MUSINGS FROM THE OIL PATCH
October 14, 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

Remaking Capital Markets: The Meaning for Energy

After seven days of wrangling, a week ago last Friday, Congress finally passed a $700 billion ($850 billion with earmarks) bill designed to restore confidence in U.S. credit markets by easing the pressure on financial institution balance sheets from bad real estate loans and other incorrectly valued assets tied to these loans. Even though time has passed since that tumultuous week, the credit market jitters have not stopped, and in fact the U.S. credit market pressures have spread globally, in particular to Europe. We have marveled at the speed with which supposedly sound financial institutions can become bankruptcy fodder. Equally amazing is the fact that the entire banking system and economy of Iceland could fail virtually overnight. Given all of this turmoil, we think a quick review of the events and their impact on financial markets is in order to begin to understand where U.S. capital markets are headed and what the impact on energy markets and energy companies may be.

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In the weeks leading up to the first announcement of a plan, however sketchy the plan was for bailing out the U.S. financial system, the toxic nature of the bad mortgage loans and their derivative financial paper was rapidly eroding the balance sheets of banks, insurance companies and investment banks. As financial institution asset bases melted away, all sorts of credit default measures were being triggered, forcing other financial counterparties to take a hands-off attitude with respect to dealing with the tainted institutions. As a result of the problems, two conditions developed – an illiquid market for these loans and a fear of doing business with other financial institutions. While both conditions are interrelated, the lack of trust issue is critical for the successful functioning of the financial industry. As the lack of trust

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spread and these attitudes hardened, weak financial institutions were forced to the wall and either had to find a willing buyer or an investor willing to help them sustain their capital base, or they were forced into bankruptcy.

The three-page plan had morphed into a 110-page bill, more than half of which was dedicated to definitions, mandates for studies and reports and other administrative steps

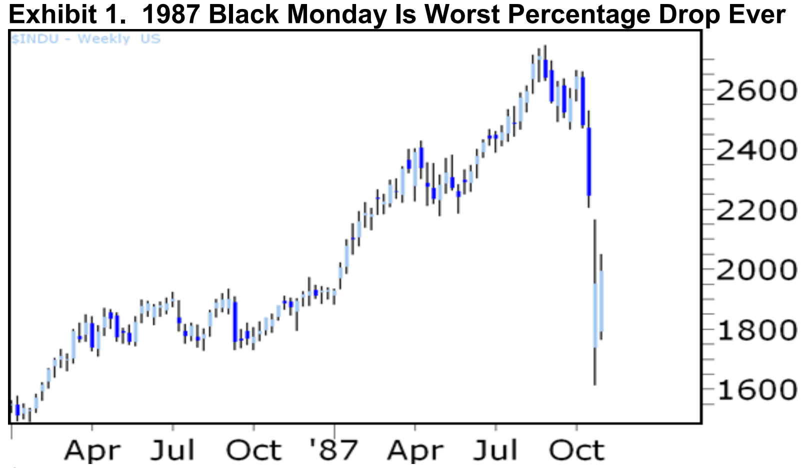
As U.S. capital markets were crumbling and commercial and consumer lending was coming to a screeching halt, the government unveiled its initial bailout plan – a three page outline of actions to be taken. The plan eventually went through two iterations before becoming law. To help understand what has been going on in the capital markets, we should consider the impact of the congressional rejection of the initial bailout bill. The three-page plan morphed into a 110-page bill, more than half of which was dedicated to definitions, mandates for studies and reports and other administrative steps. The guts of the plan were essentially the skeleton of the rescue plan outlined in the three-page document Treasury Secretary Henry Paulson had unveiled a few days earlier. Without specifics, oversight and fearing a possible bait-and-switch situation, the bill was rejected. Immediately the stock market collapsed with the Dow Jones Index falling a record 777 points.

As spectacular as that Dow drop was, it did not mark the most significant percentage decline ever for the index. That record is held by the market collapse that occurred in 1987, on what is known as Black Monday (October 19), when the Dow fell by 508 points. Exhibit 1 shows a chart of the price action of the Dow for 1986 and 1987 leading up to Black Monday and the day after.

The volatility of the past week has added two new substantial market correction days

While the 777-point drop exceeded the Black Monday numeric collapse, as shown in Exhibit 2 there have been a number of days with huge market corrections measured by Dow points. The volatility of the past week has added two new substantial market correction days – one of 508 points and another of 679. On the other hand, if one considers the relative significance of all these large market declines, Black Monday was much greater – reflecting a market decline of over 22%.

Exhibit 1. 1987 Black Monday Is Worst Percentage Drop Ever



Source: Plexus Asset Management

Exhibit 2. Largest Market Declines By Points

Dow Jones Industrial Average: Largest Points Declines				
Rank	Date	Index	Points	%
1	9/29/2008	10365.45	-777.68	-6.98%
2	9/17/2001	8920.70	-684.81	-7.13%
3	9/10/2008	8579.19	-678.91	-7.30%
4	4/14/2000	10305.78	-617.77	-5.66%
5	10/27/1997	7161.14	-554.26	-7.18%
6	8/31/1998	7539.06	-512.62	-6.37%
7	10/7/2008	9447.11	-508.39	-5.10%
8	10/19/1987	1738.74	-508.00	-22.61%
9	9/15/2008	10917.51	-504.48	-4.42%
10	9/17/2008	10609.66	-449.36	-4.06%

