



2009

Q4 report on Energy



Karvy Comtrade Ltd

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Crude oil

Highlights of Q3:

- Going by OPEC estimates **World oil demand** in 2009 is expected to contract by 1.6 mb/d to 84.1 mb/d. In 2010, world demand is forecast to return to growth following two years of consecutive declines, increasing 0.5 mb/d to stand at 84.6 mb/d.
- In Q3 Oil prices shared a good correlation with equity markets especially in U.S, China and Japan.
- At the end of Q3 Crude oil stockpiles in U.S, the world's largest energy consumer stood at 338.4 million barrels.
- Stockpiles of gasoline and distillate stood at 211.45 million barrels and 177 million barrels. The stockpiles of distillate are reported to be at the highest level since January 1983.
- In September OPEC members agreed to keep the supply cut of 4.2 million barrels announced last year and maintain the overall output unchanged at 24.845 million barrels a day.
- During the quarter benchmark WTI grade on NYMEX reached a high and low of \$75 per barrel and \$58.32 per barrel with a gain of 1 percent over the previous quarter. Prices have risen 57 percent this year.
- Oil inventories reported by DOE declined in Q3 over Q2 by 3.38 percent.

Review of Q3

The quarter began on a lower note as prices declined to as low as \$59 per barrel in mid July as oil markets were taking hints from stock market movement in the U.S, Europe and Asia over the extent of the economic recovery. Demand concerns continued to exist as inventory pile ups in U.S dampened the gasoline demand during the summer driving season. However prices recovered as world equities rose on better than expected corporate earnings from a wide range of companies. Prices revolved around \$70 mark for the most part of Q3. At that level prices have surged by close to 56 percent since the year beginning. As it turns out Crude oil prices shared a very high correlation with World equity indices during the quarter. Towards the later half of Q3 prices began to track fundamentals in the form of inventory data reported by DOE each week. The weakness in Asian demand came mainly from china as the Chinese stock markets reported a quarterly decline and with the central bank figures showing lower lending by banks, it appears as if the economy has hit

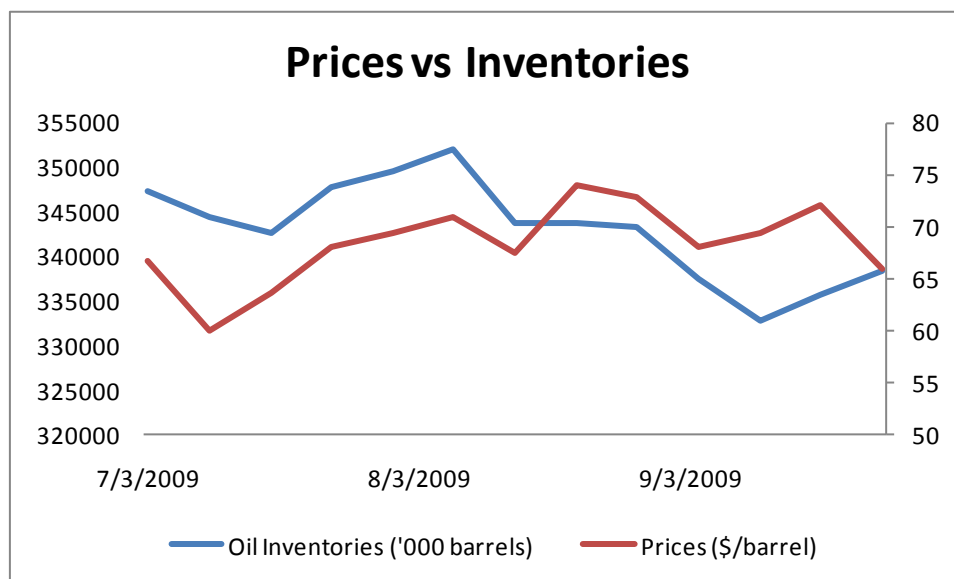
some obstacles on its path to recovery. The rebel crisis in Nigeria was prevalent all through the quarter though there were no major disruptions to supply.

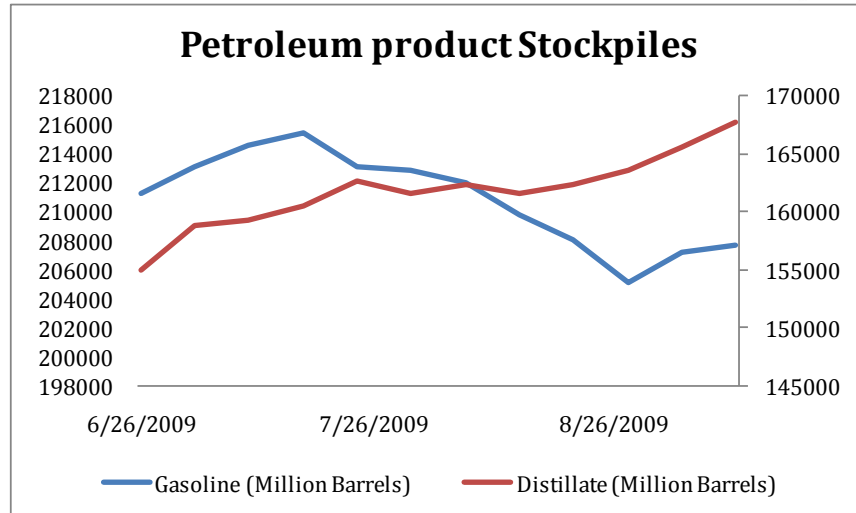
U.S Driving season:

The summer driving season in U.S which started on Memorial Day or in late May and extended till Labor Day (Sep 7th) this year has been insignificant for gasoline demand. As the season ends the demand for finished motor gasoline which accounts for a significant chunk of the refinery yield in U.S amounting to almost 45 percent will be declining in the future. At the end of the quarter the inventories of finished gasoline stood at 211.45 million barrels.

