PARKS PATON HOEPFL & BROWN

ENERGY INVESTMENT BANKING, LP

MUSINGS FROM THE OIL PATCH

November 25, 2008

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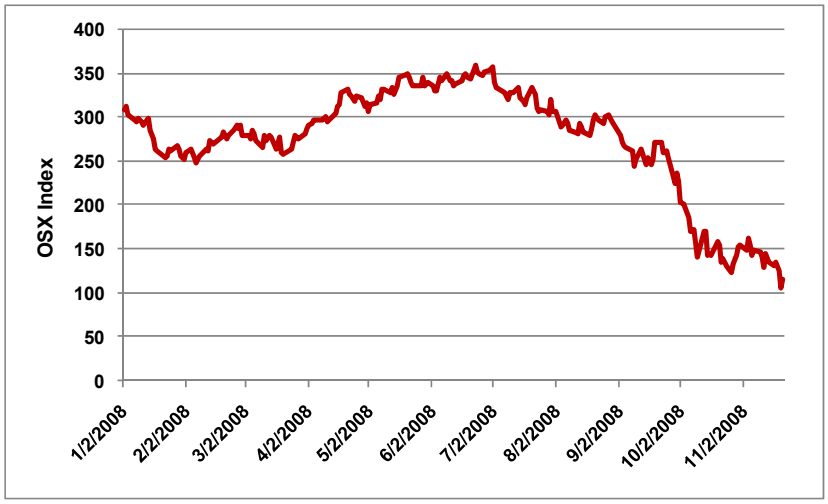
Note: *Musings from the Oil Patch reflects an eclectic collection of stories and analyses dealing with issues and developments within the energy industry that I feel have potentially significant implications for executives operating oilfield service companies. The newsletter currently anticipates a semi-monthly publishing schedule, but periodically the event and news flow may dictate a more frequent schedule. As always, I welcome your comments and observations.* Allen Brooks

The Pain Of The Oil Service Stock Market

The OSX has gone from over 300 early in the year to barely above 100 now

In the halls of office towers; at lunch tables at the Petroleum Club; and in the aisles at grocery stores, the pain of the collapse of oil service stocks and the stock market in general is a topic of discussion. Most of the observations focus on how fast stock wealth has disappeared in the face of a still solid business environment for energy companies and a reasonably healthy industry outlook. The correction in the Philadelphia Oil Service Stock Index (OSX) has been noticeably brutal as the index has gone from over 300 early in the year to barely above 100 now.

Exhibit 1. The OSX Has Lost Almost 200 Points This Year



Source: Yahoo Finance, PPHB

Everyone knows that the global credit market turmoil has had a negative impact on economies around the world, which is resulting in a loss of energy demand. This prospect, already underway, has undercut the global price of crude oil. Here in the United States, a growing natural gas supply picture is being met with a moderation in demand due to weaker economic activity, lower electric power sales and warmer than expected weather. The bottom line is that oil and gas prices are falling, and they are without solid prospects of a bottom being close.

Duke Energy pointed out, its third quarter electricity sales were down 5.9% in the Midwest from a year ago, but more troubling was that residential demand fell 9%

November is a time of the year when winter weather begins to set in across the country and energy demand, especially for home heating, grows. The absence of daylight savings time, even after being delayed for several weeks, usually means more electricity is needed to provide lighting. Unfortunately, none of this is happening at the moment, and in the case of electricity demand, utility executives are concerned. An article in *The Wall Street Journal* last Friday highlighted a surprising drop in power use. The article pointed out that the data is preliminary and incomplete, but as Duke Energy Corp. (DUK-NYSE) pointed out, its third quarter electricity sales were down 5.9% in the Midwest from a year ago, but more troubling was that residential demand fell 9%. These usage declines cannot be explained by weather fluctuations. Some executives are questioning whether the declines are a function of weakening economic activity.

Some power executives, such as James Rogers, chairman of Duke Energy, says that even where electricity prices are flat to declining, his company experienced lower consumption. According to Mr. Rogers, “Something fundamental is going on.” Executives are beginning to wonder whether their efforts to convince customers to conserve are actually working. If so, then they may need to rethink how much new power capacity they need to build and how they are going to restructure their rates to cover their fixed costs better.

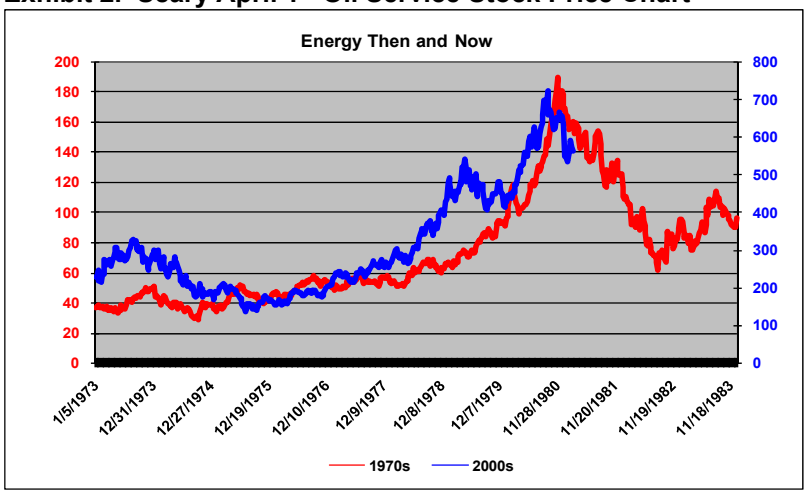
Oil Market Intelligence estimates that global oil demand in October was 84.81 million barrels per day (b/d), up 290,000 from September but down 1.39 million b/d from last year

As we point out in another story, all three principle oil forecasting organizations have lowered their estimates for crude oil demand both for 2008 and 2009. Further to the weakness in energy demand, Oil Market Intelligence estimates that global oil demand in October was 84.81 million barrels per day (b/d), up 290,000 from September but down 1.39 million b/d from last year. This level of demand is down about 500,000 b/d from OPEC’s estimate of average demand in the third quarter and 2.6 million b/d from their fourth quarter estimate. What we know is that oil demand is falling when it should be rising. OPEC is under pressure to act for a second time to cut production to try to prop up oil prices. According to the head of OPEC, they want oil prices to settle in the $70 to $90 a barrel range, which would ensure that some of the unconventional oil resources can be developed. We found this statement quite interesting because it implies that OPEC is concerned about the ability of the global petroleum industry to satisfy the expected growth in oil demand.

The question that is most frequently asked of us: When will we hit bottom? That question is then followed with: When will the stocks go back up?

With all the economic, credit and stock market chaos, investors are worried about the outlook for oilfield service stocks. The question that is most frequently asked of us: When will we hit bottom? That question is then followed with: When will the stocks go back up? As our loyal readers know, we have been addressing the stock market action of energy and oilfield service stocks off and on since we started writing the Musings eight years ago. One of our more recent in-depth efforts to examine the outlook for the stocks was published on April 1st – although some readers thought it was an April Fool's Day joke. In that analysis – and remember crude oil prices were climbing steadily higher, natural gas prices were stronger than anticipated, the rig count was moving higher, oil company capital spending was ramping up and the stocks were doing well – we raised concerns about the ending of the stock cycle. We published a chart in that report that plotted the oil service and equipment stock segment of the S&P 500 index for the decade of the 2000s against their record for the decade 1973-1983, the most significant boom and bust period ever experienced by the energy industry. We commented that this chart scared us. It is displayed in Exhibit 2.

