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ENERGY INVESTMENT BANKING, LP

MUSINGS FROM THE OIL PATCH

December 11, 2007

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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

That Was The Week That Was

Last week was one of those unique periods in time when the role of energy in our world now and in the future was in the spotlight. Last week marked the 146th Organization of Petroleum Exporting Countries Extraordinary meeting in Abu Dhabi in the Middle East while partway around the world in Bali, Indonesia, a UN-sponsored group was meeting to develop the next phase of global warming regulations/agreements to follow on the ending of the Kyoto treaty emission reduction agreements. In another part of the world, the U.S. Congress was dealing with both energy and environmental legislation that would impact the energy use trends of the world's leading economic power, energy consumer and carbon emitter.

Analysts, investors and the media focused on the upcoming decision by the OPEC oil ministers

As the week began, analysts, investors and the media focused on the upcoming decision by the OPEC oil ministers about whether or not to raise the organization's production quotas. The conventional wisdom was that the issue was not a question of would OPEC raise its production, but rather would the increase be only 500,000 barrels per day (b/d) or would it be 750,000 b/d.

Crude oil prices recently flirted with the $100 threshold before correcting significantly as investors sensed an OPEC production hike. The crude oil market was being driven largely by speculators trying to drive the price into triple-digit territory, which they anticipated would spark another sharp upward run providing a significant profit opportunity. Unfortunately, when the oil price failed to crack the century barrier, the speculators cashed in their chips and headed for the sidelines driving spot prices down by $12 and into the mid $80s.

OPEC established a production quota for Angola of 1.9 million b/d, below the county's target production for next year

The volatility of oil prices seemed to empower OPEC's bearish members resulting in the organization surprising the market by deciding to stand pat with its existing production quota. At the Abu Dhabi meeting, OPEC did welcome Angola as its newest member and also welcomed back returning member Venezuela. In doing so, the organization established a production quota for Angola of 1.9 million b/d, below the county's target production for next year. It also assigned a 520,000 b/d quota for Venezuela, much more in line with the country's actual production.

OPEC definitely wants to avoid another 1997

In response to its market-surprising announcement, OPEC agreed to schedule its next meeting on Feb. 1, 2008 in Vienna, about a month ahead of the prior meeting date. This shift may signal that OPEC is concerned about avoiding overproducing oil heading into the seasonally weak second quarter, especially in light of the growing number of forecasts calling for significant slowing of economic activity both in the United States and Europe. OPEC definitely wants to avoid another 1997 when it boosted production in response to strong global oil demand growth only to be caught by the sharp economic slowdown in Asia as a result of the region's currency crisis producing a collapse in global oil prices.

Instead of the anticipated 700,000 barrel drawdown, crude oil inventories fell by a massive eight million barrels

At mid week, the weekly U.S. oil inventory numbers threw the futures market into a tizzy. Instead of the anticipated 700,000 barrel drawdown, crude oil inventories fell by a massive eight million barrels. At the same time, gasoline and heating oil inventories climbed against the conventional expectations of reductions. Initially, the analysis of the huge crude oil reduction was tied to the prior week's Enbridge Energy's (EEQ-NYSE) pipeline fire that shut down all four lines coming from Canada and accounting for 16% of total U.S. oil imports. After the fire was extinguished, three of the pipelines were restarted and the fire-damaged one was only out of service for a couple of days. Moreover, the inventories at Cushing, Oklahoma rose 700,000 barrels, which would not have happened had the Midwest pipelines of Enbridge been the cause of the crude oil inventory drop.

Last week saw two days marked by huge crude oil futures volatility

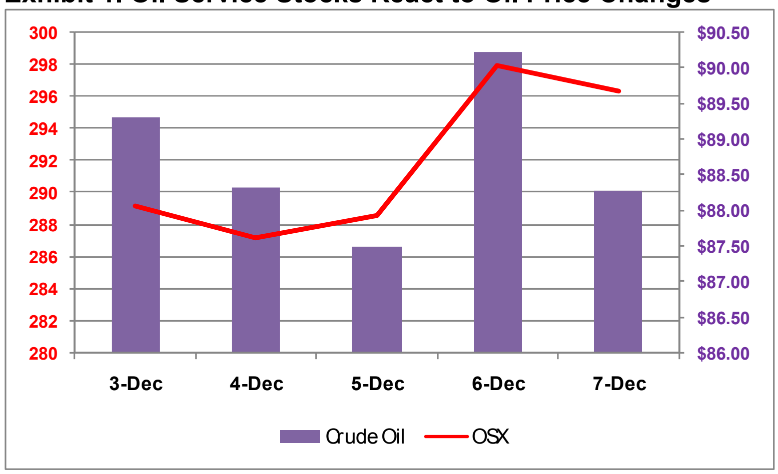
What really impacted the crude oil inventory numbers turned out to have been the fog that forced the closure of the Port of Houston for the better part of a day in the prior week, when there were 20 tankers waiting to unload. The impact of the inventory changes highlighted the volatility in the crude oil futures market that has become more evident in recent weeks. Last week saw two days marked by huge crude oil futures volatility. On Wednesday, the day the government's crude oil inventory data was released oil futures opened at $85.23, but soared to $90.39 following the announcement. However, as crude oil traders examined the builds in gasoline and heating oil inventories, the market turned very negative. Traders were also digesting the OPEC announcement that it was not boosting production. Crude oil futures fell as low as $86.82 before rallying to end the day at $87.49. The following day crude oil futures swung from a low of $85.82 to a high of $90.73 before closing at $90.23.