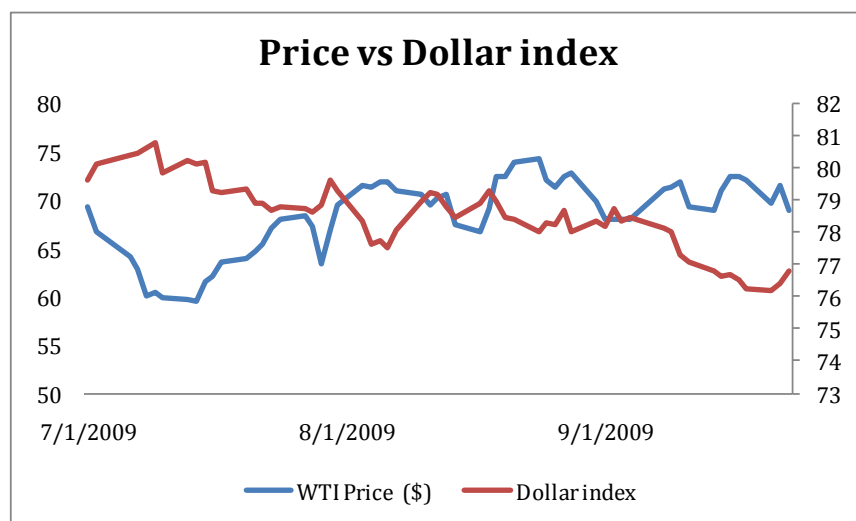
Inventories:

Though the quarter saw oil inventories declining week on week the inventories of petroleum products were raising which was signifying weak demand. The graph below shows the inventory levels of gasoline and distillate as reported by DOE for each week during Q3. Inventories of distillate which consist of diesel and heating oil rose while gasoline inventory decline was moderate. The inventories of distillate now stand at a level of 171 million barrels the highest since January 1983. With the end of driving season the demand for gasoline is expected to drop and there will a pile up in inventories of gasoline. Heating oil is used by roughly 7 percent or around 8 million households during winter for heating purposes. With still some time left before winter season begins inventories are expected to climb in the next 3 to 4 weeks.





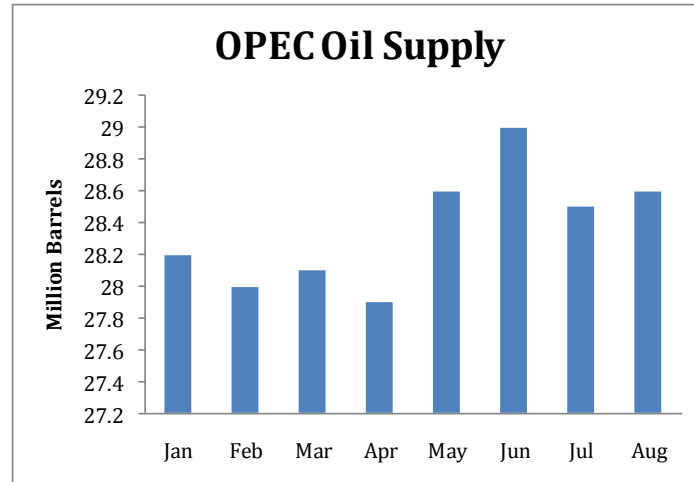
The figure below shows the relationship exhibited between prices and dollar. The dollar index fell to a low of 75.827 not seen since the year beginning. While the dollar index declined during the quarter by 4.34 percent prices rose by 1 percent.



OPEC: Given the delicate situation of the world economy and the concerns raised by the weak fundamentals the group agreed at its Ministerial Meeting on 9th September to keep production levels unchanged for the time being. The organization which met for a third time this year decided to stick to the decision it had taken last year to cut the output by 4.2 million barrels. The overall output quota now remains unchanged at 24.845 million barrels in all the three times the group had met this year. The graph below shows the total oil supply by OPEC nations. The organization is expected to reevaluate the situation at its 155th Extraordinary Meeting on 22 December 2009 in Luanda, Angola.

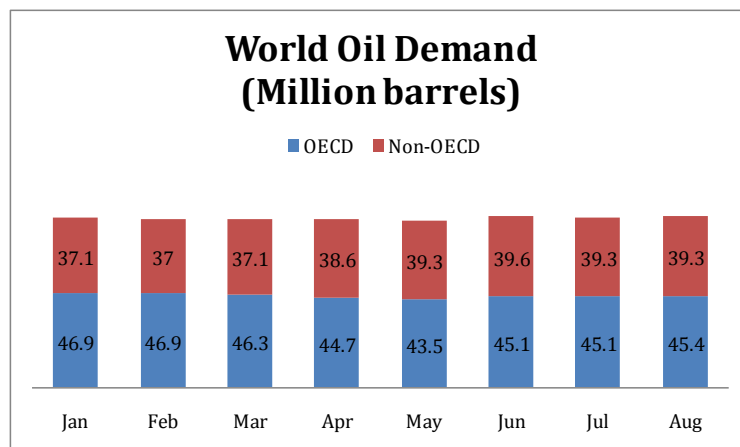
Earlier statements from the president and members of OPEC conveyed that oil prices near \$70 per barrel were comfortable to maintain investment in oil. As oil prices rose with the year the group

production averaged around 28 million barrels a day with some members producing more than their quotas to increase their revenues. However there was speculation in the market that the group might tighten the compliance on its members to stick to their quotas as it leaves the output untouched.