Exhibit 2. Scary April 1st Oil Service Stock Price Chart



Source: Global Finance, PPHB

The pattern of this decade's performance of oil service stocks has followed the pattern of the 1970s

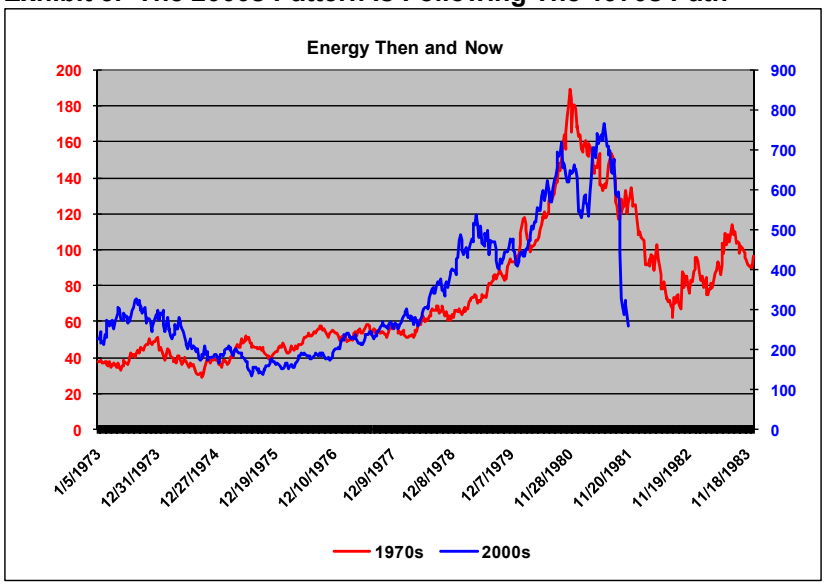
We have subsequently updated the chart through last Friday. For stock market analysts who follow technical analysis, they like to look at patterns of stock trading activity since they have found that the patterns often repeat. If one looks at the updated chart in Exhibit 3, one will see that in a broad sense, the pattern of this decade's performance of oil service stocks has followed the pattern of the 1970s. While the first peak for the stocks this year came slightly ahead of the 1970s peak, it was a small correction. The stocks then rallied back to a higher high before starting back down.

When the oil service stocks started down this second time, however, the drop became almost a freefall. That probably had something to do with the rapid deterioration of credit markets, the health of both the U.S. and global economy and need for investors to sell highly

Since this decade's stocks did not climb as high as they did in the 1970s, the magnitude of this correction has not been as great as in that previous one

liquid investments and especially ones where they had profits. What we did find interesting is that this correction has taken the stocks below the correction-low of the 1970s, but since this decade's stocks did not climb as high as they did in the 1970s, the magnitude of this correction has not been as great as in that previous one. The other observation about this correction is that we have essentially made it in slightly more than half the time it took to complete the 1970s correction. We suspect the speed of this correction is part of the reason why investors seem to be feeling the pain of this correction more.

Exhibit 3. The 2000s Pattern Is Following The 1970s Path



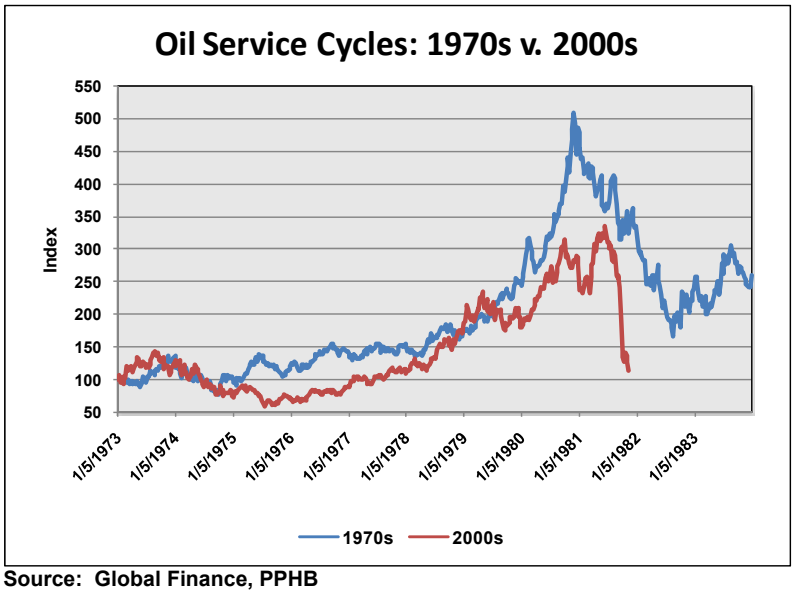
Source: Global Finance, PPHB

The 2000s cycle, for all its investor attention and hype, did not earn as much profit for investors as was earned in the 1970s

After we had shown these two charts to some investors, we were asked whether we had done a relative chart as they felt it might show something different. Previously we had measured the relative performance of the stocks and found similar gains between the two respective periods. We went ahead and indexed the two periods and prepared similar time plots. As shown in Exhibit 4, the pattern of the two cycles was similar. What we did observe was that the 2000s cycle, for all its investor attention and hype, did not earn as much profit for investors as was earned in the 1970s. The other observation is that at the bottom of the correction, the 2000s has almost given back all the profit earned since 2000 in contrast to the 1970s when the correction still left investors with about a 70% return.

Now that oil service stocks have crashed, the next big question is whether they are now at a bottom and have become attractive purchases. There are two key ingredients involved in answering that question. One is where are we in the normal cycle of stock prices relative to the earnings estimates for the companies? The second is how will the overall stock market and global economy play out?

Exhibit 4. This Correction Reclaims 2000s Profits



Source: Global Finance, PPHB

As the chart in Exhibit 5 shows, we are in Phase 1 of a typical cyclical industry earnings recession. While Wall Street analysts have begun cutting earnings estimates for the oilfield service companies for 2009 and 2010, the estimates possibly are still reflecting a more modest downside than the industry may actually experience. Thus, one cannot expect these new earnings estimates to be very accurate.

Stock prices usually bottom half way to the bottom of the earnings cycle but since oilfield service company earnings have yet to fall, we may have more downside for stock prices

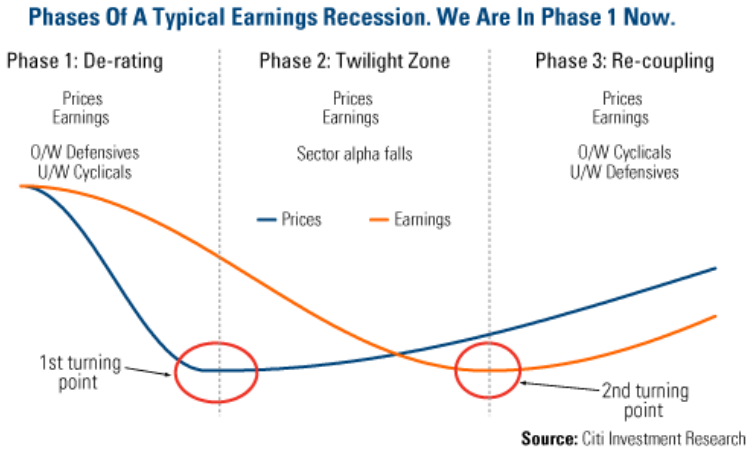
While the chart shows that stock prices usually bottom half way to the bottom of the earnings cycle, since oilfield service company earnings have yet to fall, we may have more downside for stock prices. We would hope that because the stocks corrected so quickly that they have reflected the anticipated maximum drop in company earnings and the only issue is how long before the earnings reach that bottom. Until we have some visibility on that question, the stock prices probably will trade around current levels.

We are at a loss to come up with what might be the likely catalyst to drive oil service stock prices higher

As we know from prior oil service industry cycles, stock prices will begin to recover meaningfully some months before the earnings turn up, and often before the analysts start raising their earnings estimates for the companies. The critical issue is that the industry and the stocks need a catalyst in order to rally, and at the present time we are at a loss to come up with what might be the likely catalyst. We have always felt that the current oil service stock cycle would peak as energy demand destruction took place. In hindsight, that destruction was taking place when the stocks peaked, but few people saw it until too late.

The big questions about the economy and the overall stock market are just as difficult to answer as identifying the catalyst that will send oil service stock prices up. We suspect that the two are intertwined.