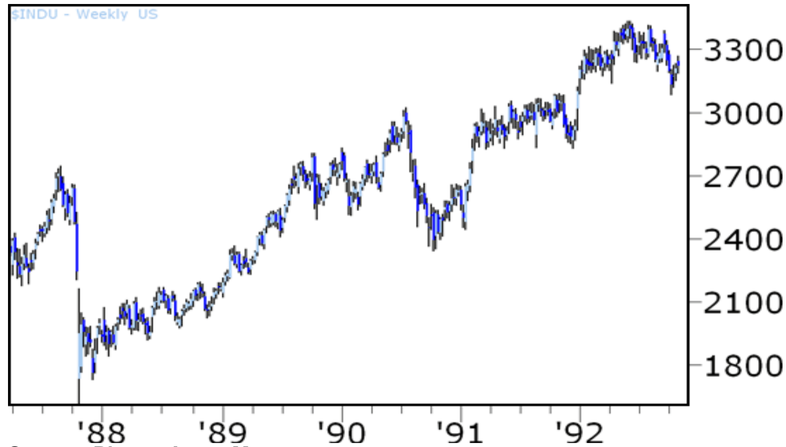
Source: Plexus Asset Management, PPHB

Exhibit 3. Largest Market Percentage Declines

Dow Jones Industrial Average: Largest Percentage Declines				
Rank	Date	Index	Points	%
1	10/19/1987	1738.74	-508.00	-22.61%
2	12/14/1914	56.76	-14.66	-20.53%
3	10/28/1929	260.64	-40.58	-13.47%
4	12/18/1899	58.27	-7.94	-11.99%
5	10/29/1929	230.07	-30.57	-11.73%
6	10/5/1931	86.48	-10.40	-10.73%
7	11/6/1929	232.13	-25.55	-9.92%
8	8/12/1932	63.11	-5.79	-8.40%
9	3/14/1907	76.23	-6.89	-8.29%
10	1/4/1932	71.59	-6.31	-8.10%
11	10/26/1987	1793.93	-156.83	-8.04%
12	6/16/1930	230.05	-19.64	-7.87%
13	7/21/1933	88.71	-7.55	-7.84%
14	10/9/2008	8579.19	-678.91	-7.30%
15	2/1/1917	88.52	-6.91	-7.24%
16	10/18/1937	125.73	-9.75	-7.20%
17	10/27/1997	7161.14	-554.26	-7.18%
18	10/5/1932	66.07	-5.09	-7.15%
19	9/17/2001	8920.70	-684.81	-7.13%
20	9/24/1931	107.79	-8.20	-7.07%
21	7/20/1933	96.26	-7.32	-7.07%
22	9/29/2008	10365.45	-777.68	-6.98%

Source: Plexus Asset Management, PPHB

Exhibit 4. Market Needs Two Years To Recover 1987 Loss



Source: Plexus Asset Management

We found a table showing the price performance of the Dow stocks for last week and the 1987 market crash week. The table also

Exhibit 5. Energy Stocks Suffer Greater Declines Than In 1987

Dow Members This Week vs '87 Crash Week

Stock	Company	Price	One-Week % Chg This Week	% Chg in Week of '87 Crash	% Chg Since '87 Crash
GM	General Motors Corp	4.89	-45.67	-12.88	-76.25
AA	Alcoa Inc	11.25	-41.53	-34.60	111.76
BAC	Bank of America Corp	20.87	-39.47	-17.34	373.64
CVX	Chevron Corp	57.83	-27.15	-13.89	460.78
AXP	American Express Co	23.15	-25.01	-14.34	302.56
C	Citigroup Inc	14.11	-23.11	-21.74	712.18
BA	Boeing Co	41.80	-22.35	-9.45	388.57
DIS	Walt Disney Co/The	23.04	-22.00	-21.39	509.14
KO	Coca-Cola Co/The	41.50	-21.06	-1.85	988.52
PFE	Pfizer Inc	15.14	-20.32	-13.93	641.54
T	AT&T Inc	22.42	-20.27	1.94	196.46
XOM	Exxon Mobil Corp	62.36	-19.99	2.57	644.60
MSFT	Microsoft Corp	21.50	-18.31	-25.48	6742.78
MRK	Merck & Co Inc/NJ	26.23	-17.46	-11.41	211.78
HD	Home Depot Inc	19.75	-17.05	-25.00	3770.27
PG	Procter & Gamble Co	59.56	-16.14	-3.53	1464.73
MMM	3M Co	54.26	-16.01	-14.95	333.74
CAT	Caterpillar Inc	43.13	-15.78	-25.68	579.88
JNJ	Johnson & Johnson	55.85	-15.58	-6.96	1285.41
IBM	IBM	87.75	-15.17	-10.56	237.50
WMT	Wal-Mart Stores Inc	50.95	-14.70	-6.90	1430.90
VZ	Verizon Communications	26.77	-14.31	1.87	84.50
HPQ	Hewlett-Packard Co	37.00	-13.95	-24.69	696.42
DD	EI Du Pont de Nemours	33.40	-13.92	-10.66	148.94
UTX	United Technologies Corp	47.63	-13.18	-24.68	829.37
INTC	Intel Corp	15.19	-12.25	-36.06	1636.00
MCD	McDonald's Corp	53.35	-11.42	4.01	1073.33
JPM	JPMorgan Chase & Co	41.64	-9.28	-22.81	385.13
GE	General Electric Co	21.50	-0.32	-8.13	516.12

Performed Better This Week Than '87 Crash Week.

Performed Worst This Week Than '87 Crash Week.

Source: Bespoke Investment Group

shows the price performance since that 1987 crash. According to the data, Chevron Corp. (CVX-NYSE) was the fourth worst performing stock last week and essentially doubled its decline compared to 1987. Exxon Mobil Corp. (XOM-NYSE) was the 12th worst stock compared to being the second best stock in 1987 with a positive price performance. Maybe more interesting is to note that Chevron outperformed 12 stocks over the next 21 years while Exxon did better than 17 stocks. These are good performances, but certainly not outstanding.

For all of 1987, the Dow closed up, a fact often lost on market analysts

Possibly more important for investors is to consider what happened to the stock market over the course of 1987, even with the Black Monday correction. For all of 1987, the Dow closed up, a fact often lost on market analysts. However, it took essentially two years to earn back the market value lost in the Black Monday drop. On the day of our recent 777 point drop, according to market analysts, at least one trillion dollars (ouch – some of that was mine) of stock market value vanished. Stock market historians will be totaling up the damage done from this volatility for some time to come, just as they are trying to quantify how great the cost will be for financial institutions to manage their way out of this mortgage loan crisis.

Since the market peak in October 2007, some $25.9 trillion has been lost, about a 41% decline

When we consider how much market value has been lost, the Bloomberg World Market Capitalization shows that since the market peak in October 2007, some $25.9 trillion has been lost, about a 41% decline. The stock market decline has been centered in the U.S. that has lost almost $7 trillion. One question is whether the world decline has further to go and that the U.S. stock market was merely the first to correct, or whether all stock markets have further to fall?