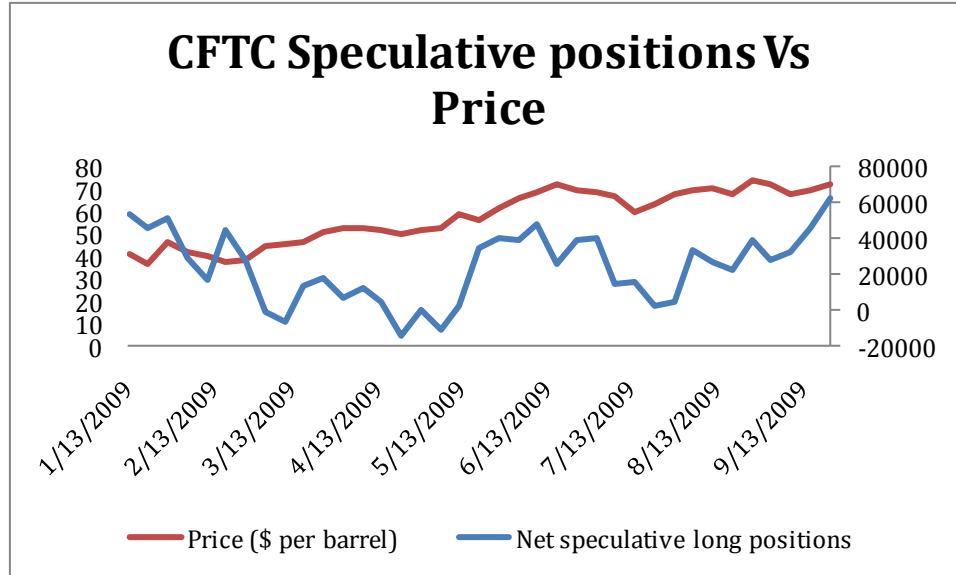


Source: Bloomberg

Non-OPEC: Non-OPEC supply averaged 50.1 million bbl/d in the second quarter of 2009. This figure was 300,000 barrels/d higher than the second quarter of 2008. Growth in supply came from central and south America which contributed around 0.3 million bbl/d while former soviet union contributed the same increase. This increase was offset by 0.3 million bbl/d decrease from Europe. During the forecast period, higher output from Brazil, U.S, Azerbaijan, Kazakhstan and Canada have offset a fall in production in Mexico and the North Sea. In 2009 Non-OPEC supply is expected to average 50.81 mb/d showing a growth of 0.34mb/d over the previous year and an upward revision of 70tb/d from the earlier reported figure. Data from EIA indicates that global oil consumption declined by 3 mb/d in the second quarter of 2009 compared to 2008. Members of OECD accounted for most of the decline. Consumption in Non-OECD was virtually unchanged.

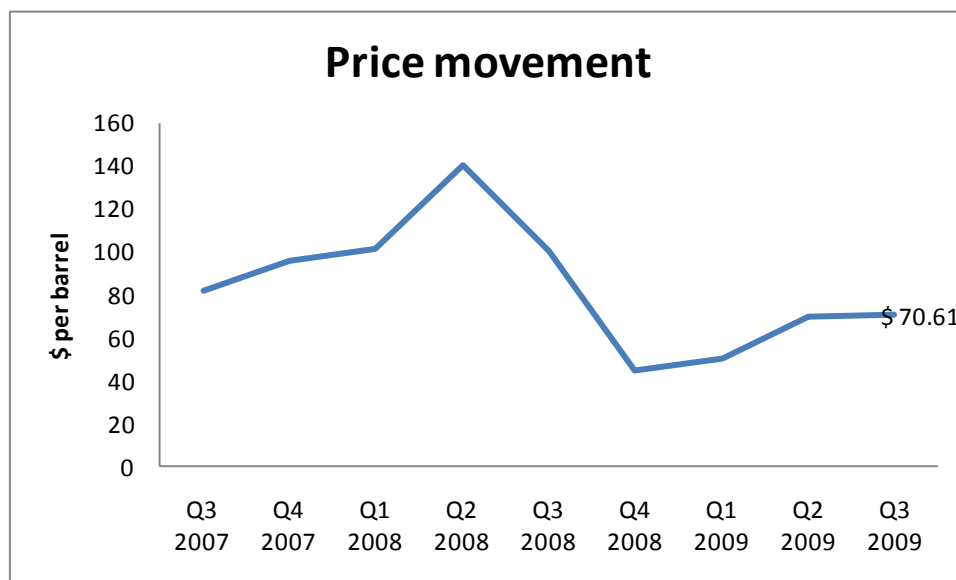


Source: Bloomberg



The figure above indicates that barring a few instances the market had been bullish over the prospects of higher oil prices. The last CFTC report showed net speculative long positions for WTI oil on NYMEX at 42142.

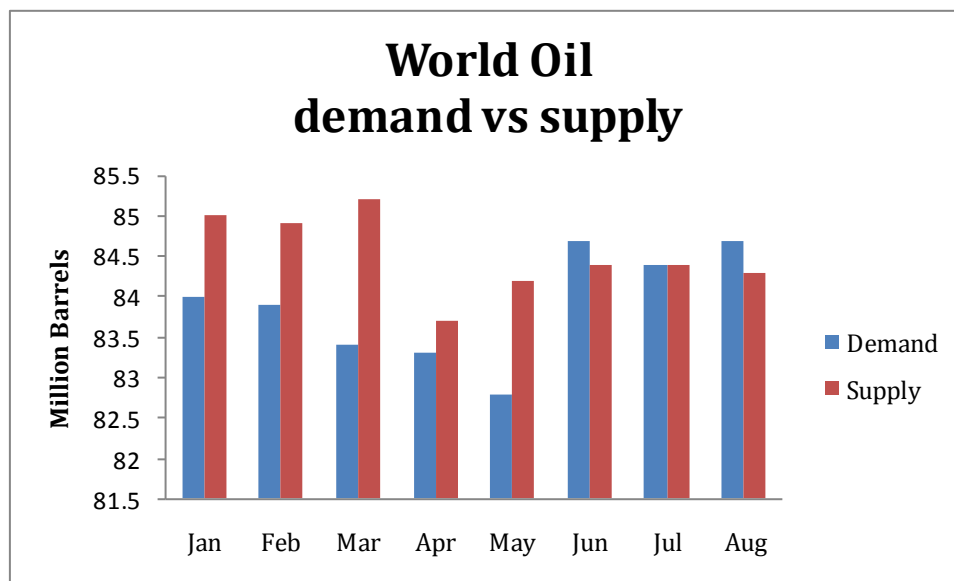
Equity markets: During the quarter benchmark equity indices in U.S namely Dow Jones and S & P went up by close to 15 percent each, the second consecutive quarterly gain this year. Coming to Asia equity indices in Japan rose by 1.75 percent while the Shanghai SE composite fell by 6.08 percent. Prices took clues about the global economic recovery through movements in the stock indices in the top oil consuming nations in the world sharing a correlation as high as 0.7 to 0.9 during certain periods.