Exhibit 5. Oil Service Subject To Cyclical Investing Pattern

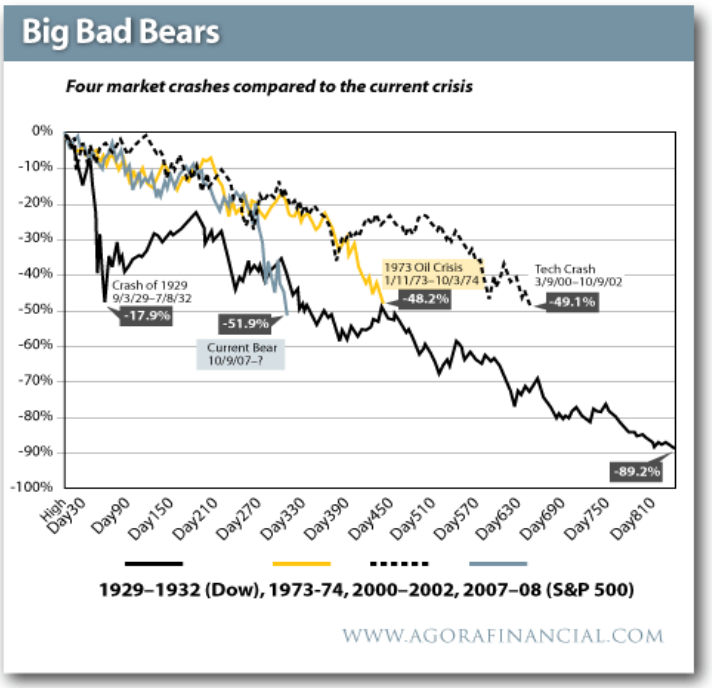


Source: U.S. Global Investors

If the global economic recession is more mild than currently expected, then energy demand will start to grow

If financial and credit markets can begin to function more normally soon, then possibly the global economic recession will be more mild than currently expected. If that proves to be the case, then energy demand will start to grow rather than continue to contract. The tightness in the global oil market experienced during 2007 will rapidly return sending oil prices up with all the attendant good things that follow for the petroleum and oilfield service companies. The prospect of that change, in our view, may be the catalyst to drive oilfield service stock prices higher.

Exhibit 6. This Correction Faster And More Severe Than Most

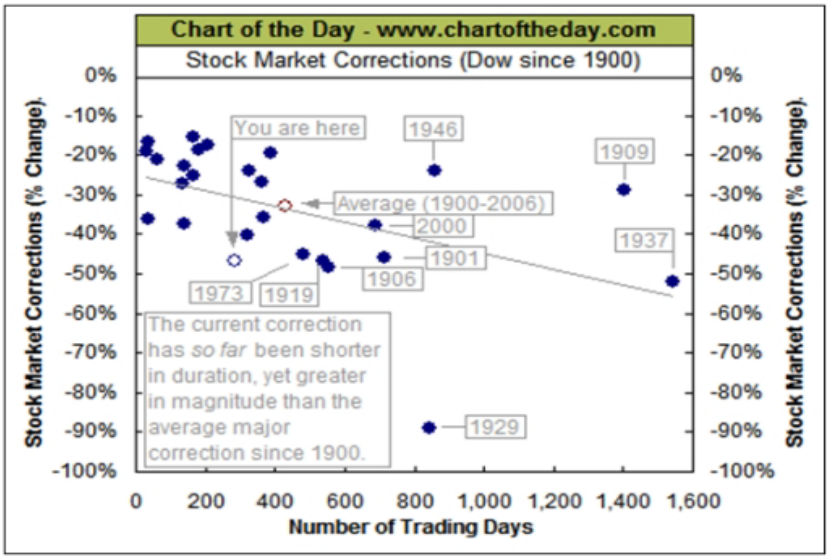


Source: AgoraFinancial.com

This market correction seems to be worse than most corrections experienced since 1900 with the exception of the Great Depression

While neither of the charts in Exhibits 6 and 7 offer much insight to the future, we thought our readers should see them to gain a better understanding of the magnitude of the stock market correction we have been experiencing. As money managers and stock market historians point out, this market correction seems to be worse than most corrections experienced since 1900 with the exception of the Great Depression. Based on these charts we sincerely hope we are not about to match that correction.

Exhibit 7. This Correction Still Has Worse Ones To Match



Source: chartoftheday.com

Will Cheap Gasoline Turn On American Drivers?

Our intuition suggests that we may see prices for each grade of gasoline fall further, although most of the price decline is probably over

One of the fun games today is seeking out the lowest priced gasoline in Houston. While it may have been financially more beneficial to play this game when gasoline prices were above $4 a gallon, the joy now comes from trying to see just how low dealers will go to boost their business. The magnitude of the drop in pump prices over the past few weeks has been amazing. We have seen regular gasoline prices on the west side of Houston as low as $1.67 a gallon as late as last Friday. With low regular gasoline prices, we have also seen premium gasoline prices fall. At the same station with the low regular gasoline price, premium was at $1.91 a gallon, down 17¢ a gallon from the prior day when we thought we were getting a great deal. Our intuition suggests that we may see prices for each grade of gasoline fall further, although most of the price decline is probably over, but another dime or so lower might set the bottom in gasoline pump prices for this cycle. If that were to happen then regular gasoline would be around $1.57 a gallon while premium would fall into the $1.81 range. But the big question is what does the low pump price do to the "conservation ethic" and the driving pattern changes experienced earlier this year when gasoline prices soared above $4 a gallon?

Recently there have been articles in the popular press highlighting this very issue. Newspaper reporters stand at various gasoline stations in cities around the country and poll the drivers filling up their tanks as to whether their driving habits have reverted back to their old ways due to the lower pump prices. For some the answer is definitely yes, acknowledging that they were suffering because of lengthy commutes on public transportation. Others answer that they have not altered their driving habits and are using the extra money from lower gasoline prices to offset other rising expenses such as food and utilities.

Lately the year-over-year comparisons of the amount of gasoline consumed – either the weekly data reported by the Energy Information Administration (EIA) or the consumer spending data collected by MasterCard – have shown a reduction from earlier this year. One would think this trend (an increase in gasoline volumes) reflects a return to old gasoline consumption patterns.

Once gasoline prices went above $3.50 a gallon and the media was reporting the prospect of much higher gasoline prices in the future, American drivers began to cut back

We have been tracking and reporting on the Federal Highway Administration's monthly estimate of total vehicle miles driven that has shown a distinct downward trend for the past nine months. That data suggests that once gasoline prices went above $3.50 a gallon and the media was reporting the prospect of much higher gasoline prices in the future, American drivers began to cut back. We decided to take a closer look at the gasoline consumption trends and pump prices to see if we could discern any recent change in consumer behavior.

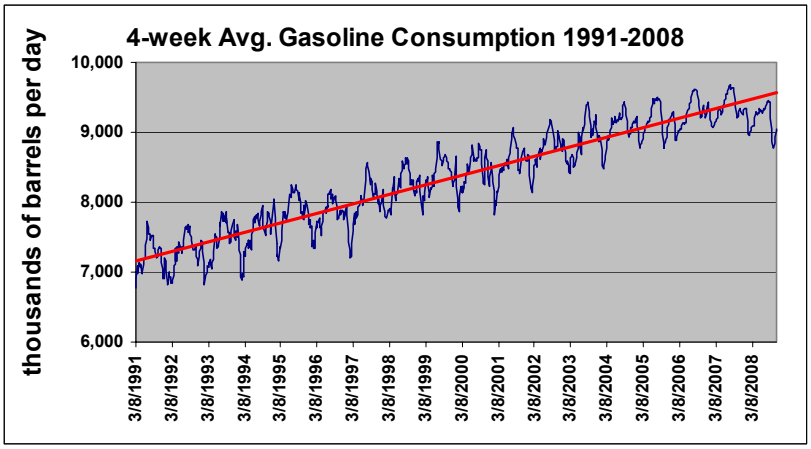
First we must issue a caveat. All the weekly EIA data series available on its web site do not always match up with the same date. Secondly we found different historical data. For example, the latest *Weekly Petroleum Status Report* for the week ending November 7, 2008, compares the data averaged for the last four weeks against a similar period ending November 7, 2007. However, when one goes to the historical data series, one finds that the week ending dates in 2007 are either November 2 or November 9, not November 7. As a result, the November 2 and November 9 data totals are different from that included in the weekly report, which makes the year-over-year percentage comparisons considerably different. Recognizing this issue, we elected to go with the historical data series as listed on the web site and tried our best to match up weeks whenever we were making a period comparison. Our decision was based on the ability to analyze data over a longer time period.