On Thursday, the U.S. House passed its version of a comprehensive energy bill. The bill contains provisions to boost average fuel consumption standards for the vehicle fleet, mandates for increasing the use of ethanol and generating more electricity from renewable fuels, and the withdrawal of tax subsidies for petroleum companies. After the House passage, the U.S. Senate prepared to consider the bill, but first needed to end the debate over its provisions. That effort failed on a vote of 53-42, which means that the bill will need to be revised in order to gain passage. In its current form, it still faces the threat of a presidential veto.

The volatility of crude oil prices last week was also evident in the performance of the oilfield service and oil stocks

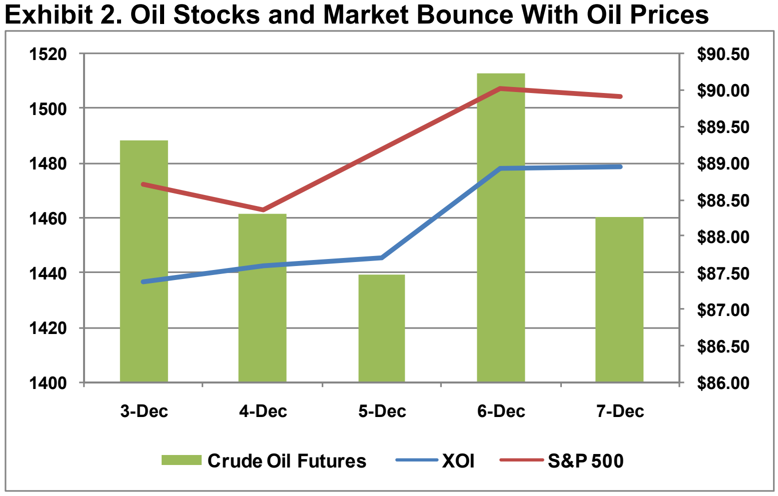
The volatility of crude oil prices last week was also evident in the performance of the oilfield service and oil stocks and the overall stock market. It is likely this volatility will continue through the balance of the year.

Exhibit 1. Oil Service Stocks React to Oil Price Changes



Source: Yahoo Finance, NYMEX, PPHB

Exhibit 2. Oil Stocks and Market Bounce With Oil Prices



Source: Yahoo Finance, NYMEX, PPHB

So as the week ended, we remain in limbo over the future of U.S.

In the near term it may be the weather that will drive oil prices and thus the energy stocks

energy policy. We have yet to hear from the UN negotiators at Bali, although the war of words over the demands from developing countries not to be punished for their emissions as their economies develop while the big polluters in Europe and the United States are forced to make only "token" savings continues. OPEC oil ministers, along with most economists, are confused about the future health of the U.S. and European economies. Will there be a recession? What impact will the weakened U.S. dollar play in economic growth and foreign attitudes toward holding U.S. dollars or continuing to be paid in U.S. dollars? A U.S. Congressional committee has approved a cap-and-trade carbon emissions tax, which marks this nation's first response to the global movement to address global warming trends. While all of these major factors will impact future energy markets, in the near term it may be the weather that will drive oil prices and thus the energy stocks.

Energy Companies Winning the Valuation Battle

CEOs are constantly struggling with how best to balance the long-term growth and sustainability challenges facing their company against the short-term shareholder return pressures of investors

CEOs are constantly struggling with how best to balance the long-term growth and sustainability challenges facing their company against the short-term shareholder return pressures of investors. This struggle has grown in intensity as the bull market of the past five years has rewarded those short-term investors who primarily trade stocks aggressively attempting to capture quick changes in share prices due to shifting perceptions about industry trends and/or corporate developments. The minimal cost to trade securities and the development of sophisticated derivatives and trading strategies has contributed to the increased short-term volatility and focus of investors. But a major problem is that Wall Street tends to more generously reward companies that take actions that benefit short-term shareholders, often at the expense of long-term shareholders and potentially the sustainability of the enterprise. How best to balance these often conflicting views is the responsibility of the CEO and his board of directors.