Fundamental Outlook:

Supply:

The price of (WTI) Crude oil is expected to average around \$70 per barrel in Q4 of 2009, recording an increase of \$27 over Q1 of 2009 going by EIA estimates. Prices are expected to rise to about \$75 per barrel gradually by December 2010 as world economy recovers. From the below figure Oil demand was weak since the beginning of 2009 whereas supplies were excess. However as the outlook for economy improved as the year progressed and as rig counts fell due to weak demand a balance is being restored between the production and demand. Also Q3 has been crucial as demand – supply reached a break even. Crude oil production from OPEC is expected to average 29.3 mb/d in the second half of 2009 and then averages 28.9 mb/d in 2010. At the end of second quarter OECD commercial petroleum inventories stood at 2.74 billion barrels. This provides a forward cover of 61 days which is well above the average level at this time of the year.



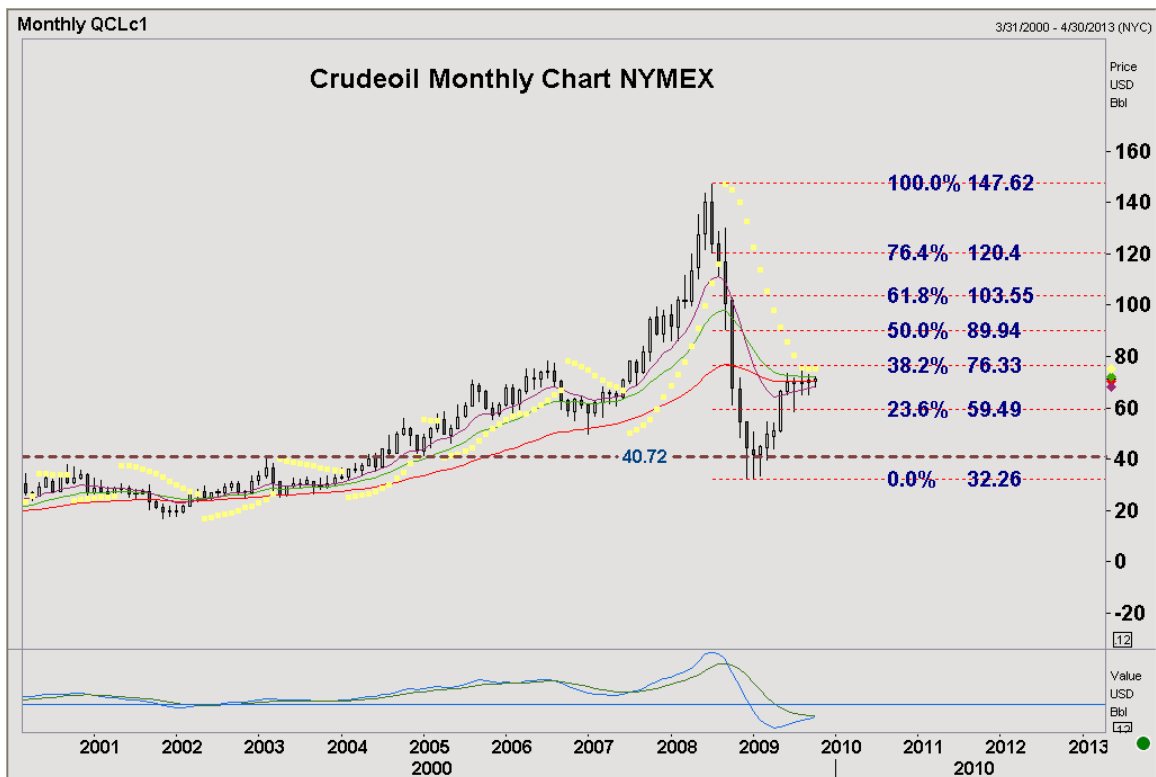
Demand: Refiners are shut down for maintenance in the months of September and October before heating oil demand picks up in winter. Heating oil is used by some 7 percent or 8 million homes during winter for heating purposes. Refinery intake is expected to slow down over the next few weeks as a result of which there is a higher chance for seeing more inventory pile ups in the future. Much of the demand outlook rests on how the economy performs as a whole.

Outlook:

The macroeconomic view assumes that world economic recovery begins at the end of this year led by non-OECD Asia. As a result, world oil consumption is expected to grow in the fourth Quarter of

2009 compared with 2008 levels, the first such growth in 5 quarters. Projected world oil consumption grows by 0.9 million bbl/d in 2010, with relatively strong growth in Non-OECD countries being partially offset by a slight decline in OECD consumption according to EIA. Although a fundamental view seems to be forming that the global economic downturn has seen the worst there still remains uncertainty over the current state of affairs. According to the IMF outlook the world economy is expected to contract by 1.1 percent this year and expand by 3.1 percent in 2010. The Asian economies are expected to lead with china, India and Japan at the forefront. As a whole emerging economies are expected to expand by 1.7 percent this year. **Prices may drop initially during Q4 while recovering towards the end of the year as winter begins. Based on the above factors we expect prices to trade near \$70 per barrel during Q4 this year.**

Technical Outlook:



Crude oil futures on NYMEX platform initially took a lower correction and after witnessing a low of \$58.32 levels prices settled near to its opening levels with the formation of “Doji” pattern (Quarterly chart). However, prices are seen trading in a consolidation phase (band of \$59-\$75) from the past five months and expected to continue the same trend for coming quarter. Moreover, closing of previous quarterly candle renders indecisive movements in the near term and only on break above \$75 levels may push the prices towards \$78.4 then \$83.9 levels.