Exhibit 6. World Markets Have Been Hammered

Source: Bespoke Investment Group

Exhibit 7. $26 Trillion In Global Market Losses

Market Cap* Losses From 10/31/07 Peak

Country	Loss Since World Market Cap Peaked on 10/31/07
US	$6,948,192,505,420
China	$1,765,572,720,000
UK	$1,717,109,258,980
Japan	$1,541,112,432,050
Hong Kong	$1,466,095,000,000
France	$1,313,740,515,880
Germany	$937,304,857,840
Canada	$767,878,449,230
Brazil	$745,596,332,200
World Equity Markets	**$25,924,624,000,000**

*From Bloomberg World Market Cap Data

Source: Bespoke Investment Group

To further understand the global nature of the credit crisis and its impact on world stock markets, the series of charts below show how badly various stock indices in Asia and Europe have performed this year and how they are being valued currently.

Exhibit 8. Asia and Europe Markets Are Beaten Up

Brutal Showing

How some key Asian stock-market indicators have fared:

Index	2008E P/E	Div Yld	2008 Decline
DJ Asian Titans	8.6	3.5%	42%
Nikkei 225	11.0	2.62	46
Hang Seng	9.8	4.69	47
Bombay Sensex 30	10.7	1.81	48
S&P/ASX 220	8.8	6.24	38

Sources: Dow Jones; Bloomberg

Old World Blues

European stock markets have been devastated this year.

Index	2008E P/E	Div Yld	2008 Decline
DJ Stoxx 600	7.8	5.9%	44%
DAX 30	8.2	5.4	44
London FTSE 100	6.9	6.5	39
Paris CAC 40	7.1	5.6	43
Swiss Market Index	13.8	3.3	37

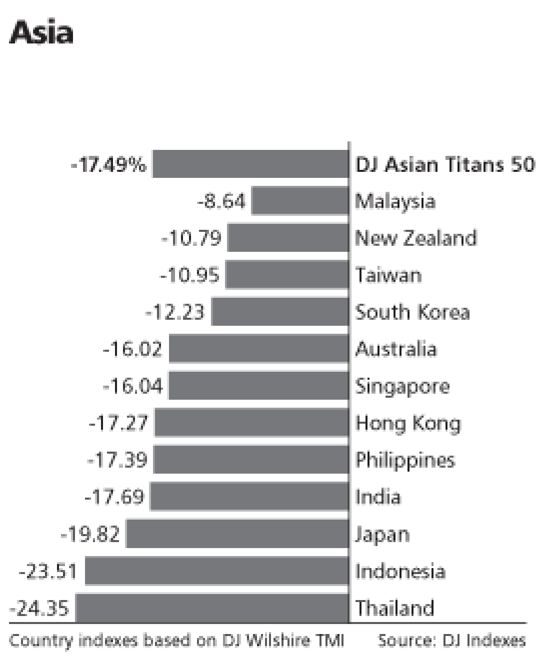
E=Estimate. Sources: Dow Jones; Bloomberg

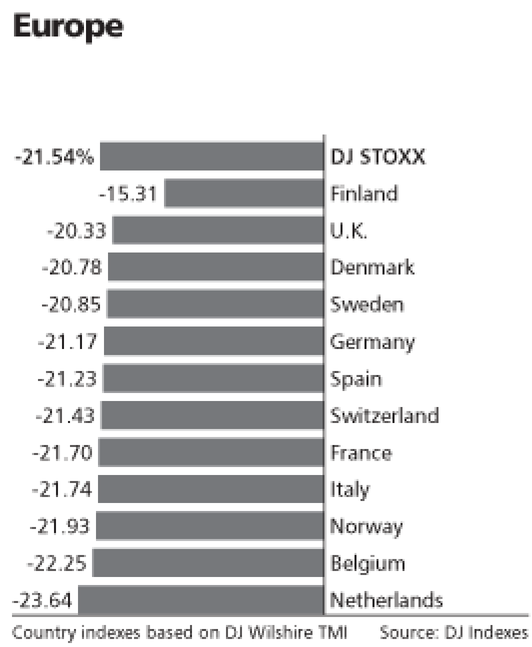
Source: ***Barron's***

For the DJ Stoxx Index to get back to its high set in 2000, the stocks would have to rise by 10% a year until 2015

The charts below show how hard many countries' stock markets were impacted last week by credit market conditions. The *Barron's* writer discussing the European market pointed out that the yearly declines do not yet match the 2001-2003 contraction when most indices in that region fell by about 60%. He also pointed out that for the DJ Stoxx Index to get back to its high set in 2000, the stocks would have to rise by 10% a year until 2015.

Exhibit 9. No Place To Hide Last Week





Source: ***Barron's***

The dividend actions took $22.5 billion out of the pockets of investors

Another indication of how bad credit market conditions are and how they are impacting corporate America, Standard & Poor's reported on corporate dividend actions for the quarter ending September 30th. In their view, this was the worst September for dividends since they began tracking payouts in 1956. Their data showed that 60 companies cut or omitted their dividends in September versus only 10 a year earlier. For the quarter, 138 firms took such actions, up 557% from the 21 that did so last year. According to Howard Silverblatt, S&P's senior index analyst, the dividend actions took $22.5 billion out of the pockets of investors. Some two-thirds of the companies accounting for 93% of the dollar damage were financial institutions – certainly not a surprise. But as Mr. Silverblatt put it, in light of the current uncertainty about financial markets and the economy, any company that hikes its dividend "has to be extremely confident of their future earnings and cash flow."

The 2008 stock market decline, however, appears to be signaling a more significant structural change underway in the financial markets of the United States and globally

Black Monday in 1987 was considered a black swan event – never foreseen – so there has been no good explanation for what caused that drop other than the workings of computerized program trading that had recently emerged as a portfolio risk management tool. The 2008 stock market decline, however, appears to be signaling a more significant structural change underway in the financial markets of the United States and globally. The world's economies and financial markets will most likely never be the same again. We say that because of the unprecedented increased involvement in financial markets by governments. Government ownership in banks and financial institutions and mandates about how executives in these businesses will be paid will change their risk tolerance and ability to attract tier one executives. There is also a growing philosophical change toward the structure of our economy, and the upcoming election may cement that change. The credit crisis has discredited free markets and boosted the cry for greater government regulation, even though existing regulators failed over the past decade to utilize their enforcement powers.