The issue of cash on company balance sheets may be of greater importance in today's environment that is marked by an uncertain economic outlook than at other recent times

In an article in the November issue of *CFO* magazine, the issue of the impact of cash on balance sheets of companies was examined from the viewpoint of actions that can help or hurt the share price. The issue of cash on company balance sheets may be of greater importance in today's environment that is marked by an uncertain economic outlook than at other recent times. Significant cash balances can be insurance to help a company survive an economic downturn and provide the financial firepower to undertake acquisitions or make capital investments that enhance the company's size and strength heading into the next upturn. But from Wall Street's perspective, a balance sheet loaded with cash is usually perceived as hurting the near-term financial performance of the company. Therefore, what was once considered a strong balance sheet is increasingly being viewed as a lazy balance sheet – one that under-exploits a company's assets either by holding too much cash earning low rates of return or by having too little debt.

If one assumes that a company will generate after-tax returns on its cash balances of three to four percent, and that investors can earn market-average annual returns for stock index funds of 10%, then the cash maintained on a balance sheet represents about a six to seven percent in foregone opportunity cost. This opportunity cost is a strong motivator for short-term investors to push company CEOs to get rid of that cash in some manner that will benefit the shareholders. Their argument is akin to that made for companies to remain pure plays rather than diversifying – we'll do the diversifying by purchasing other stocks in our portfolio.

According to BCG, today, companies with large cash balances risk being penalized by Wall Street rather than being rewarded

The Boston Consulting Group (BCG), in the article about Value Creators, writes about this cash balance dilemma. "That opportunity cost has a negative impact on annual TSR (total shareholder returns) of one to two percentage points, on average, which over 10 years is equivalent to the difference between top-quartile and average performance." According to BCG, today, companies with large cash balances risk being penalized by Wall Street rather than being rewarded. In the current unsettled economic environment, companies are reluctant to draw down on their cash balances. Because investors have the power to penalize companies, they can also demand that managements return the cash to shareholders – primarily through stock buybacks. If management is not prepared to satisfy Wall Street, it is well known that either private equity or activist shareholders are more than happy to pressure the managements.

BCG finds that there are three principle drivers for creating total shareholder returns (TSR)

BCG completed an analysis of companies they called "value creators." These are companies that have performed well in driving shareholder value. BCG finds that there are three principle drivers for creating total shareholder returns (TSR). The three factors are: fundamental value, or growth in EBITDA; valuation multiple, or the EBITDA multiple; and the free-cash-flow yield. To demonstrate which companies have done a good job in creating TSR over the five-year period from December 2001 to December 2006, BCG analyzed the returns of the top quartile of companies in the S&P 500 index excluding financial service companies. Cognizant Technology Solutions (CTSH-NASDAQ) was the top performing company with a TSR of 62% during that period. The bottom company in the top quartile was Limited Brands (LTD-NYSE) with only an 18% TSR. The average TSR-return for the quartile was 28%.

There were 99 companies in the top quartile of which 21 were energy companies. These companies included exploration and production, oilfield service, coal, refiners and petroleum marketers. The best performing energy company was XTO Energy (XTO-NYSE) with a 45% TSR, while the worst performer was Transocean (RIG-NYSE) with only a 19% TSR. Only nine of the 21 energy companies generated TSRs above the 28% average TSR for the quartile. (See Exhibit 5 for data on energy companies.)

The TSR performance of the quartile reflects the robust economy and easy access to liquidity that has propelled investor returns since

Rising corporate profits and stock prices negatively impacted the opportunities available for corporate managers to foster continued growth

the dot.com bust in 1999-2000. Rising corporate profits and stock prices have in some ways negatively impacted the opportunities available for corporate managers to foster continued growth. These managers have been bidding against private equity groups for acquisitions within their industries and are finding that they cannot compete. This inability to compete on deals has partially contributed to the buildup of cash on corporate balance sheets.

Stock buybacks have not had a significant impact on share prices in the long-term

The easy alternative to satisfy the demands of short-term investors is stock buybacks. As the *CFO* article points out, through the end of last year, companies in the S&P 500 had bought back more than $100 billion in shares in each of the previous five quarters, nearly double what they were paying out in dividends. While this makes sense for companies with significant cash balances and strong cash flows and limited debt on their balance sheets, stock buybacks have not had a significant impact on share prices in the long-term. Stock buybacks tend to reward those shareholders who are and intend to be only short-term investors.

Revenue growth is the primary driver for value creation in the long-term

Balancing long-term versus short-term actions is a delicate task. In the long-term most CEOs focus on revenue generation and based on the research, this appears to be the correct priority. According to BCG, revenue growth is the primary driver for value creation in the long-term, but in the short-term, it is secondary to improvements in the company's valuation multiple. BCG points out that there are a small number of factors that explain 80% to 90% of the differences in valuation multiples among peers.

BCG has identified four categories of factors that impact valuation multiples. These categories are: revenue growth; profitability; risk; and 'fade,' BCG's term for investor confidence that current levels of corporate growth or profitability can be sustained. BCG believes that the importance of these categories will vary depending upon the companies and the industry they operate in. For example, high tech businesses such as computer software are associated with high revenue growth rates, while research and development expenditures are a more important measure for judging the long-term outlook for pharmaceutical companies.