To start our review, we plotted the long-term trend in gasoline supplied to the market based on the 4-week averages. The amount of gasoline supplied each week is treated as indicative of demand, as we are ignoring changes to gasoline inventories. Admittedly, those changes would add to or subtract from the amount of consumption, but we do not believe that these weekly inventory changes over time make that large a difference.

While there were several periods when there were sharp drops in consumption – notably in the early weeks of 1993, 1997 and 2001 – there was a steady upward stair-step pattern in the amount of gasoline consumed over the 16 year period

As shown in Exhibit 8, the trend line of gasoline consumption growth in this country was fairly steady from 1991 to 2006. From 2007 forward, however, the plotted actual consumption line consistently fell below the long-term trend line. The consumption line shows the weekly volatility associated with seasonal factors along with the demand changes associated with broad macro economic conditions. For example, gasoline consumption almost always falls during the winter and rises in the spring and summer. While there were several periods when there were sharp drops in consumption – notably in the early weeks of 1993, 1997 and 2001 – there was a steady upward stair-step pattern in the amount of gasoline consumed over the 16 year period. In the early 1990s the consumption floor was about 7 million barrels per day (b/d) followed by an 8 million b/d plateau in the late 1990s and early 2000s. By 2005, we were up to a winter consumption level of around 9 million b/d. However, in recent weeks we have fallen below that level.

Exhibit 8. Long Term Trend of Gasoline Usage Steadily Higher



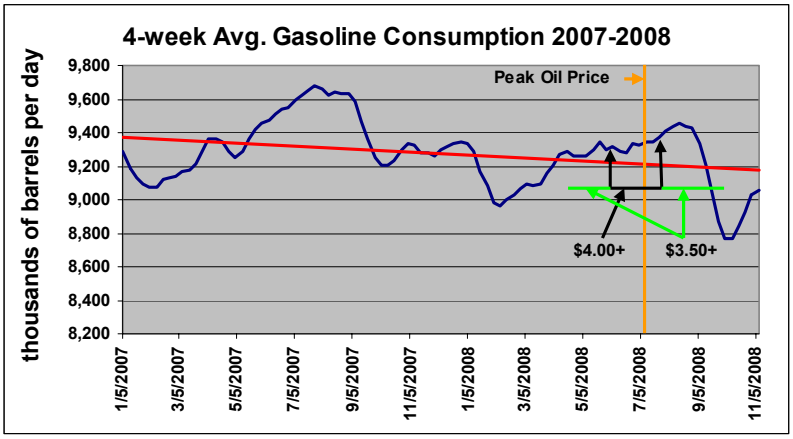
Source: EIA, PPHB

We then focused in on gasoline consumption since the start of 2007. Both the absolute line and the trendline for gasoline consumption during the past 22-month period has been downward. Clearly the seasonal demand pattern was present, but the impact on gasoline sales from the economic stress since the middle of last year is quite evident, too. We have marked the 2008 gasoline consumption part of the chart with notable industry events – the peak in crude oil futures prices at $147.27 on July 11th, the time period when average gasoline pump prices were at $4.00 or greater a gallon, and the periods of time when gasoline prices per gallon were $3.50 or greater.

When we look at the amount of gasoline consumed during the entire first $3.50 a gallon or greater period, one can see a flattening in demand

When we look at the amount of gasoline consumed during the entire first $3.50 a gallon or greater period, one can see a flattening in demand, albeit the demand rose through more than half of the $4.00 or greater a gallon timeframe and even appears to have surged once gasoline prices fell below $4.00. After about a third of the time of $3.50 or greater pump prices following the peak, the falloff in

Exhibit 9. Gasoline Consumption Trending Lower



Source: EIA, PPHB

consumption was dramatic. The conclusion one can draw is that during the period when gasoline pump prices were jumping higher in leaps and bounds in the spring and summer of 2008, gasoline consumption was constrained. The full impact of changes in driving patterns and gasoline consumption patterns did not become clear until early fall. The problem with part of this analysis is that early September marked when the Gulf Coast was ravaged by hurricanes Gustav and Ike that significantly impacted refinery operations and created spot gasoline shortages throughout the Southeast with a concurrent spike in gasoline prices. As refineries came back on stream and the gasoline distribution system was resupplied, these high pump prices fell like a rock as demand had disappeared.

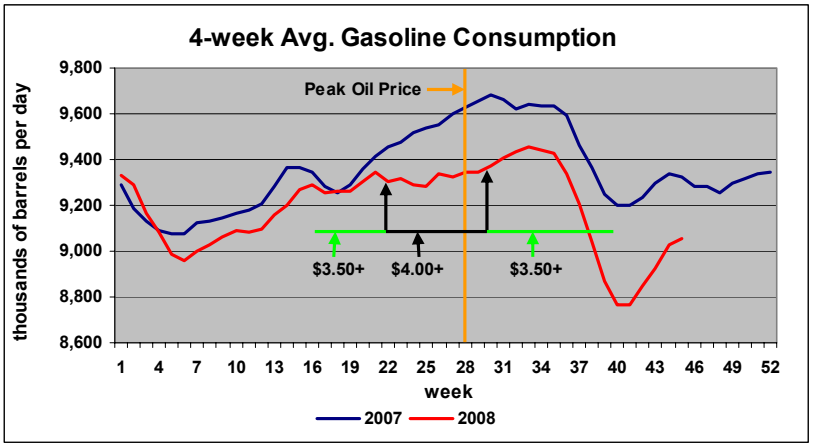
The full impact of changes in driving patterns and gasoline consumption patterns did not become clear until early fall

In looking at gasoline consumption, we thought it would be interesting to match up the weekly demand numbers for 2007 and 2008. That information is presented in Exhibit 9. Again we have highlighted the periods of high gasoline pump prices and the date of the peak oil price. The graph for 2008's consumption highlights vividly the impact high gasoline prices during the spring and summer time periods had on demand. However, we cannot totally be sure that the absence of demand during this period was due solely to high pump prices since this was also a period when credit markets were coming unglued, home foreclosures were escalating, unemployment was climbing and the stock market was swooning. Combined, these factors were making businessmen and families uncomfortable about the future course of economic activity and signaled a time when spending should be curtailed. That also marked a period when all commodity prices were leaping higher raising the specter of substantially higher costs of living meaning family budgets were becoming, and would continue to be, squeezed.

The graph for 2008's consumption highlights vividly the impact high gasoline prices during the spring and summer time periods had on demand

A test of the impact of pricing on gasoline demand would be to look at the consumption changes on a relative basis. That data is presented in Exhibit 10. What we found surprising was that the relative data and the absolute data were very close, providing us

Exhibit 10. Gas Consumption Lower For Almost All of 2008



Source: EIA, PPHB

little additional value from this analysis. What may have provided more value was plotting the year over year change in the 4-week average gasoline volume supplied during 2007 and 2008. Economic stresses began to surface during 2007, especially in the summer, and then conditions truly deteriorated in 2008 beginning in the spring. When one looks at the year-over-year change, consumption really started deteriorating in the late spring/early summer of 2007 and has continued to deteriorate throughout 2008 with an accelerating decline in demand when gasoline prices rose above the $3.50 a gallon mark. The recent bounce back in the rate of year-over-year weekly gasoline demand probably reflects some consumer relief as a result of the sharp drop in gasoline pump prices.