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In response to the Dotcom market collapse at the turn of this century, New York Attorney General Elliott Spitzer attacked Wall Street and its greed and forced the brokerage industry to radically restructure its business model, an event that likely will be listed as a contributing cause of the credit crisis. Low interest rates and a booming stock market encouraged Wall Street to create financial products designed to generate commissions (income lost to Spitzer's changes) and that were not understood and/or mispriced with regards to risk. That helped to shift these institutions' income streams from historically known sources to unknown ones. In an era of such greed, commissions became paramount and risk ignored.

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The last major experience with major corporate failures was in 2002 when Enron and WorldCom, among others, went under. The outgrowth of those failures was the Sarbanes-Oxley legislation mandating improved corporate governance. Even with increased corporate transparency, we still find ourselves in the midst of the most significant restructuring of the American financial industry since the Great Depression. What new, additional regulations will be thrust onto corporate America remains to be seen, but there will be.

What is underway in both the U.S. and globally is a deleveraging of the financial system. In the United States, the deleveraging reflects the need to reverse what has been an extended time period when Americans consumed more than they could afford. They supported this spending spree by drawing on their savings. And when those savings no longer existed, the income shortfall was covered by borrowings. The U.S. consumer savings rate fell to zero, and in some periods the national savings rate was even calculated to be a negative percentage. The consumer spending spree was financed primarily from the equity accumulated in the value of consumers' homes, a virtual ATM. The equity build-up was the result of a decade of well-above trend-line growth in home prices fueled by federal government policies encouraging the expansion and liberalization of home lending. It was further helped by the Federal Reserve's low interest rate policy that helped to bring down long-term mortgage rates. Creative bankers also helped by designing loan programs that kept rates abnormally low for a period of time. These teaser rates would readjust down the road and the increased monthly mortgage payment would be serviced by either the borrower's income having increased or the sale of the house.

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American society has maintained a special characteristic that sets

The mandate of the CRA was expanded and even institutionalized in the 1990s under the Clinton Administration, and lending standards were weakened in a bold attempt to aggressively boost the percentage of Americans owning their own home

us apart from others, which is the encouragement of home ownership. Study after study reinforced the positive social and economic aspects of home ownership for families, and in particular the children in these families. Beginning in the 1970s as America continued to construct its Great Society social programs, the Community Reinvestment Act (CRA) institutionalized our goal of fostering increased home ownership. The mandate of the act was expanded and even institutionalized in the 1990s under the Clinton Administration, and lending standards were weakened in a bold attempt to aggressively boost the percentage of Americans owning their own home, but then again, why not? Interest rates had been low and the economy was growing and creating jobs, many of which were in the high tech sector that appeared to be high paying jobs. Home prices were rising steadily and real estate was a "no lose" proposition.

The casino known as the housing market was opened for business, but many people failed to understand the rules of the game or what the odds were. Getting into the casino was made easier as mortgages often did not require verification of the buyer's income; house appraisals were established to help make the loan qualification ratios work; loan payments were minimized through adjustable rates and even negative amortization loans; and "Flip This House" was among the most popular shows on television. The psychology was to get into the game as quickly as possible since everyone would then succeed like a "downhill bike rider."

The initial lenders' response was that the real estate woes were really localized – California, Florida and Las Vegas

In financial markets the casino mentality was aided by a Securities and Exchange Commission decision allowing banks and other financial institutions to maintain debt-to-capital ratios of 25: or 30:1, while regular banks were held by their regulators to much more strict ratios of about half of those measures. But then again, financial institutions appeared conservative because the underlying assets – principally home and commercial mortgages – were increasing in value seemingly daily. It was only when homebuilders started overbuilding select real estate markets was this financial institution leverage questioned. The initial lenders' response was that the real estate woes were really localized – California, Florida and Las Vegas. As most of the lenders stated, they had minimal exposure to these geographic markets and those at risk were the local lenders. However, as we soon found out, these bad mortgages had been packaged into securitized debt instruments that were used to back multiple derivative securities.

Investors and financial institutions began to question the value of these securities and thus were not interested in buying them

As the mortgages began to go bad (loan defaults leading to home foreclosures) these securitized loan packages rapidly became "toxic debt." Investors and financial institutions began to question the value of these securities and thus were not interested in buying them. Institutional holders soon found this paper was illiquid. This meant that in order to sell any of the paper, the institution had to accept a price substantially below the value assigned to the paper on its balance sheet. While that haircut would normally have been absorbed by the institution's loan loss reserve, we soon found out that much like mushrooms these securities pools had grown way beyond people's comprehension.

Since the entire financial sector was tied to "mark-to-market" accounting rules, every time an institution was forced to mark down its portfolio, then every other institution that held any of the paper associated with the underlying loan pool was forced to do likewise

Quickly it evolved into an environment where anytime an institution sold any of this paper it had to take a charge for the below-market value. Since the entire financial sector was tied to "mark-to-market" accounting rules, every time an institution was forced to mark down its portfolio, then every other institution that held any of the paper associated with the underlying loan pool was forced to do likewise. Because institutions often had no idea what was backing many of their securitized paper, they were often surprised to discover how rapidly their values were erased. Each markdown created a problem in that financial institution capital accounts were eroded even though they never sold any of the paper. As their capital was eroded, their leverage ratios increased meaning they either had to raise new capital or shed assets – both actions difficult to accomplish in a world where investors have no idea what anything is worth and are reluctant to buy by try to catch falling knives.

Capital had to be guarded and not making loans – even overnight commercial paper and interbank transactions – became the norm

The fixed income world was rapidly imploding and bankers and investors had no confidence in the value of assets on institutional balance sheets. This condition fueled a lack of confidence in buying other institutions' assets. As a result, capital had to be guarded and not making loans – even overnight commercial paper and interbank transactions – became the norm. As this condition spread from institution to institution, the credit markets in the U.S. began to freeze up. The lack of trust and willingness to do business between bankers spread to Europe and Asia. Slowly the global financial system ground toward a halt. It was the fear of a complete collapse of the global financial system that prompted the U.S. government and major European countries to act.