According to Fibonacci principle prices are hovering between 23.6% (59.51) to 38.2% (76.28%) retracement of the range \$147.27-\$32.46 and likely to expand the trend until it breaches above \$76.28.

However, technical indicator parabolic SAR (Stop and Reversal system) showing lower potential in the near term since the market is trading below the “dots” which **is under the control of bears**.

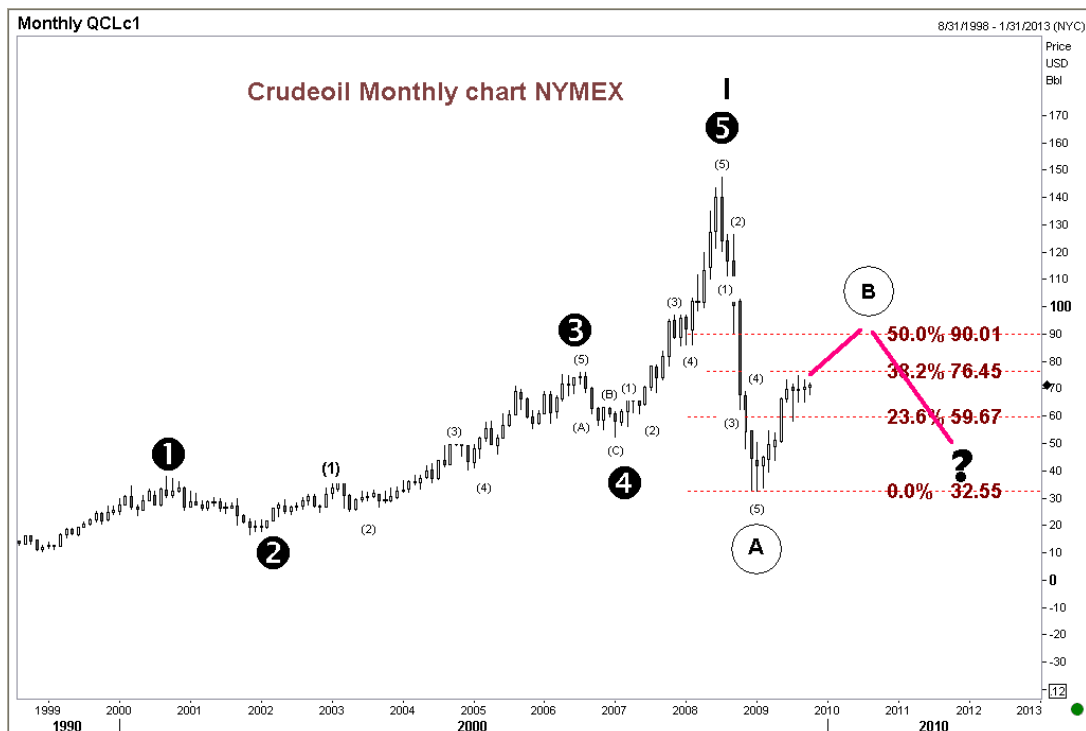
The momentum indicator MACD is trading below “0” median line supported by MACD below signal line (9-period) both are showing sideways to lower potential.