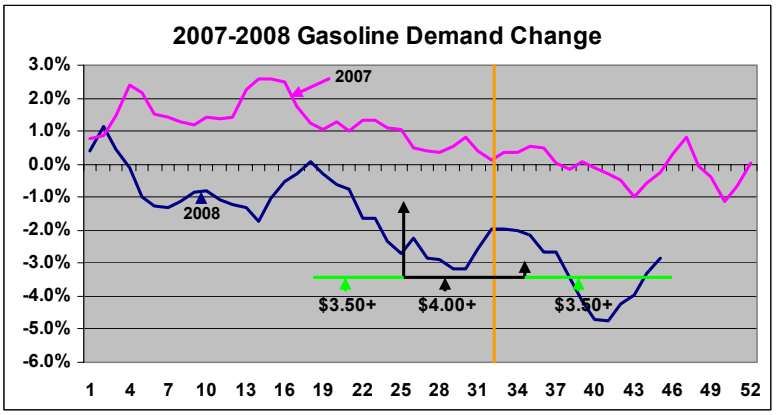
Consumption really started deteriorating in the late spring/early summer of 2007 and has continued to deteriorate throughout 2008 with an accelerating decline in demand when gasoline prices rose above the $3.50 a gallon mark

According to the Automobile Association of America (AAA), nationwide, gasoline prices declined last week by 1.8¢ to $2.087 a gallon, the lowest retail price since March 2005. Gasoline pump prices have fallen 49% since the July 17th peak of $4.114 a gallon. Over that same period, crude oil prices have fallen 63%. Gasoline today, on an inflation-adjusted basis, is cheaper than the 17¢ a gallon gasoline seen in the Depression year of 1931, and cheaper than the 20¢ gasoline seen during World War II or the 30¢ gasoline of the 1950s, or even the $1.40 a gallon gasoline in the 1980s. On a real basis, gasoline is now the cheapest it has been in 90 years, and if one compares it to consumer incomes, it is as cheap as ever.

Gasoline is now the cheapest it has been in 90 years, and if one compares it to consumer incomes, it is as cheap as ever

Our conclusion is that the decline in gasoline consumption this year has largely been the result of the higher pump prices. That said, however, we also think that the general decline over the course of the year is due to the growing economic and credit market problems. The recent snapback in gasoline consumption has been in response to the sharp fall in pump prices, but all that has been accomplished is the reduction of some of the demand repression in the market. Since economic projections call for the United States to continue in a recession until early 2009 with a slow recovery thereafter, we think

Exhibit 11. 2008's Decline Reflects Economy Over Gas Price



Source: EIA, PPHB

The longer Americans go with these new use patterns, the greater the likelihood that the new patterns will become permanent

gasoline consumption will remain weak. The longer credit market turmoil continues and Americans are forced to adjust their consumption habits, automobile use patterns will change. The longer Americans go with these new use patterns, the greater the likelihood that the new patterns will become permanent. The mitigating factor offsetting greater gasoline demand erosion is that new, more fuel efficient, or alternatively-powered, vehicles will not be entering the nation's fleet as quickly due to the credit market chaos. This year may be looked back upon as the tipping point for American gasoline consumption.

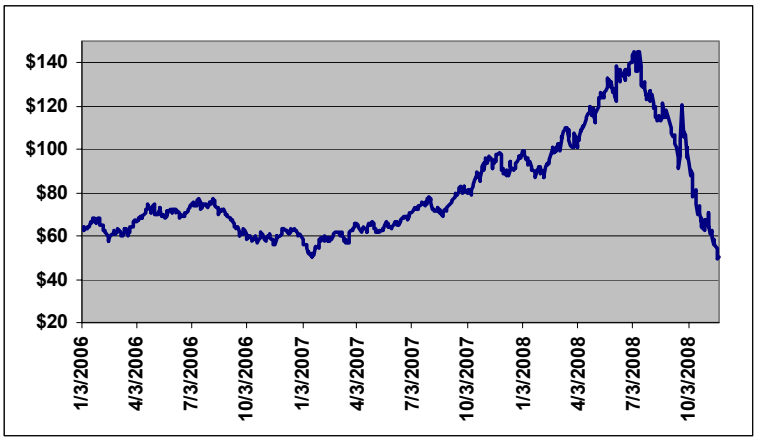
OPEC, The Economy And Oil Prices

Last week, crude oil futures prices broke through a barrier thought impossible to breach - $50 a barrel

Crude oil futures prices have continued their dive driven by growing concern about the scale and depth of the developing global recession. Last week, crude oil futures prices broke through a barrier thought impossible to breach - $50 a barrel. That is the lowest oil price since May 2005, about three and a half years ago. From an environment last summer when oil prices could do nothing but go higher along with forecasts for how high oil prices would go, we now have people concerned about how low oil prices might fall and how much demand has been destroyed by both high oil prices earlier in the year and the collapsing global economy. Increasingly analysts are playing the game of trying to forecast how low oil prices might go, which is less fun than on the upside since the bottom is capped at zero, but that seems to be the trajectory of current oil prices.

In the past few weeks we have seen all the primary global oil market forecasting bodies – the International Energy Agency (IEA), the Energy Information Administration (EIA) and the Organization of Petroleum Exporting Countries (OPEC) – issue revised forecasts for oil demand for both this year and next. In every case, the organization reduced its prior demand forecast, largely as a result of the reduced estimates for global economic growth issued recently by

Exhibit 12. Oil Futures Prices Plummeted In Recent Weeks



Source: EIA, PPHB

the International Monetary Fund (IMF). They reduced their projection of global growth by about four-tenths of one percent to 2.9% in 2009.

The EIA lowered its average oil price forecast to an average of $101.45 this year and to $63.50 next, down from the prior forecast of $112

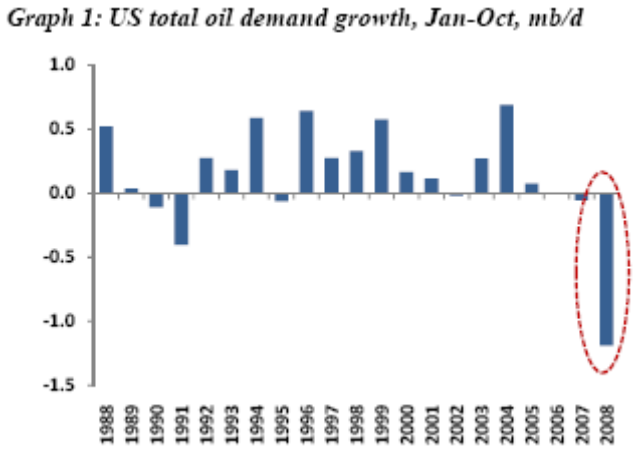
The EIA, in its revised Short-Term Energy Outlook, reduced its 2008 oil demand growth estimate to only about 100,000 barrels a day (b/d), followed by no growth in 2009. More importantly, the EIA lowered its average oil price forecast to an average of $101.45 this year and to $63.50 next. The 2009 price reduction is from the EIA's prior estimate of $112. In revising its outlook, the EIA pointed out that over the 2007-2009 time period, its expects demand in the non-OECD countries will grow by 2.3 million b/d while OECD countries are anticipated to experience a demand contraction of 2.2 million b/d, explaining their forecast for only a 0.1 million b/d demand increase.

In 2009, OPEC is calling for global oil consumption to increase to 86.68 million b/d, but that is down 530,000 b/d from its prior forecast

OPEC's forecasts were reduced as a result of the lowering in economic growth projections. OPEC is now expecting global oil demand in 2008 to total 86.19 million b/d, down 260,000 b/d from its prior estimate of 86.45 million b/d. In 2009, OPEC is calling for global oil consumption to increase to 86.68 million b/d, but that is down 530,000 b/d from its prior forecast. In its monthly oil report, OPEC highlighted the impact of demand destruction that has been underway in the United States this year. One chart OPEC showed focused on the magnitude of the oil consumption fall is displayed in Exhibit 13. The chart shows that U.S. total oil demand has fallen by about 1.2 million b/d during the 10-month period of January to October this year, almost three times the amount that oil demand declined in 1991.

The OPEC report also showed a chart comparing the trend in crude oil prices and stock prices as measured by the price performance of the S&P 500. The chart reflects the period since oil prices peaked in early July. The significance of the chart is consistent with a point we have raised previously. For most of 2008, rising oil prices were

Exhibit 13. U.S. Oil Demand Has Collapsed

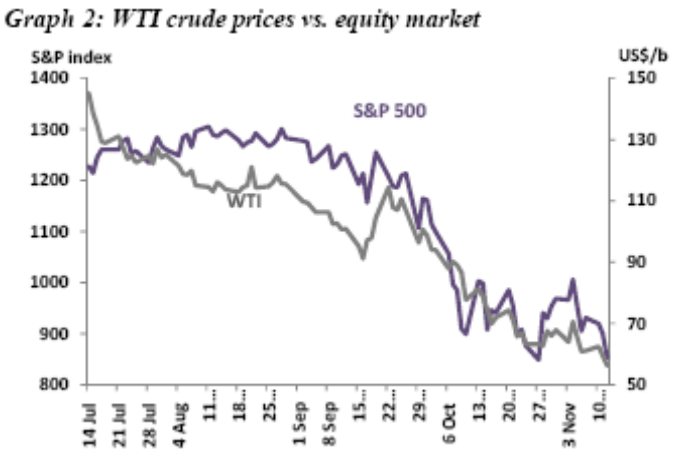


Source: OPEC

Investors have shifted focus from company profit margin squeezes due to high oil prices to the impact of oil demand destruction

sending stock prices lower as investors were looking at the financial damage done to businesses and consumers. After oil prices peaked, the fact that the market and prices have traded in tandem reflects investors shifting focus from company profit margin squeezes due to high oil prices to the impact on overall economic activity, and how much oil demand destruction is happening.