The fade issue is clearly at work in the oilfield service industry as many investors are worried about the timing of new asset purchases and acquisition prices

The more important consideration across industry lines, according to BCG, is investor concern about the way company managements deploy cash. As investors worry about how this cash deployment is done, they have become more sensitive to any fade in revenue growth or profitability. The fade issue is clearly at work in the oilfield service industry as many investors are worried about the timing of new asset purchases and acquisition prices. When buying or building new, long-lived capital assets in the oilfield service business, the timing of the investment will impact the level of future returns for many years to come. Timing, as they say, is everything.

BCG further makes the point that there are four cash traps that managements need to avoid when trying to balance short-term investor expectations against long-term strategic investment goals.

The first trap is the lazy-balance sheet. Management must balance the amount of cash, debt and how they reward shareholders against

Exhibit 3. American Companies Boosting Cash Balances

CASH ON THE RISE

Cash and equivalents as a percentage of market capitalization for S&P 500 companies*

SECTOR	1997 MEDIAN (%)	2006 MEDIAN (%)
Materials	1.5	4.8
Consumer Discretionary	2.8	4.8
Consumer Staples	1.0	2.8
Health Care	4.4	6.9
Energy	1.1	3.8
Industrials	1.7	4.2
Information Technology	8.4	13.3
Telecommunication Services	0.6	4.1
Utilities	1.1	2.8
AVERAGE	2.5	5.3

Cash and equivalents as a percentage of total assets for S&P 500 companies*

SECTOR	1997 MEDIAN (%)	2006 MEDIAN (%)
Materials	1.9	6.3
Consumer Discretionary	4.6	6.3
Consumer Staples	1.9	5.3
Health Care	11.4	15.2
Energy	1.2	3.8
Industrials	2.2	4.4
Information Technology	26.1	28.6
Telecommunication Services	0.6	3.0
Utilities	0.6	1.5
AVERAGE	5.6	8.3

*Excl. financial institutions and companies with large financing subsidiaries.
Source: S&P's Compustat, The Boston Consulting Group

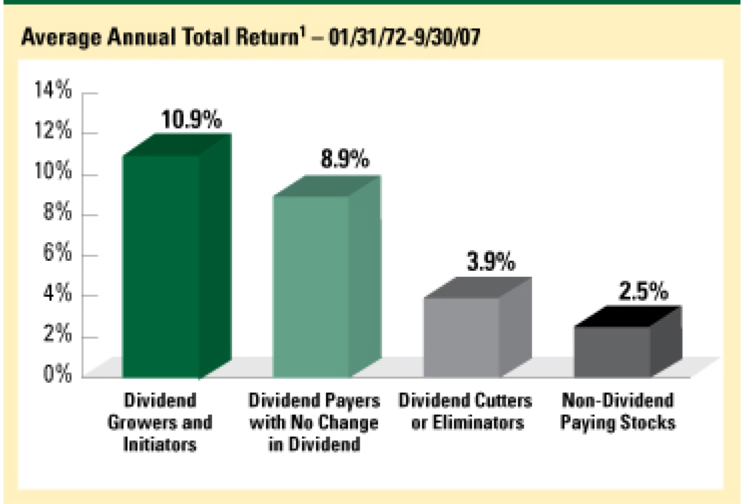
Source: BCG, CFO magazine

the need to sustain and eventually grow the earnings power of the corporation. The second trap is reinvestment. Management must be careful not to misallocate resources across its various business lines – giving money to all units equally when there are differing growth rates, or giving too much capital to poorly performing businesses. The third trap is M&A. Deals that are immediately accretive must be scrutinized for their impact on the company's long-term organic growth rate and whether they will dilute the valuation multiple investors are currently rewarding companies. The final cash trap is the stock buyback. BCG believes that buybacks do not change investors' estimates for long-term earnings per share growth or induce them to reward a company with a higher valuation

Deals that are immediately accretive must be scrutinized for their impact on the company's long-term organic growth rate and whether it will dilute the valuation multiple investors are currently rewarding the company

multiple. It believes that dividend payers are awarded better valuation multiples in the long term than are stock-buyback companies.

Exhibit 4. Dividends Are A Significant Factor In Returns



Source: Ned Davis Research

The greatest returns over the past 35 years have come from owning portfolios of stocks that have been increasing or initiated dividends

Over the past 50 years, the average annual return from investing in the S&P 500 has been 10.51%. Approximately 40% of that return is attributed to dividends, which demonstrates their long-term importance to investors. When the stock market is segmented slightly differently, as shown in Exhibit 4, it turns out that the greatest returns over the past 35 years have come from owning portfolios of stocks that have been increasing or initiated dividends. The performance data shows that if one had invested $100,000 in these categories 35 years ago, the non-dividend paying stock portfolio would have grown to $240,000. On the other hand, the portfolio of steady dividend paying stocks would have increased in value to $3,223,000, while the dividend growers and initiators portfolio would have soared to $4,059,000.

