 13. Gas Storage Well Above Recent Years



Source: EIA

Increasingly producers are accelerating their drilling cutbacks and formation shifts

Increasingly producers are accelerating their drilling cutbacks and formation shifts. What has not shown up in the gas production data yet, partly due to its lag time in being reported, is a decline in production growth. Hopefully that will begin to materialize in the next several months, but even then the E&P industry will be plagued by the large volumes of associated gas produced along with the crude oil and liquids-rich production coming from the new drilling plays.

Exhibit 14. Carrizo Shares Reflect Gas Prices

Source: Yahoo Finance

The shift in the drilling focus is an encouraging trend – at least for those of us who believe that managers should be creating shareholder value rather than destroying it

The shift in the drilling focus is an encouraging trend – at least for those of us who believe that managers should be creating shareholder value rather than destroying it. The problem with the shift is that it may be coming too late for shareholders. (See Exhibit 14.) An analysis of the 2011 capital expenditures and the change in debt and reserves between 2010 and 2011 of one producer, Carrizo Oil & Gas, Inc. (CRZO-Nasdaq) who had aggressively targeted dry gas formations in recent years, shows the potential damage that can be inflicted on shareholders by the strategy. The analysis, while pointing out the issue for just this one producer, is instructive for how it could be applied across the industry to those producers who were swept up in the shale gas revolution fever and ignored the principles of capital discipline in a desire to be part of the herd of admired E&P companies. In the end all they did was destroy shareholder value.

Exhibit 15. The Risk In Carrizo's E&P Strategy

Selected Highlights from CRZO 2011 10K		
2011 Capital Expenditures:	$	**556,324,000**
2011 Value of Proved Oil & Gas Properties:	$	907,347,000
2010 Value of Proved Oil & Gas properties:	$	626,665,000
Increase/(Decrease)	$	**280,682,000**
2011 Value of Total Property & Equipment, net:	$	1,310,514,000
2010 Value of Total Property & Equipment, net:	$	983,057,000
Increase/(Decrease)	$	**327,457,000**
2011 Proved Natural Gas Reserves (Mcf)		727,685,000
2010 Proved Natural Gas Reserves (Mcf)		670,000,000
Increase/(Decrease)		**57,685,000**
2011 Proved Oil, Condensate and NGLs (Bls)		34,659,000
2010 Proved Oil, Condensate and NGLs (Bls)		28,473,000
Increase/(Decrease)		**6,186,000**
2011 SEC Standard Measure of DCF	$	1,041,036,000
2011 SEC Standard Measure of DCF	$	748,786,000
Increase/(Decrease)	$	**292,250,000**
2011 Percentage of Natural Gas Reserves as PUDs		46%
2011 Percentage of Crude Oil,Condensate and NGLs as PUDs		69%
2011 Cost of Incremental Reserve Additions per Mcfe (6:1)	$	5.87
2011 Cost of Incremental Reserve Additions per Bbl	$	35.2
2011 Total Long Term Debt:	$	729,300,000
2010 Total Long Term Debt:	$	558,094,000
Increase/(Decrease)	$	**171,206,000**

Source: Robert Gray

The more telling problem is that by spending $556 million on drilling and production last year, the company had to add just over $170 million in long-term debt to its balance sheet, which was close to 55% of the increased value of its total oil and gas reserves

What we see from the analysis is that in 2011 the cost of incremental natural gas reserve additions was nearly $6 per thousand cubic feet, or nearly two and a half times the current gas price. On the other hand, some analysts will say that the $35.20 per barrel incremental cost for adding liquids reserves in a world of $100 per barrel oil prices more than offsets the high finding cost for natural gas reserves. The more telling problem is that by spending $556 million on drilling and production last year, the company had to add just over $170 million in long-term debt to its balance sheet, which was close to 55% of the increased value of its total oil and gas reserves. Should oil prices drop for some reason this year, shareholders could see almost all the incremental value added last year erased quickly. That scenario is what 'old timers' in the oil and gas business refer to as "boom and bust." We are not suggesting a "bust" anytime soon, but are merely pointing out the risk for shareholders given the company's exploration strategy, a potential outcome often overlooked by investors and management as they focus on long-term goals. It's the proverbial pothole companies often fall into when focused only on the horizon.

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