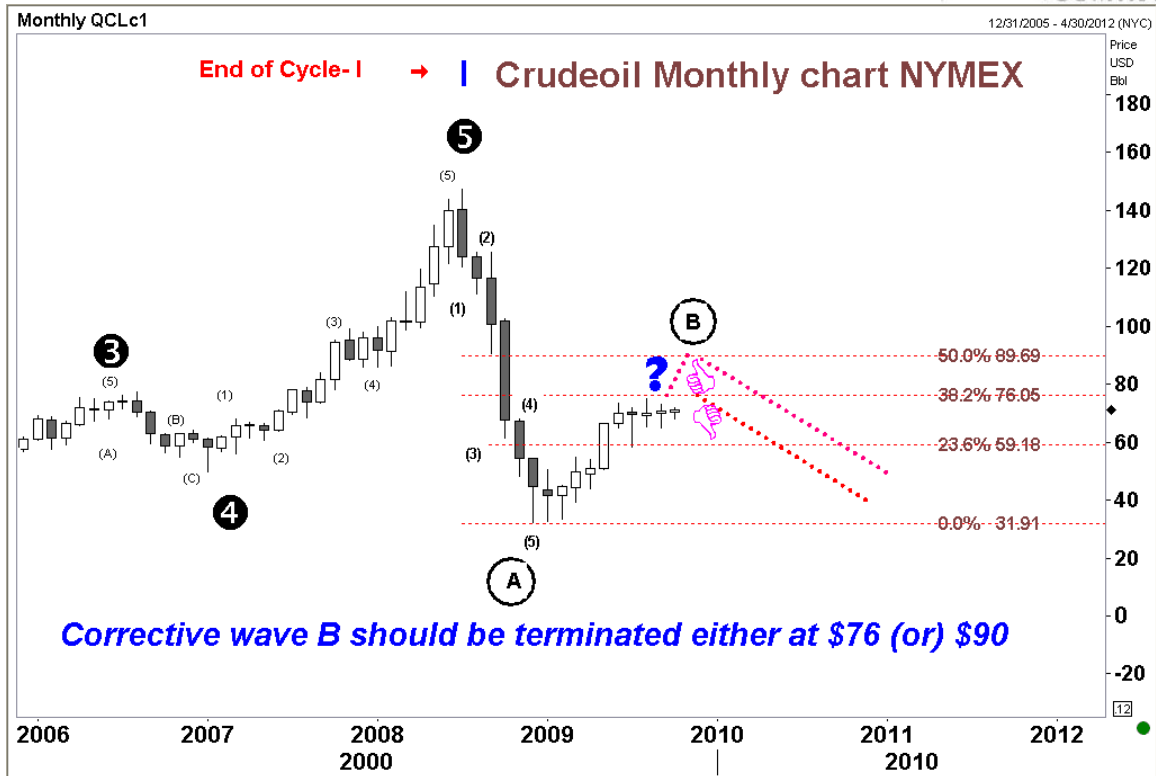
Elliot Wave Analysis

The below mentioned price chart of crude oil shows prices have completed CYCLE-1 at life time high of \$144-146 range and since then it resumed major CYCLE-2. Since the completion of CYCLE-1, market has witnessed a fall of -78.25% correction which is a corrective wave-A of CYCLE -2. Now, in the year 2009, crude oil prices resumed an uptrend and prices shot up to \$76 a level which is the 38.2% correction of the recent down trend. With the anticipation, if market sustains below 76.50-76.00 range may see an end of corrective wave-B of CYCLE-2. On the contrary, if market breaches \$76.50, the corrective wave-B may extend its higher move to \$90 (50%) of the \$145 to \$31 falling trend.

Now, if market ends its corrective wave- B at (\$76 or \$90), resumption of corrective wave-C of CYCLE-2 can not be ruled out. If market moves inline with our expectations, the outlook of crude oil may remain lower in the months ahead.

The detailed wave analysis is explained below mentioned charts.





Subsidies in India:

The GOI (Government of India) has a price structure where by various refiners and oil sellers sell their products at a government defined structure. In INDIA like in most developing countries the government in order to reduce the burden of high international prices has introduced subsidies so that common man can procure fuels at lower prices. Various participants in the fuel industry like government owned refiners and petrol pump owners sell their products under the governments pricing structure. Due to these subsidized prices they incur losses which can run into thousands of crores. To compensate them the government issues oil bonds. There are in other words normal bonds issued by the government of India to various producers of petroleum products so that they can represent it on their balance sheets to show a revenue stream rather than a loss. The government makes interest payments on these bonds at regular intervals and at maturity the entire bond payment is made by the government of India. However practically speaking those who receive such oil bonds sell them in the market place and turn them into hard cash. However the obligation to pay the bond owners the interest payment still exists.

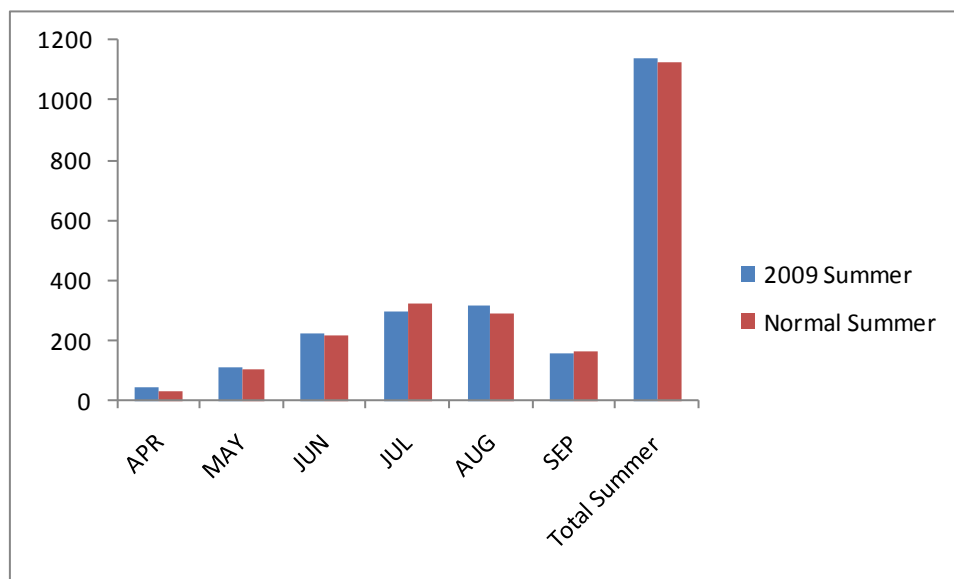
Natural gas

Highlights

- Overall inventories of working gas storage stand at 3.589 Tcf at the end of the Q3.
- Prices decline to seven year lows of \$2.409/MMBtu on NYMEX during the quarter.
- Rig count in U.S at the end of the quarter stood at 712 rising by 3.6 percent over the previous quarter.
- Demand continues to be weak due to non supportive weather during the summer and hurricane season.
- Supplies continue to form a glut in the market and set a new record this year overcoming the last previous held record of 3.545Tcf set in late 2007.
- Prices have fallen 37 percent since the year beginning.