What to do about these balances is clearly management's greatest challenge

As the oilfield service industry prepares to head into 2008, many analysts and investors believe the industry's outlook is becoming increasingly more uncertain. Others believe that the future is extremely bright and will remain so well into the next decade. While the future outlook is unclear, the present health of the industry is strong and most companies are building cash balances. What to do about these balances is clearly management's greatest challenge. We have long been a believer that cash dividends are the most appropriate way to reward shareholders, and over the long-term they clearly have demonstrated that belief. Based on the very uncertain outlook for next year, we would argue that having significant cash balances is not the worst position for an oilfield service company to be in today and heading into 2008. By then maybe our crystal ball will become clearer.

Exhibit 5. Energy Companies Producing Strong Shareholder Returns

Company	TSR[1] (%)	Sales Growth (%)	Margin Change (%)	Multiple Change[3] (%)	Dividend Yield (%)	Share Change (%)	Net Debt Change (%)	2006 Revenue ($mill)
		TSR DECOMPOSITION[2]						
XTO Energy	45%	40%	1%	4%	2%	(6)%	3%	$4,578
Peabody Energy	43	21	5	14	1	(5)	6	5,256
Valero Energy	41	43	7	(15)	1	(7)	11	91,051
Halliburton	39	12	10	12	2	(3)	5	22,504
Chesapeake Energy	36	50	(2)	0	1	(18)	5	7,326
Occidental Petroleum	33	5	18	(0)	3	(2)	10	17,661
Sunoco	30	24	(7)	3	3	4	3	36,002
Devon Energy	29	28	14	(17)	1	(11)	14	10,578
Marathon Oil	29	16	3	1	4	(2)	8	59,917
EOG Resource	27	19	1	5	0	(1)	3	3,899
Smith International	25	16	6	1	0	(0)	3	7,334
National Oilwell Varco	24	32	9	(6)	0	(14)	3	7,026
Apache	24	24	(2)	0	1	(3)	4	8,074
Consol Energy	24	9	7	4	3	(3)	4	3,586
ConocoPhillips	22	47	(2)	(15)	3	(14)	3	167,578
Sempra Energy	22	8	1	6	4	(5)	7	11,761
Murphy Oil	21	26	(11)	3	2	(1)	2	14,248
Hess	21	16	(1)	(3)	2	(3)	11	28,067
Schlumberger	20	7	12	(3)	1	(0)	3	19,230
Ashland	19	(1)	(4)	(9)	11	1	22	7,246
Transocean	19	7	1	6	0	2	4	3,882
Energy Company Avg.	**28%**	**21%**	**3%**	**(0)%**	**2%**	**(4)%**	**6%**	**N/A**
S&P 500 Top Quartile Avg.	**28%**	**17%**	**6%**	**1%**	**2%**	**(2)%**	**4%**	**N/A**

Notes: *Excludes financial institutions [1] Average annual shareholder return, 12/01-12/06

[2] Contribution of each factor is shown in percentage points of five-year average annual TSR [3] Change in EBITDA multiple

Source: BCG, *CFO* magazine, PPHB

Capex Survey Foresees Robust 2008 Oilfield Market

Industry spending will be dominated by international expenditures, up 16%, while domestic spending will increase only about 3.5%

Lehman Brothers released its annual survey of oil and gas company capital expenditure spending for 2008 last week that showed that the most recent industry spending trends seem likely to be sustained. The overall spending increase projected, based on the 344 companies surveyed, suggests an 11% increase for 2008 over 2007's expected capital expenditure total. Once again, industry spending will be dominated by international expenditures, up 16%, while domestic spending will increase only about 3.5%. Canada, for the second year in a row, is projected to experience a spending decline, with 2008's drop estimated to be about 12%.

Exhibit 6. Lehman Spending Survey Is Bullish for Activity

	2008E	2007E	Year-toYear % Change	Companies Surveyed
U.S. Spending	81,238	78,485	3.5%	252
Canadian Spending	20,331	23,207	-12.4%	72
International Spending	267,452	230,235	16.2%	100
Worldwide Spending	$369,022	$331,926	11.2%	344

Source: Lehman Bros., PPHB

The results of the survey showed that the expected increase or decrease in 2007 exploration and production expenditures over 2006 has not changed appreciably from the June survey results for international spending. The decline was lowered somewhat for Canada with final spending projected to be down only 9.8% rather than the June estimate of an 11% fall. U.S. spending will wind up rising by 7.4% in 2007, better than the 4.8% increase projected at mid-year.

Exhibit 7. 2007 Spending Pattern Remains Consistent

	December 2006 Survey	June 2007 Survey	December 2007 Survey
U.S. Spending	5.1%	4.8%	7.4%
Canadian Spending	-7.5%	-11.0%	-9.8%
International Spending	12.7%	21.1%	20.8%
Worldwide Spending	8.9%	12.8%	14.3%

Source: Lehman Bros., PPHB

According to the 2008 survey, total oil and gas company capital spending will total about $369 billion. As usual, in the report issued by Lehman's oil service analyst team headed by Jim Crandall, there were a handful of nuggets of information. For example, in its analysis of Latin American oil and gas capital spending, Mexico's PEMEX is projecting to boost its spending by 23%, followed by PdVSA of Venezuela, which will rise by about 19%. Interestingly, Brazil's Petrobras (PZE-NYSE) is forecasting only about an 8% increase, which is the smallest increase in the region. In absolute dollars, however, Petrobras slips from first to second if PEMEX follows through with its projected spending hike. Based on market intelligence – the number of new drilling rig contracts and vessel contracts – it appears that PEMEX is well on its way to hiking its spending to meet its projected increase.