The realization of the possibility for a global collapse of the financial system caused investors to value cash over almost any asset – stocks, bonds, commodities or real estate

The realization of the possibility for a global collapse of the financial system caused investors to value cash over almost any asset – stocks, bonds, commodities or real estate. With the bond market in disarray, the stock and commodity markets soon followed suit. Residential real estate was already in its recession and the deteriorating health of the global economy is contributing to commercial real estate following suit. As prices of all asset classes fell (the opposite of what had propelled the Dow toward 15,000), investors started indiscriminate selling. Or in other cases leveraged investors were forced to sell to meet margin calls. The death spiral was in place and it would depend on whether governments could act to restore confidence in the stability and continued existence of financial institutions – banks, Wall Street brokerages and insurance companies – and to establish a floor under asset values. That appears to be the stage of this credit crisis cycle we have entered, and it may be marked with hindsight to a statement by Jim Cramer of hedge fund and CNBC fame telling investors that if they have money in the stock market and might need it within the next five years, they should sell now!

While European governments are proposing to use different rescue

The actions of financial market regulators might be described as "the blind leading the blind"

methods than the U.S. government, the world's financial markets are waiting to find out what might or might not work. With virtually no history to rely on, the actions of financial market regulators might be described as "the blind leading the blind." While trying to remain emotionally detached from current events, let's try to describe current conditions and what they may mean for energy markets.

1. Investors are dumping stocks, both good and bad companies, with little concern about their near- or long-term outlooks for earnings. Many energy companies are financially very strong and have solid earnings, but they are facing either a substantial slowing in their earnings growth rate, or even an absolute decline in 2009 compared to this year. A negative earnings outlook is not conducive for rising stock prices.
2. Credit availability appears to be severely limited. Moreover, borrowing rates are shooting through the roof even for solid credit risks. This means more companies may need to learn to live within their cash flows. For financially weak companies, they may need to find partners, sell assets or sell out. This is not a good outlook for oilfield service companies who are likely to see their customers cut their capex spending.
3. U.S., European and Japanese economies are slowing and projections call for virtually all OECD countries to be in recession soon or definitely by early 2009. The big questions are how far economies may fall, how the weakness will impact energy demand and how long it may take for a recovery to begin.
4. The economic uncertainty and global credit market conditions are likely to take a toll on economic growth in Asian countries. Investors are wondering whether the Asian economies will experience a collapse as they did in 1997-1998, or whether they will only experience a mild recession. As these countries' economies slow, will their energy demand fall, and if so, by how much?
5. Traditionally at the end of all major industry investment cycles, merger and acquisition activity rises. We have just begun to see that in the energy sector with most of the activity being tied to undercapitalized (overleveraged) firms that cannot finance their operations.
6. In the M&A space, strategic buyers are still active as demonstrated by several recent strategic acquisitions by large oilfield service companies. These strategic buyers are still willing to complete transactions at premium valuations compared to financial buyers, the reverse of attitudes that have prevailed over the prior few years.
7. Energy private equity investors are still active, but they are experiencing increasing difficulty in securing debt financing necessary to complete large financial transactions. Smaller transactions can be completed, but with much greater equity contributions that change the traditional return parameters.

8. Dividends may become a more attractive way to reward shareholders than stock buybacks given the energy industry's stronger financial position than many other economic sectors. If it takes the stock market years to recover its prior peak, then current income will have greater appeal for investors. Share repurchases will have little impact on stock prices in a stock market environment of subnormal returns and lower valuations.

The credit crisis is spreading and governments need to cooperate in actions to return confidence in the future

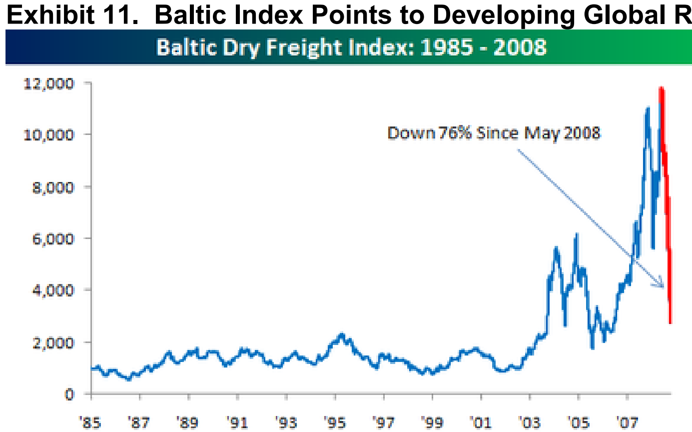
So what does all this mean for the future for energy markets? It is clear that the credit crisis is spreading and governments need to cooperate in actions to return confidence in the future and restore trust among financial institutions in order to get money flowing. As the map in Exhibit 10 shows, there are large and economically important regions of the world being impacted by the credit crisis.

Exhibit 10. The Credit Crisis Is Spreading Around The World

Source: British Broadcasting Corp.

The impact of their problems is becoming more evident in weakening economic activity. One of the best measures of how rapidly global economic activity is slowing is the huge drop in the

Exhibit 11. Baltic Index Points to Developing Global Recession



Source: Bespoke Investment Group

Baltic Dry Freight Index. That index, which reflects the day rate cargo ship operators charge shippers, has fallen by 78% since May. This index reflects economic health through global trade activity.

The CRB Index needed only 96 days this year to move from its 52-week peak to its 52-week low

Equally impressive measuring the collapse of economic activity is the drop in the CRB Index. The index measures the price movement of a broad basket of commodities. As shown in Exhibit 12, the CRB Index needed only 96 days this year to move from its 52-week peak to its 52-week low. Interestingly, the 2008 CRB decline is sandwiched between the 1984 and 1977 declines as the fastest declines in the history of the index. The 1984 decline was marked by the collapse in crude oil prices that began in 1983 and finished in 1985. The 1977 decline was due to the global economic recession caused by the 1973-1975 oil price spikes. These comparisons suggest that the world is in the midst of a global economic recession with negative implications for energy demand.