Q3 Review

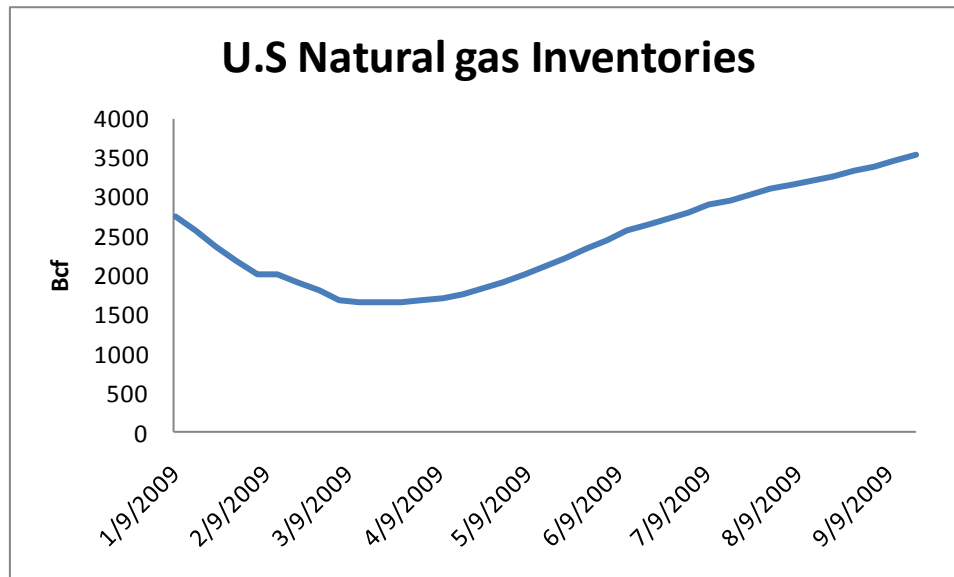
Q3 began for natural gas in the form of the peak time for summer seasonal demand for space cooling needs. Despite having hot weather in a few of the consuming parts in U.S the season went by without having any significant impact and as a result prices continued with the decline seen since the year began. The weekly injections of inventories as reported by EIA led to gas storage reaching a record new high. The recession cut down the industrial demand and as a result brought down the prices. Prices dropped to seven year lows in the last part of quarter 3 before rebounding significantly on some reported short covering and on speculation of a demand revival towards the year end when the fuel will be used for heating purposes in winter.



The table above compares the cooling degree days in the summer of 2009 with the normal summer average. As indicated the summer went by almost normal there by restricting the demand for the fuel to pick up. Cooling degree days is an index used for measuring the possible fuel demand during a season in this case summer.

Inventories

Working gas storage inventories at the end of Q3 stand at Tcf which is the highest level since 1994. The previous record stood at 3.545 Tcf set on 2nd Nov 2007. Overall inventories rose during the quarter by 868 Bcf with a quarterly gain of 31 percent over the previous quarter.

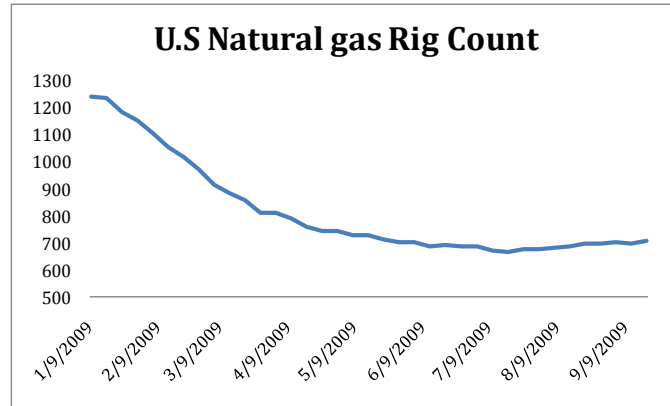


Atlantic hurricane season

The season officially starts on June 1st and ends on November 30th. The season had a slow start this year with no tropical activity reported in the months of June and July. In August tropical storms Ana and Tropical storm Claudette were reported. Bill, the first hurricane of the season dissipated without making any significant impact on prices as it stayed away from the producing regions of the Gulf of Mexico. Danny, Erika and Fred were some of the others reported later on during the season. Inspire of September being the peak season for hurricane activity the month went past by with no major hurricane occurrence. Overall the season had a quiet start and storm activity kept away from the producing regions in the Gulf of Mexico.

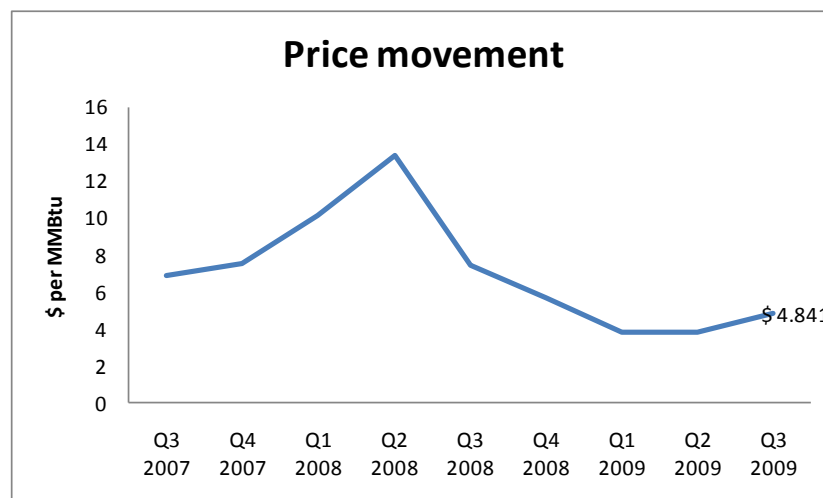
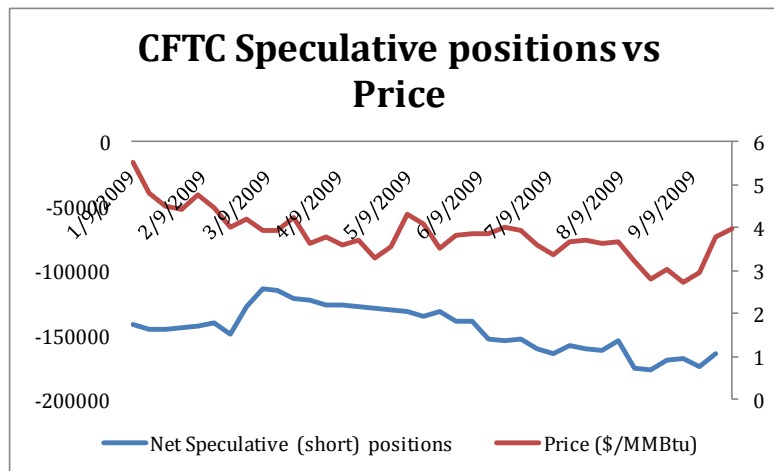
Rig count:

Natural gas rig count in U.S continued to stay steady during the quarter despite setting at a much lower level since the beginning of the year. As the rig count continue to stay steady a balance can be established between supplies and demand towards the year end as lower production will translate into lower injections into storage. The rig count in the U.S at the end of the quarter stood at 712 a rise of 3.6 percent from the earlier figure.