Mexico's PEMEX is projecting to boost its spending by 23%, followed by PdVSA of Venezuela, which will rise by about 19%

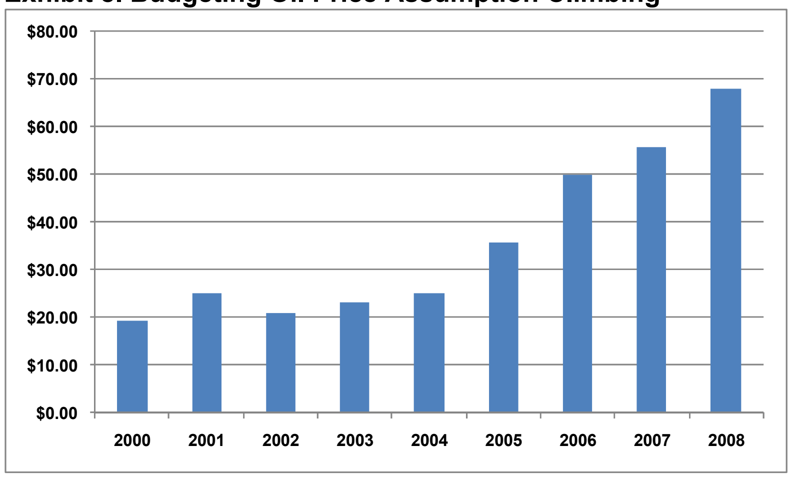
The exploration and development focus of the Supermajors does not appear to be shifting. It remains targeted on international market opportunities. The survey shows that the six super major oil company group comprised of BP (BP-NYSE), Chevron (CVX-NYSE), ConocoPhillips (COP-NYSE), ExxonMobil (XOM-NYSE), Royal Dutch/Shell (RDS.B-NYSE) and Total (TOT-NYSE) should be increasing its international spending by 16%, on average, in 2008, with the range of individual increases between 11% and 25%. On the other hand, the large European-based oil companies will hike their spending by only 9%. This international focus is also drawing increased funds from the larger North American independents. The survey shows that this group of six companies will increase their international budgets by 37%, a roughly $2.7 billion increase over 2007 spending.

For Canadian service companies, the actual spending decline may be appreciably worse

While the spending survey shows that Canadian capital expenditures will fall by 12.4%, the strength of the Canadian dollar relative to the U.S. dollar minimizes the magnitude of the spending fall. This means that for our Canadian service company friends, the actual spending decline may be appreciably worse than shown by the Lehman spending survey results.

Another very interesting table Lehman presented was one showing the trend in the average oil price assumption that underlies company exploration and production budgets since 2000. The table showed a steady rise in the average oil price from slightly over $19 a barrel in 2000 to almost $68 for 2008. While the magnitude of the increase in the annual average oil price is slightly less than the rise between 2006 and 2005, which was $14 per barrel, this year's increase of over $12 per barrel was healthy. The incredible rise in global oil prices over the past few years is finally being embraced by oil company executives.

Exhibit 8. Budgeting Oil Price Assumption Climbing



Source: Lehman Bros., PPHB

As managements begin to fully embrace the era of high oil prices, we always worry about the Black Swan event that sends prices sharply lower and undercuts those beliefs

This acceptance of the era of high oil prices was further reinforced by comments from Anton Mubarak, chief executive officer of oil and gas consulting and services firm, Energy Projects Development Ltd. in the U.K. He stated recently that oil companies are basing investment decisions on the basis of $55 per barrel prices being sustained rather than the $25 per barrel estimates of a few years ago. As managements begin to fully embrace the era of high oil prices, we always worry about the Black Swan event that sends prices sharply lower and undercuts those beliefs. If, and when, that happens, the natural reaction of managements will be not only to pull back on current year spending, but also to throw all future capital spending projects into neutral except for those development projects with such long lead-times that they need to be completed in order to have any value. Just as the 1998 collapse in global oil prices set back the industry's recovery from the 1980s and 1990s by a few years, the same situation could happen again.

2007 Hurricane Season: Another Sub-par Storm Year

The 2007 hurricane season, which officially ended November 30, experienced 14 named tropical storms or hurricanes, slightly below the original forecasts of most forecasters. The early forecasts called for a season of above-average storm activity, as all the weather conditions appeared present to spur storm formations. As the 2007 hurricane season developed, some of the favorable conditions changed, which contributed to repeated reduction in the forecasted number of storms.