Exhibit 14. Stock And Oil Prices Are In Sync



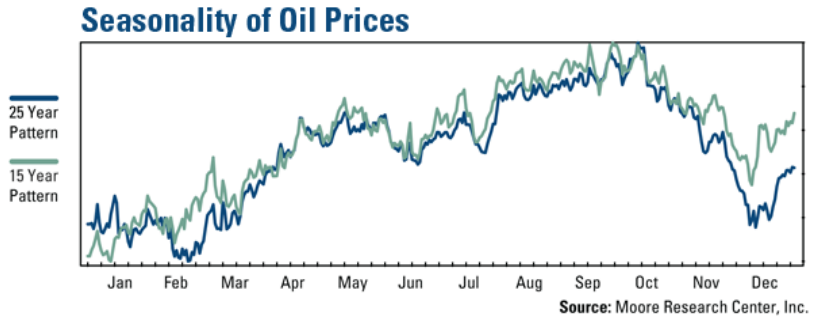
Source: OPEC

Oil prices tend to peak in the summer months, which suggests how sensitive oil prices are to driving patterns

An interesting consideration in estimating where oil prices may be heading is to note the historic seasonal oil price pattern. The pattern shows that oil prices seasonally decline in November and December before turning up in January. Oil prices tend to peak in the summer months, which suggests how sensitive oil prices are to driving patterns. What we know from analyzing American driving patterns, and we suspect in European driving, also, is that people drive less in winter (cold weather) months and more in summer (warm weather) months. Certainly this trend, coupled with a strong U.S. dollar and

concern about global economic weakness, has contributed to the rapid fall in crude oil prices in recent weeks.

Exhibit 15. Crude Oil Prices Traditionally Fall In Winter Months

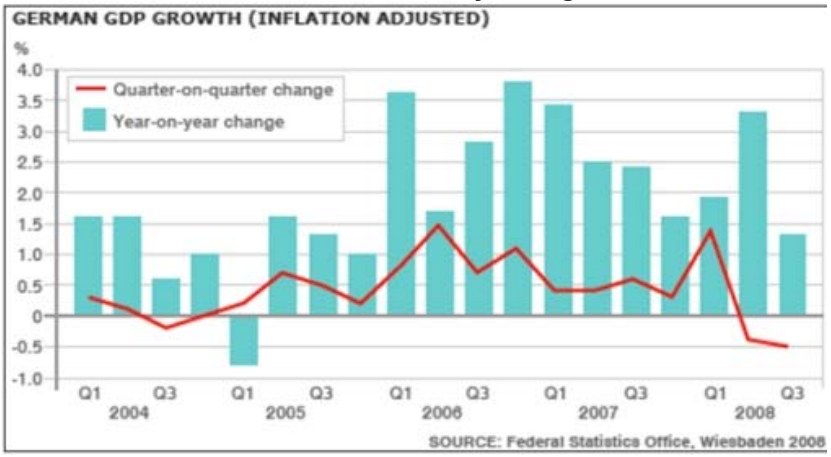


Source: U.S. Global Investors

More and more countries are either falling into recessions or are on the brink of recession

The problem with all these organizations' forecasts is that they are tied closely to the outlook for global economic activity. The impact of the credit market turmoil of the past few months is only now beginning to be understood. As a result, more and more countries are either falling into recessions or are on the brink of recession. The Eurozone entered a recession in the third quarter while the United States experienced a contraction in economic activity in the third quarter and is expected to experience negative growth in the fourth quarter and the first quarter of 2009 or possibly for an even longer time period. Germany's latest economic statistics reflect the Eurozone's problems.

Exhibit 16. German Economic Activity Is Negative Now



Source: German government, U.S. Global Investors

It is challenging to quantify the impact of China's economic growth on global energy consumption

One of the more challenging aspects for understanding economic activity is to try to quantify the impact of China's economic growth on global energy consumption. We had previously suggested that a substantial amount of China's economic activity over the past several years and this year, and as a result its energy consumption growth, was the country's preparations for the Olympics. We

questioned whether China's economy would continue to grow after the Olympics at the same pace as it grew before. Based on the 9% growth rate in the third quarter, China's economy is not proving immune to the global economic contraction, which supports our view that the country's growth rate had been boosted by Olympic-related activity.

Reports are that the Chinese government is very concerned about the potential for social unrest as a result of its weakening economy and has mobilized military troops to various parts of the country to potentially head off any violent protests

One of the recent economic measures that reflect the growing weakness in the Chinese manufacturing sector is the country's electric power output. As shown in Exhibit 17, China's October's power output was the worst in the past 20 years. This measure is consistent with the reports of thousands of Chinese plants being shut down and the announcement of the government's economic stimulus program. The $586 billion plan is focused on building a substantial amount of infrastructure, which is designed to employ large numbers of workers. Reports are that the Chinese government is very concerned about the potential for social unrest as a result of its weakening economy and has mobilized military troops to various parts of the country to potentially head off any violent protests. While difficult to comprehend, this is the typical behavior of a government concerned about being unseated from power. Conditions such as this do not suggest a robust outlook, or even a stable one, in the future.

Exhibit 17. Electricity Data Highlights Weak Chinese Economy

Source: Chinese government, U.S. Global Investors

2008 will be the slowest shipping container volume year since 2004

What we have also seen, based on industry data is continued weakness in the container shipping segment, especially in the Asia/Pacific region. That weakness is spreading globally. According to Port Tracker, cargo volume at U.S. container ports fell again in October. They now anticipate 2008 will be the slowest volume year since 2004. Currently, they are forecasting 15.3 million TEUs (twenty-foot equivalent units) will be transported in 2008, down 7.1% from the 16.5 million TEUs moved last year. This year's volume would be slightly less than 2005's but more than the 14.0 million TEUs transported in 2004.

Based on the surveyed ports, in September the volume was 1.33 million TEUs, down 2.9% from August and 9.8% lower than the

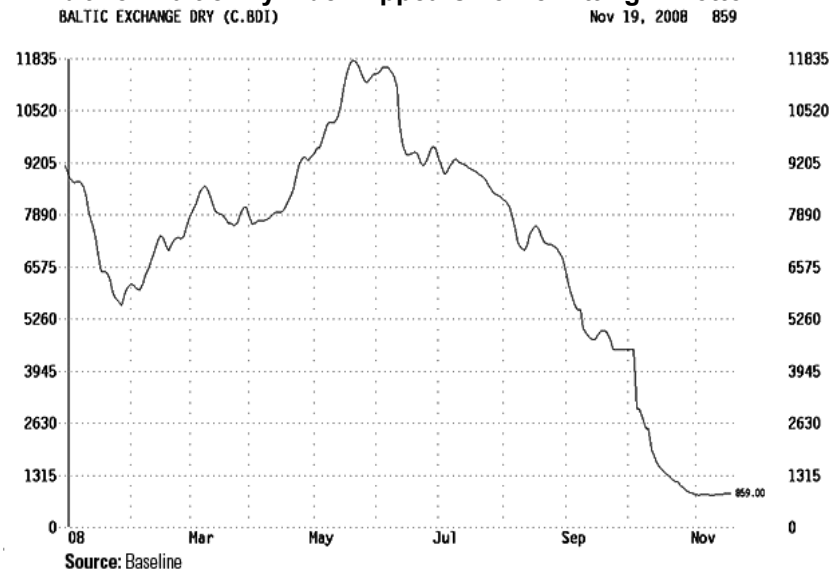
The Port Tracker forecast calls for March 2009 to be the first month showing a year over year improvement in TEU volume with a 2.3% gain

same month in 2007. October's volume is estimated at 1.36 million TEUs, down 5.7% from 2007. October would be the peak volume month in 2008, but less than the peak of 1.48 million TEUs in September 2007. The Port Tracker forecast calls for March 2009 to be the first month showing a year over year improvement in TEU volume with a 2.3% gain. In the interim, the four-month period, November through February, shows monthly comparison declines from the prior year's month of -8.7%, -5.5%, -5.0% and -8.3%, respectively.