Exhibit 12. 2008 Commodity Crash Matches Past Crashes

CRB Index Fastest Declines From a 52 - Week High to a 52-Week Low

Date of 52 Week Low	Price	Date of 52 Week High	Price	Days	Percent Change (%)
7/20/84	256.4	5/28/84	284.2	53	-9.8
10/6/08	309.7	7/2/08	473.52	96	-34.6
7/25/77	196.4	4/18/77	232.7	98	-15.6

Source: Bespoke Investment Group

Commodity Prices, Oil Demand and Energy Stocks

The collapse in crude oil prices is tied to a number of factors

Crude oil prices settled at $77.70 last Friday after dropping almost $9 a barrel during the day and after having fallen 17.2% over the course of the week. The closing price was about 54% of the oil price when it closed at the peak of $145.29 a barrel in early July. The collapse in crude oil prices is tied to a number of factors – weakening U.S. oil consumption, a stronger U.S. dollar, new trading rules targeting commodity speculators, a shift by hedge funds away from commodities, and the need for investors to sell highly liquid and profitable investments to meet margin calls. One of the major concerns now is a growing recognition that the world is on the brink of a recession – the depth of which is unknown due to uncertainty about when or how the global credit crisis will be resolved.

Likely more ominous for energy markets was the IEA's 2009 oil demand forecast reduction of 440,000 barrels a day

Friday's oil price drop may also have been driven by the cut in global demand forecasts by the International Energy Agency (IEA). The IEA, in its latest monthly energy report, reduced its estimate of oil demand for 2008 by 240,000 barrels a day. The agency now sees global oil demand at 86.5 million barrels a day (mmbd), an increase of barely 0.5% over last year's consumption. Likely more ominous for energy markets was the IEA's 2009 oil demand forecast reduction of 440,000 barrels a day. They are now projecting global oil demand of 87.2 mmbd, a 0.8% increase over 2008. As suggested by the huge drop in the Baltic Dry Freight Index (see Exhibit 11), the world is rapidly sliding into a recession.

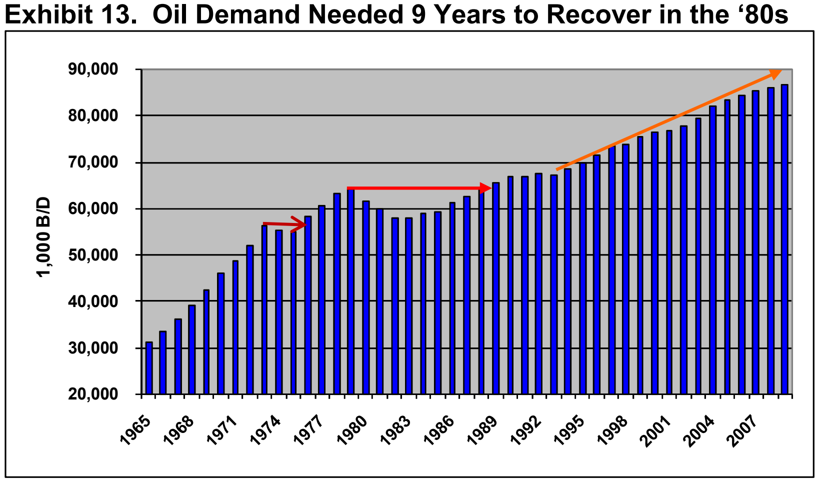
The resulting economic calamity and the huge oil price increases experienced during the 1970s decade contributed to significant changes in oil consumption habits

An important consideration for understanding the gyrations in the crude oil market is to look at the analog for recessionary oil demand that investors are considering. That would be the recession in the early 1980s. When we look at the history of world oil consumption since 1965, there have been very few periods of annual declines. The first occurred after the 1973 oil price jump by OPEC following the Arab-Israeli war. That recession was sharp, but oil demand needed only two years to recover from its prior peak. When oil prices spiked in 1979 following Iran's cessation of oil shipments, the resulting economic calamity and the huge oil price increases experienced throughout the 1970s decade contributed to significant changes in oil consumption habits. It took a decade for oil demand to surpass that 1979 high. We have experienced minor dips in demand caused by other economic problems with the most recent being the Asian currency-induced economic problems of 1998.

Since the IEA is only expecting China's demand to grow by between 350,000 to 425,000 barrels a day, it is impossible to see a significant falloff in global oil demand being made up by higher Chinese oil demand

Investors looking to the 1980s economic recession as a guide will find that after peaking in 1979 at 64.4 mmbd, oil consumption fell for four straight years. As could be expected, the pace of the decline slowed each year. In 1980, oil consumption fell by 2.65 mmbd, or 4.1%. The following year the drop was 1.9 mmbd (-3.1%) and then it fell in 1982 by 1.7 mmbd (-2.8%) and in 1983 by 250,000 barrels a day (-0.4%). The cumulative total of the decline was 6.5 mmbd. To put that demand into perspective, it represents over 83% of China's total current oil demand. Since the IEA is only expecting China's demand to grow by between 350,000 to 425,000 barrels a day in the future, it is impossible to see a significant falloff in global oil demand being made up by higher Chinese oil demand. That scenario is further heightened by reports of weakening oil demand in China following the Olympics. Reportedly, automobile sales have fallen for two straight months and steel production is also lower.

Exhibit 13. Oil Demand Needed 9 Years to Recover in the '80s



Source: BP, IEA, PPHB

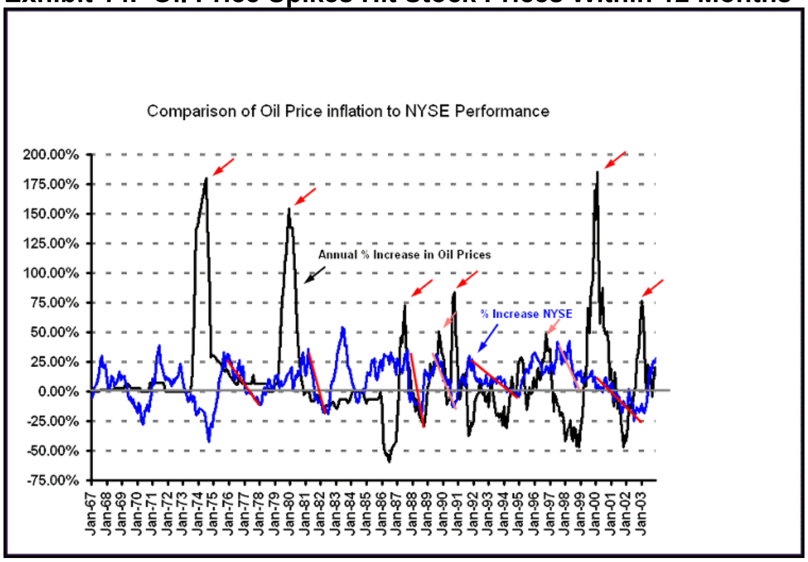
To further highlight the challenges for the oil market, one only needs to look at the performance of stock markets and crude oil prices. In a analysis of the impact of oil price spikes and stock market

The period of time between these oil price spikes and stock market drops averages about 12 months

performance, one study shows that within a reasonable time following an oil price shock, the stock market does suffer. The period of time between the oil price spikes and declines in the stock market ranges between two months and 17 months with the average duration being about 12 months.