The total of 14 named tropical storms, while slightly below the early forecasted number, was generally on target with some of the better known forecasters

This year's season ended with a total of eight named tropical storms or depressions and six storms designated as hurricanes. One of the hurricanes was officially upgraded from a tropical storm following a review of the storm's technical data. Of the six hurricanes, two were Category 5, the most intense storms categorized, and four were Category 1. These totals, while slightly below the early forecasts, were generally on target with some of the better known forecasters such as Accuweather.com's Joe Bastardi's May forecast that called for 13-14 total storms, three or more Category 3 or stronger storms and six to seven that would hit the U.S. coastline. The Colorado State University (CSU) forecasting team of Phil Klotzbach and Bill Gray were really on target with their December 2006 forecast of 14 storms, seven hurricanes and three of Category 3 or greater. In the spring they upped their forecast numbers to 17, nine and five, respectively, that later turned out to be too high.

The six hurricanes were spot on the long-term average of 5.9 hurricanes

The 14 tropical storms in 2007 made it 12 of 13 years since 1995 when there have been greater than the long-term average (1950-2000) of 10 storms a year. The six hurricanes were spot on the long-term annual average of 5.9 hurricanes. With only two intense hurricanes, this marked the most recent year with fewer than two storms since 1997. The eight storms formed in September tied the record for that month with 2002. The 14 storms generated 33.5 storm days, or 2.4 days per storm, the lowest ratio since 1977 (2.3).

There was little disruption of Gulf of Mexico drilling and production activity, which has led to increased production

The good news for the United States and the offshore oil and gas industry was that the two major hurricanes of this season stayed significantly south, landing in Mexico and Central America. As a result of this year's storm pattern, there was little disruption of Gulf of Mexico drilling and production activity, which has led to increased production. A total of four storms landed on the U.S. coast, but the estimate of insured damage from these storms was $25 million.

The impact of hurricanes on offshore oil and gas production from 1960 through 2005 shows that an average hurricane season disrupts only 1.4% of annual Gulf of Mexico oil production and 1.3% of natural gas production

The more important fact is that the repair work on offshore oil and gas production facilities damaged by 2005's hurricanes Katrina and Rita is rapidly coming to a conclusion, although some work remains ongoing. The improved offshore structures and better engineering of facilities and planning for dealing with storms is reducing the potential impact to offshore operations from tropical storms and hurricanes. According to HIS (HIS-NYSE), an industry data source, the impact of hurricanes on offshore oil and gas production from 1960 through 2005 shows that an average hurricane season disrupts only 1.4% of annual Gulf of Mexico oil production and 1.3% of natural gas production. The time period analyzed by IHS includes the two 2005 hurricanes and four other major hurricanes: Hurricane

Exhibit 9. 2007 Hurricane Season Was Quiet

Name	Date	Category	Peak Sustained Winds (kts)
Andrea	5/9 - 5/10	TS	40
Barry	6/1 - 6/2	TS	45
Chantel	7/30 - 7/31	TS	45
Dean	8/13 - 8/23	H - Cat 5	145
Erin	8/14 - 8/16	TS	35
Felix	8/31 - 9/5	H - Cat 5	145
Gabrielle	9/7 - 9/11	TS	45
Humberto	9/12 -9/13	H - Cat 1	75
Ingrid	9/12 - 9/17	TS	40
Jerry	9/23 - 9/24	TS	35
Karen	9/24 - 9/29	H - Cat 1	65
Lorenzo	9/25 - 9/28	H - Cat 1	70
Melissa	9/28 - 9/30	TS	40
Noel	10/27 - 11/2	H - Cat 1	70

Source: Accuweather.com, CSU, PPHB

Opal (1995); Hurricane George (1998); Hurricane Lili (2002); and Hurricane Ivan (2004).

Exhibit 10. 2007 Hurricanes Rarely Touched the U.S.

Source: Accuweather.com

CSU has unveiled its preliminary forecast for hurricane activity and the probability of U.S. landfall of tropical storms in 2008. The forecast foresees a likelihood of an above-average Atlantic basin tropical storm season in 2008 and it anticipates an above-average probability of U.S. major hurricane landfall. This outlook continues the trend first identified in 2005.

Professors Klotzbach and Gray based their December forecast on a new methodology that utilizes three predictors. They are very excited about this new methodology since it has demonstrated a better hindcast performance over the past 58-year period (1950-2007) than their old method, which was little better than a climatology-based forecast. The new forecasting methodology has also demonstrated a better hindcast skill over the last 16-year period when the real-time December forecast (the older forecasting technique) has not.

The CSU forecast for 2008 calls for 13 named storms compared to the average over the last century of 9.6

The CSU forecast for 2008 calls for 13 named storms compared to the average over the last century of 9.6. Of these storms, seven will be hurricanes (5.9) and three will be intense hurricanes of Category of 3-4-5 (2.3). These storms should generate 60 named storm days (49.1); 30 hurricane days (24.5) and six intense hurricane days (5), respectively. While this forecast looks much like last year's, the potentially more important aspect of the forecast is its probability of U.S. landfall.