The Baltic Dry Index has essentially gone sideways in recent weeks suggesting that maybe we have reached a bottom in the decline

The decline in container shipping volume is supported by the Baltic Dry Index trend this year. The index has fallen by about 93% from its high this year, but as Exhibit 18 shows, the index has essentially gone sideways in recent weeks suggesting that maybe we have reached a bottom in the decline. Hitting bottom does not automatically mean we are headed higher anytime soon, but bouncing along a bottom is healthier than the freefall environment since summer of this year. It means companies can begin to assess strategic moves with their capacity and pricing that cannot be considered when everything is down.

Exhibit 18. Baltic Dry Index Appears To Be Hitting A Bottom



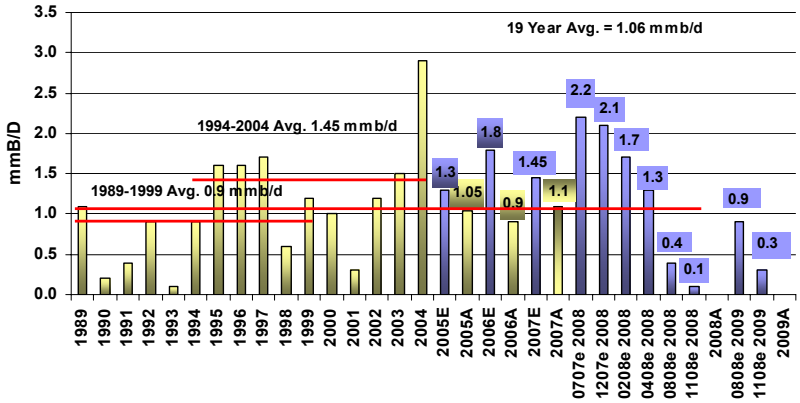
Source: U.S. Global Investors

The magnitude and rapidity of the economic slowdown has surprised investors and analysts

Another economic data point comes from the World Steel Association, which reports that global steel output was down 12.4% in October to the lowest output level since January 2006. All this macro industry data shows that the world's economy is slowing. With that weakening, oil demand is being destroyed. The magnitude and rapidity of the economic slowdown has surprised investors and analysts. The IEA has had a particularly difficult time this year in forecasting oil demand, but their failure reflects a trend that has been prevalent at the organization for a number of years. Exhibit 19 shows the forecasting record of the IEA since 2005, the year after

the IEA missed forecasting the surge in global oil demand by a wide margin as they misunderstood the magnitude of China's oil consumption in 2004. Since then the IEA has consistently overestimated annual global oil demand in its early forecasts.

Exhibit 19. IEA Forecasts Have Overestimated Demand



Source: IEA, PPHB

The IEA's November forecast reduction suggests that global oil demand growth will be barely 5% of their initial estimate for the year

The IEA initially forecasted that global oil demand would soar this year with an initial projection of 2.2 million b/d growth, which was only slightly lowered five months later. Had this year met the IEA's forecasted volume growth, 2008 would have been the second strongest year for oil demand growth in 20 years. The IEA's November forecast reduction suggests that global oil demand growth will be barely 5% of their initial estimate for the year. Our guess is that by the time 2008's oil demand is totaled, we will find that global oil demand fell. More importantly, the initial 2009 oil demand estimate of 900,000 b/d growth has been cut by two-thirds to 300,000 b/d.

This growth rate suggests a global economy that is both struggling to find additional low cost oil supplies and one that is becoming more efficient in its use of oil

It is interesting to note the historic record of annual average oil demand growth. Over the decade 1989-1999, the average annual growth rate was 900,000 b/d. For the decade of 1994-2004, the average yearly growth rate increased to 1.45 million b/d, but that average was significantly impacted by the inclusion of 2004's 2.8 million b/d growth as a result of the huge Chinese demand increase. To us, though, the more important figure is the 19-year average for oil demand growth of 1.06 million b/d. If the 2008 and 2009 demand growth forecasts prove accurate, the 19-year trend would become a 21-year oil demand average of about 980,000 b/d, or about a 1.1% annual growth rate. This growth rate suggests a global economy that is both struggling to find additional low cost oil supplies and one that is becoming more efficient in its use of oil. Both of these trends will play important roles in how the global petroleum industry evolves in the future.

EPA Ruling On CO_2 Has Coal and Power Industries On Edge

The panel ruled that the EPA needs to consider the control of carbon dioxide (CO_2) emissions as a part of the decision in granting a permit

A little over a week ago, the Environmental Appeals Board of the Environmental Protection Agency (EPA) blocked the Denver regional office of the EPA from issuing a permit for a proposed addition to a coal-fired power plant located in Utah. The panel ruled that the EPA needs to consider the control of carbon dioxide (CO_2) emissions as a part of the decision in granting a permit. The panel, composed of three highly regarded, experienced judges, went on to suggest that the most feasible approach for the EPA's Denver office would be to seek help from the Agency in developing a nationwide standard.

While the panel did not accept the Sierra Club's complete argument, the decision to remand the case back to the Denver office with the requirement that it fully consider BACT in deciding whether to grant a permit may have provided the environmental movement with a much broader victory

The ruling came as part of the permitting process for the addition of a waste coal-burning unit to Deseret Power Electric Cooperative's pre-existing Bonanza Power Plant near Vernal, Utah, about 150 miles east of Salt Lake City. In the initial permitting round, the EPA's Denver regional office approved the granting of a permit and said that they did not need to consider the control of greenhouse emissions in determining whether or not to grant the permit. The Sierra Club appealed that decision and, given the 2007 U.S. Supreme Court's decision that carbon dioxide could be regulated as a pollutant under the 1970s-era Clean Air Act, the panel agreed that the EPA needed to consider the use of the "best available control technology" (BACT) as part of the permitting process. While the panel did not accept the Sierra Club's complete argument, the decision to remand the case back to the Denver office with the requirement that it fully consider BACT in deciding whether to grant a permit may have provided the environmental movement with a much broader victory. The decision forces the EPA to have to consider the regulation of CO_2, which it has been steadfastly avoiding.

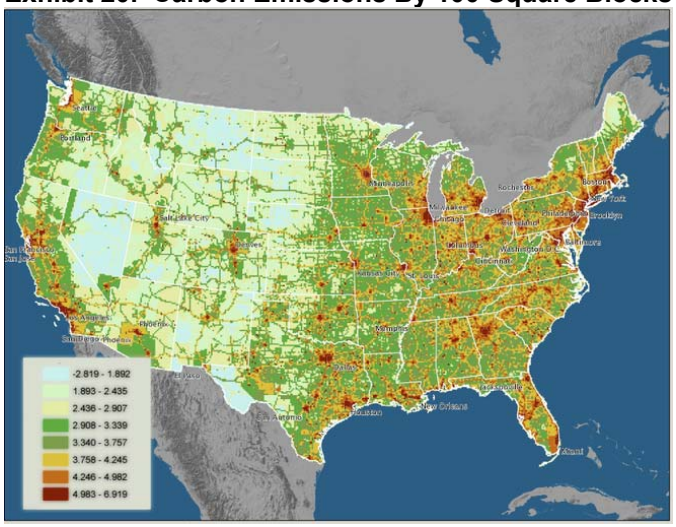
Mr. Waxman has been a strong proponent of implementing stringent environmental rules

Besides this ruling, which has not received as much notoriety as one might have thought, the recent election victory by Congressman Henry Waxman (D-CA) that elevates him to the chairmanship of the House Energy and Commerce Committee, is a further blow to the coal and power industries. Mr. Waxman has been a strong proponent of implementing stringent environmental rules. He has said the first order of business for the committee will be to move climate change legislation forward, something that was a key part of the President-elect Obama's platform during the campaign. While it is hard to know exactly what form the new environmental legislation will take, information from the Obama campaign web site suggests the most likely course. The site states that the administration will "use whatever policy tools are necessary, including standards that ban new traditional coal facilities… a stringent cap on carbon will also make it uneconomic to site traditional coal facilities and discourage the use of existing inefficient coal facilities."