While that study ended in 2004, we know from following oil prices and the stock market since that every time oil prices went higher during the oil bull market of 2007 and early 2008 the stock market fell, or at least was highly challenged. The talking heads on CNBC were always upset when oil prices climbed but jubilant whenever they fell. That attitude probably says more about the talking heads inability to understand and explain the movements of oil markets to their viewers.

Exhibit 14. Oil Price Spikes Hit Stock Prices Within 12 Months



Source: Financial Trend Forecaster

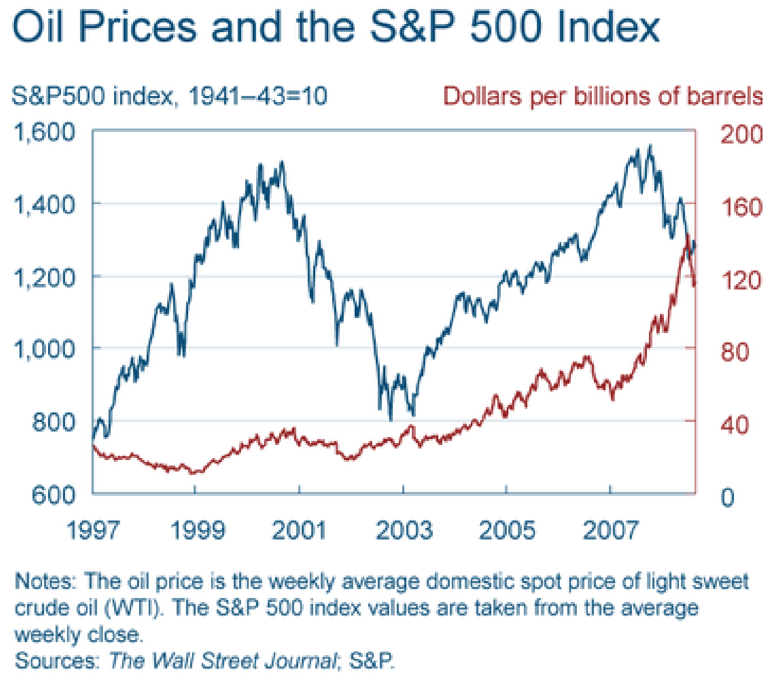
They found was that crude oil price shocks explain 13% of the variation in aggregate stock returns

In a March 2007 paper prepared by Lutz Kilian and Cheolbeom Park entitled "The Impact of Oil Price Shocks on the U.S. Stock Market" the authors came to a slightly different conclusion. The paper dealt with the period of January 1975 through September 2005. What they found was that crude oil price shocks explain 13% of the variation in aggregate stock returns – not necessarily the most important factor influencing returns. They examined the conventional wisdom that higher oil prices depress stock returns, but found that it applies only to demand shocks that are specific to the crude oil market. That means stocks are highly exposed when an oil price shock reflects the possibility of a lack of crude oil availability.

Positive oil price shocks driven by wider global demand for commodities lead to higher oil and stock prices

The more important conclusion to come from this paper was that positive oil price shocks driven by wider global demand for industrial commodities lead to higher oil prices **and** higher stock prices. Given this conclusion, the authors would argue that it was not surprising that for most of this decade, rising oil prices and higher stock prices were not inconsistent since we had a global economic boom underway and all commodities were reflecting higher economically-induced demand. As shown by the chart in Exhibit 15, this conclusion was appropriate for the period from 2003 through early 2008, although it didn't explain the pattern of 1997 through 2003.

Exhibit 15 Global Economic Boom Drove Oil And Stock Prices



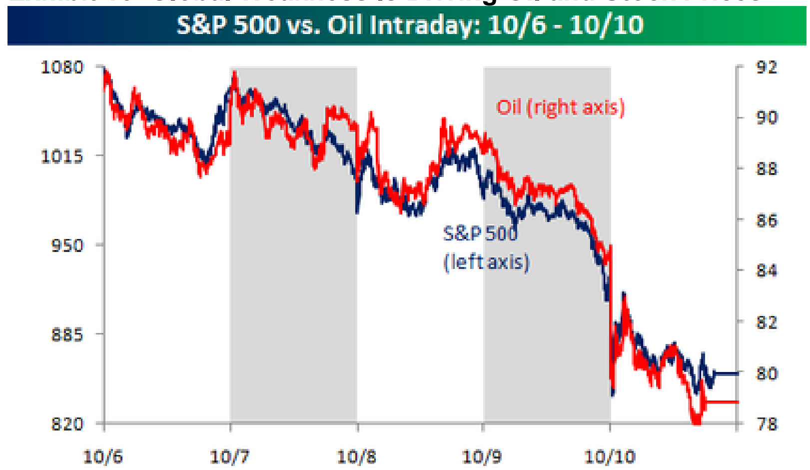
Source: Federal Reserve Bank of Cleveland

In the past week, as shown in Exhibit 16, the relationship between the price of crude oil and the stock market has changed. During that period the correlation has been almost 97% as oil prices and share prices have fallen together. This suggests that what is impacting the stock market – the credit crisis – is leading investors to anticipate a global recession and significantly reduced future oil demand.