The probability of at least one major (Category 3-4-5) hurricane making landfall on U.S. coastal areas is:

Entire U.S. coastline: 60% (52% average last century)
U.S. East Coast including Florida peninsula: 37% (31%)
Gulf Coast - Florida panhandle to Brownsville: 36% (30%)
Above-average landfall risk in the Caribbean

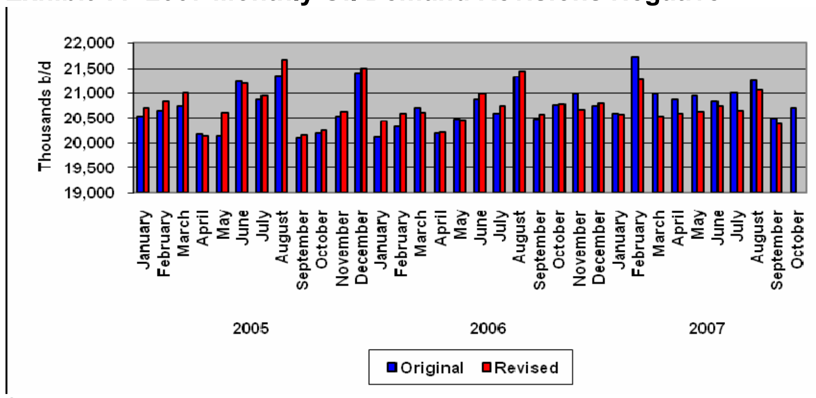
One wonders whether, after the devastation caused by hurricanes Katrina and Rita in 2005, which has been linked by the media and various climate scientists to global warming, the fact that the past two hurricane seasons have been below the heavy storm activity forecasted suggests the linkage of these two trends is not as strong as originally thought? Based on the CSU preliminary forecast for 2008, it would appear not. It will be interesting to see how the CSU forecast may change by spring of next year, as it did last year, and what the other leading forecasting services project. In the meantime, while the hurricane season is over, the legislative battle over global warming policy changes will continue.

U.S. Monthly Oil Demand Revised Lower

This was the fourth consecutive month of a reduced demand estimate

We recently noticed an observation by a Peak Oil analyst that the U.S. Energy Information Administration (EIA) had recently revised down the latest monthly oil demand estimate published in the Monthly Energy Report. The point he was making was that this was the fourth consecutive month of a reduced demand estimate. We decided to examine the pattern of final revisions to the monthly oil demand figures to see if there was a consistent pattern.

Exhibit 11. 2007 Monthly Oil Demand Revisions Negative



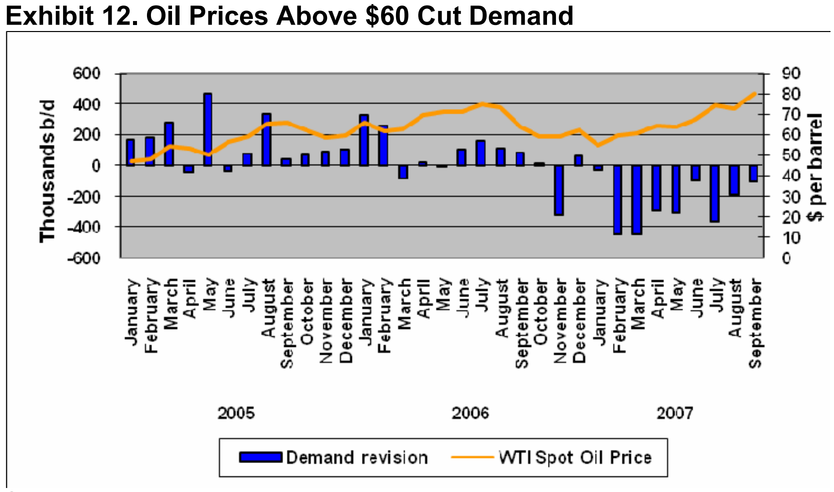
Source: EIA, PPHB

The evidence seems to be growing that oil prices above $60 per barrel are having an impact on demand

When we looked at the pattern of monthly revisions, we found it very interesting that it was almost always a positive revision to the preliminary estimate during 2005 and 2006, but so far this year, the demand revisions have been negative. Moreover, with but a few exceptions during 2005 and very early in 2006, the monthly adjustments were minor compared to almost all of the 2007 revisions having been large.

When these monthly revisions are plotted against crude oil prices, there is a very interesting pattern. As crude oil prices climbed above $60 per barrel in 2006, the monthly changes, although positive, became quite small and then the pattern turned negative as 2006 turned into 2007. As crude oil prices climbed steadily higher during 2007, the size of the monthly demand revisions grew and only recently became less significant. While it is still too early to be formalizing a position, the evidence seems to be growing that oil prices above $60 per barrel are having an impact on demand. This relationship is certainly one that needs to be monitored.

Exhibit 12. Oil Prices Above $60 Cut Demand



Source: EIA, PPHB

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