Recently the issue of greenhouse emissions was highlighted by the publication of a high-resolution map of American CO_2 volumes by

the Vulcan Project led by a team of scientists at Purdue University. The map is in Exhibit 20. The map was prepared by plotting the total amount of carbon emissions in 100 square kilometer blocks. The new map looks very much like a typical population density map.

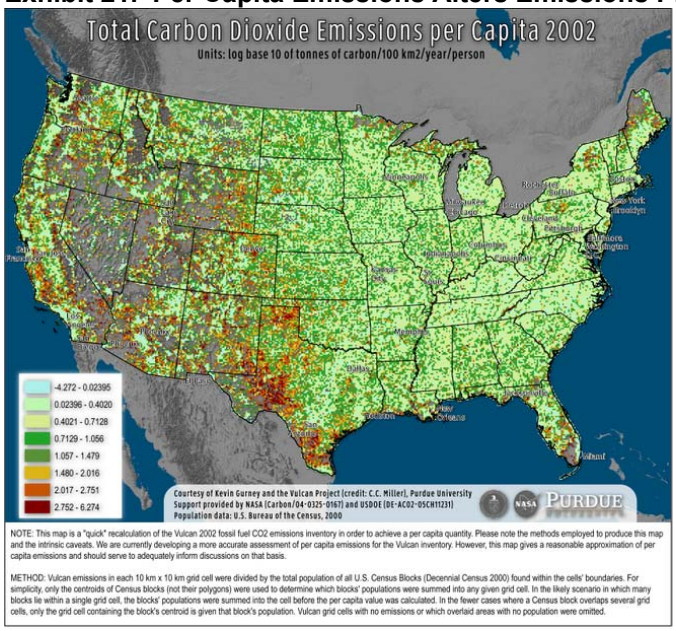
Exhibit 20. Carbon Emissions By 100 Square Blocks



Source: Vulcan Project, Wired.com

At the request of Wired.com, an environmental web site and advocacy group, the Purdue scientists redid the map by plotting the amount of CO_2 emitted divided by the population within the 100 square kilometer blocks. This map is presented in Exhibit 21. It shows a very different picture of the nation's carbon emissions than the original map.

Exhibit 21. Per Capita Emissions Alters Emissions Picture



Source: Vulcan Project, Wired.com

A possible mitigating factor to the heavy emissions, especially in Texas and California, is that the population figures do not reflect the large numbers of illegal immigrants in these states

The difference between the two high-resolution maps is quite striking. The per capita map shows a high concentration of carbon emissions in west and south Texas and in California. There also are pockets of higher emissions in New Mexico, Arizona, Colorado and Wyoming, which would seem to foot with the locations of power plants. A possible mitigating factor to the heavy emissions, especially in Texas and California, is that the population figures do not reflect the large numbers of illegal immigrants in these states. If the true populations of the 100 square kilometer blocks were known, the heavy emission areas might show a reduced concentration.

For the coal industry, this map and the panel's ruling suggest a more challenging business environment in the future as the financial and regulatory risk of building new coal-fired power plants increases

The point of the per capital carbon emissions map is that there are greater concentrations of CO_2 in the areas where a number of large, coal-fired power plants are located. On its face, this map would argue that controlling carbon emissions in these regions would be beneficial for the immediate areas and for the nation as a whole. If anything, this map supports the Environmental Appeals Panel's decision that from both a regulatory and practical point of view, the EPA needs to look at developing a nationwide standard for regulating carbon emissions. Look for this effort to gain greater traction under the Obama Administration. For the coal industry, this map and the panel's ruling suggest a more challenging business environment in the future as the financial and regulatory risk of building new coal-fired power plants increases. Regulators in Wisconsin rejected a plan for a new coal-fired power plant partly because of the uncertainty about future carbon emissions regulations. If the growth of coal-powered energy slows, there will be greater pressure to construct power plants employing other less-polluting fuels. This development could become an important catalyst for stimulating increased use of natural gas in electric plant boilers just as the nation's production is ramping up.

Energy Not Part of S&P Default Analysis – Private Equity Is

The report highlighted the high incidence of private equity involvement with the defaulting-companies at one point in time or another during their existence

We recently obtained an executive summary of a report produced by Standard & Poor's global fixed income research group in September dealing with an analysis of global defaults. The report showed no energy companies among the publicly disclosed companies that had defaulted. The report highlighted the high incidence of private equity involvement with the defaulting-companies at one point in time or another during their existence. The report was titled: Default Autopsy Finds Traces Of Private Equity DNA, which suggests a negative view of the involvement of private equity. It focused on the growing number of entities that defaulted in the first eight months of 2008 and why S&P anticipates the trend to continue and probably accelerate going into next year.

The report stated that there had been 55 entities that have defaulted globally through August of 2008, compared to 22 in all of 2007 and 30 in 2006. S&P calculated that the global speculative-grade default rate has increased to 1.9%, more than double the year-end 2007 rate of 0.86%. In the United States, where 53 of the 55 identified

entities that defaulted were based, S&P estimates that the default rate increased for eight consecutive months to 2.5% in August from a 25-year low of 0.97% at the end of 2007. Diane Vazza, head of S&P's global fixed-income research group, said, "We expect the default rate to continue this ascent and reach 4.9% in the next 12 months."

S&P collected publicly available information on these defaulting-companies. However, they only released information on 44 of the 55 defaulting companies. Some of the more prominent names on the list included Thornburg Mortgage Inc., Ziff Davis Media Inc., Linens 'n Things Inc., Six Flags Inc., Indymac Bancorp and Mrs. Fields Famous Brands. We did an analysis of the various industries represented by this list of defaulting-companies and found no energy companies represented. Instead there were 11 consumer/service entities and an equal number of leisure time/media. The next largest sectors represented were financial institutions (5), health care/chemicals (4) and transportation (4). Completing the list were forest/building products (3), real estate (3), aerospace/automobiles (2) and insurance (1).

Of the 55 defaults, nearly 70% were involved in transactions involving private equity at one point or another

Of the 55 defaults, nearly 70% were involved in transactions involving private equity at one point or another. Because some of the involvement may have happened much earlier, S&P did not opine whether private equity's role contributed to the defaults. They did point out that as a group, private equity firms are particularly attracted to entities that they view to be of good value. That is an important consideration in the model for buying low and hopefully selling higher. Given that model, private equity firms look to entities S&P refers to as "dysfunctional" or at least appear to be so. Sponsors must have confidence that they can improve on the current performance of the target entities, which they perceive to be underperforming, or in the event of a default that they can recoup their investment in the bankruptcy process. In following this model, sponsors seek above-average returns by taking on exposure to higher-risk credits, i.e., companies at the lower end of the ratings spectrum where there is less room to maneuver.

In summing up S&P's outlook, Ms. Vazza stated, "we expect to see more sponsors' [private equity's] finger prints on the majority of the corporate defaults over the next 12 to 18 months"

It is quite possible that sponsors did not fully appreciate or acknowledge the default risk of the entities because at the time they were negotiating their deals, credit availability and investor confidence were considerably different. Also, current market conditions are less forgiving and access to capital and IPO exit strategies are not available. In summing up S&P's outlook, Ms. Vazza stated, "we expect to see more sponsors' [private equity's] finger prints on the majority of the corporate defaults over the next 12 to 18 months." Their rationale for this is the pervasive involvement of private equity in this sector of the capital markets. Given the recent hay-day for energy commodities and the financial performance of the industry, most companies have strong balance sheets with substantial cash balances minimizing the risk of any of the companies going under. Of course, an extended period of weak industry fundamentals could change that picture.

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