Even though the IEA cut its 2009 global oil demand forecast growth to about 700,000 barrels a day, investors are beginning to think a year of negative growth might be more likely

Falling demand should undercut oil prices. Even though the IEA cut its 2009 global oil demand forecast growth to about 700,000 barrels a day, investors are beginning to think a year of negative growth might be more likely. Whether 2009 will be as bad a year for oil consumption growth as experienced during the four-year period 1979 to 1983 remains to be seen, but that is the analog scenario investors are considering. Even Merrill Lynch & Co., Inc. (MER-NYSE) suggested this possibility recently when it reduced its forecast for crude oil prices to $70 a barrel, but stated that in a synchronized global recession oil prices could fall as low as $50 a barrel. Under that scenario energy industry capital spending would be lowered, reducing oilfield activity and product and service prices. That would mean lower earnings and largely explains the recent dramatic fall in oilfield and energy company stock prices. Until investors can get a handle on the possible magnitude of the fall in oil

Exhibit 16 Global Weakness Is Driving Oil and Stock Prices



Source: Bespoke Investment Group

demand and its impact on energy company earnings, they will be using disaster scenario analyses to model company earnings. They will also begin to focus on asset value (bankruptcy) analysis in valuing companies, even though there appears little likelihood of a wave of bankruptcies.

While many would dismiss our concerns, I would suggest that OPEC's move to call an emergency meeting to discuss a possible output cutback is another sign of history starting to repeat itself. Last month, OPEC decided it would adhere to its prior production quotas and Saudi Arabia, the leading over-producer, said it would support the move. To us this was reminiscent of Saudi's rhetoric in the 1980s when it said it would defend the OPEC price target of $27 a barrel after previously defending a $34 price. Because of OPEC cheaters, Saudi flooded the market to teach them a lesson. When oil demand falls, there is little producers can do to stop it because all the market intelligence is after the fact. OPEC would be better served to let oil prices fall as a way to jump start economic growth and to forestall marginally profitable future energy supply projects.

We believe there are certain fundamental differences in global oil supply and demand that we believe will contribute to a more rapid industry recovery

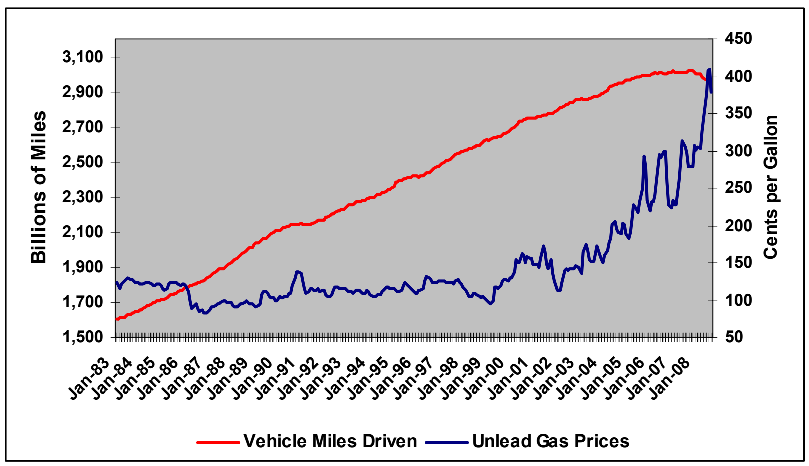
While there certainly are concerns about the economic and financial outlook, we believe there are a number of meaningful differences between the business and physical environment of the 1980s and now. We believe there are certain fundamental differences in global oil supply and demand that we believe will contribute to a more rapid industry recovery. How quickly that might be factored into the investment outlook is uncertain. We will be writing about these conditions in the next Musings.

Miles Driven Continues To Show Monthly Declines

The latest figures to come from the Federal Highway Administration (FHA) for the month of July show a continuation of the drop in highway vehicle miles driven in response primarily to rising gasoline and diesel pump prices. As can be clearly seen in Exhibit 17, when gasoline prices crossed the $2.50 a gallon price point, the growth in the rolling 12-month cumulative count of vehicle miles driven in this country flattened out from its historic growth trend. When gasoline prices surged above $3.00 a gallon, miles driven began to fall off materially. Since the cumulative total peaked in October 2007, we have had nine consecutive months of falling vehicle miles driven. The 12-month cumulative vehicle miles total for July suggests that the nation's drivers are now motoring at the same rate they did in August 2004, over four years ago. There is no question that Americans are more cautious in their use of their vehicles since we know the U.S. vehicle fleet is larger and there are more licensed drivers in this country. With gasoline prices showing their first monthly decline in August, it will be very interesting to see whether there has been any appreciable slowing in the rate of decline in miles driven when the August FHA data becomes available later this month. Given the credit market turmoil, the recent gasoline demand destruction due to the hurricane disruptions and the resulting fuel shortages, and the changing mix in new vehicles sold, it is hard to comprehend a near-term scenario that involves a material change in the trend of vehicle miles driven.

Since the cumulative total peaked in October 2007, we have had 9 consecutive months of falling vehicle miles driven

Exhibit 17. Vehicle Miles Driven Down 11 Consecutive Months



Source: FHA, EIA, PPHB

Maybe what will happen is that American cities will begin to look and feel more like European cities. We noted the huge number of motor scooters in major Italian cities a few weeks ago when we were there. We have seen these scooters before on trips to Italy, but for some reason they resonated more with us this trip. It might have been because we saw adults of all ages driving them and we even saw multiple-passenger units built around scooters with their highly efficient and fuel-thrifty engines. Another phenomenon we noticed was the rise in bike sharing – where you join a group and can use one of its bikes to travel somewhere at which point you leave it for another person to use. We observed a very large bike rental fleet with quite active usage while we were in Barcelona, Spain.

It might have been because we saw adults of every age driving them and we even saw multiple passenger units built around scooters with their highly efficient and fuel-thrifty motors

The car-sharing industry is beginning to see the large rental car companies and even U-Haul International, Inc. getting into the business

Recently we read an article about several of the mid-tier automobile rental car companies in the United States beginning to move into the car sharing market. As we wrote about in a previous Musings, the Zipcar and Streetcar companies are aggressively promoting the concept of car sharing in the United States and selectively in Europe. There also are some non-profit car sharing companies operating, primarily in large cities. But now the industry is beginning to see the large rental car companies and even U-Haul International, Inc. getting into the business. Mark Frissora, CEO of Hertz Global Holdings, Inc. (HTZ-NYSE) told *The New York Times* this summer that his company would be in the business in a big way within six months. Enterprise Rent-A-Car Co. is another company testing the market through a partnership launched earlier this year with the nonprofit St. Louis Car Sharing Cooperative. If Americans decide that there are other ways to secure automobile transportation than owning or leasing a car, how automobiles are used in the future will have an impact, undefined at the present time, on the growth in vehicle miles driven.

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