CFTC report:

CFTC report shows that the market had been excessively short on the commodity since the year beginning. The figure below shows the relationship between net speculative positions as reported by CFTC week on week compared with the price movement. At the end of the quarter speculative short positions outnumbered long positions by 145971 contracts.



Fundamental outlook:

Supply:

U.S natural gas production is expected to rise by 0.9 percent in 2009 and then decline by 3.5 percent in 2010. The surplus of inventories in underground storage which currently stands at 3.589 Tcf has caused a supply glut in the market. The market has been well supplied during the year 2009 as a result of which the current inventory levels should be enough to tackle the demand during the winter season. As winter comes up in mid November this year demand is expected to move up and as a result the inventory levels should recede coming this November on. As well production has fallen significantly this may even result in a narrowing of the gap between demand and supply. Since it takes time for wells to produce and for the fuel to reach the consumers there will be some time lag before supplies pick up. As inventories reach new heights there should be an expected drop in production.

Demand:

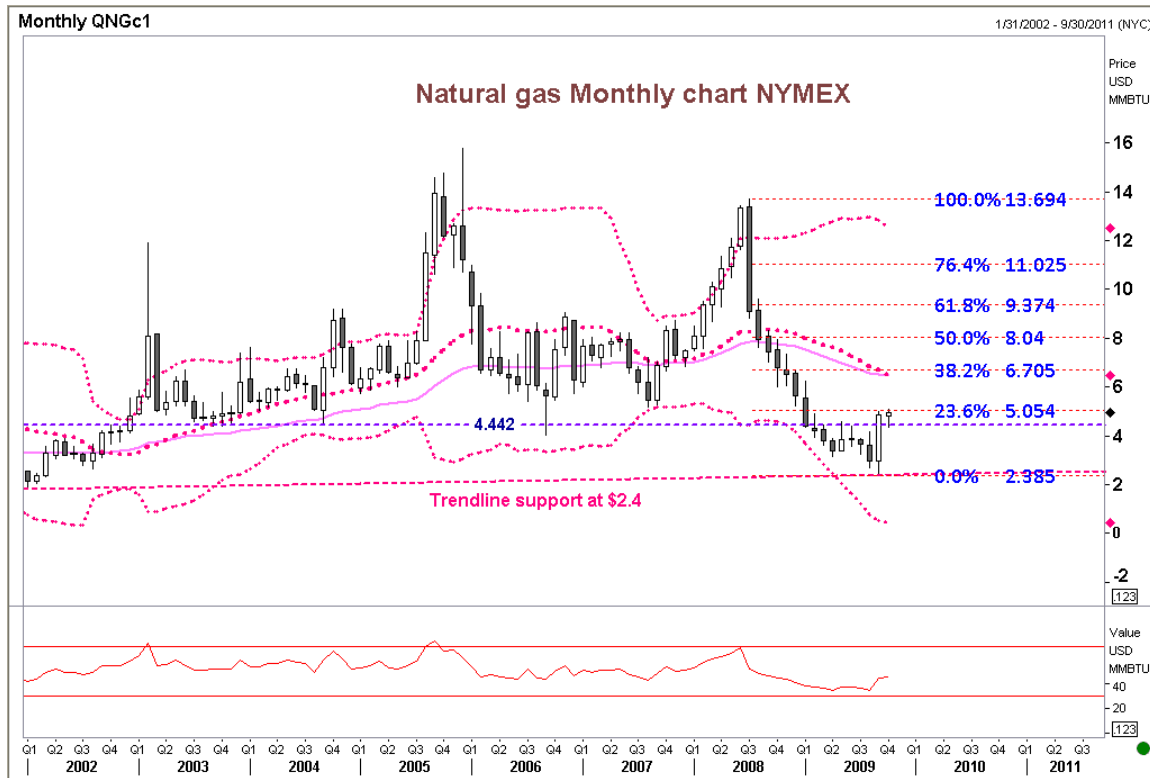
During Q3 prices had fallen to such low levels that there was some speculation of natural gas replacing coal in electricity generations. However as prices rebounded on speculation that the winter this year end might be the coldest in almost a decade and this may increase the demand and prices for the fuel. This upward movement in prices should be sustained during the winter which ranges from mid – November to march 2010. As a result inventory levels are expected to decline in U.S during the period. Consumption is expected to decline by 2.4 percent and remain unchanged in 2010. Though the prices were low during most of the year industrial consumption declined by 12 percent in the first six months of 2009 compared to same period last year. However the intake into the electric power sector is expected to rise as natural gas competes with coal for electricity generation.

Winter outlook:

According to NOAA's latest forecasts the coming winter season is expected to be 1 percent warmer than last year's winter and 1 percent milder than 30 year average. However the distribution of temperatures this winter season is expected to widely vary with the mid west which is a major market for natural gas to be 4 percent warmer than last winter and the west expected to be 4 percent colder.

Prices are expected to trade higher in the coming quarter due to higher demand in winter. However the degree of severity of the weather will be crucial in marking any movement.

Technical Outlook:



Natural gas futures on NYMEX platform initially traded lower in the beginning of last quarter. After witnessing a low of \$2.4 levels market took reversal and currently trading higher at \$4.971 levels by gaining as much as 20.1% from its previous quarterly close. Due to market instability to breach the support at \$2.4 levels (Mentioned in 3rd quarterly report) made prices to settle higher. Closing of previous quarterly candle resembles *“Hammer”* shape (Bullish in nature) which renders higher price movements in the near term. However, market is trading above the monthly short term (10) EMA and heading towards medium term (50) EMA (\$6.50 levels) signaling upside movements.

According to Fibonacci principle market is witnessing a stiff resistance at 23.6% retracement (\$5.05) of the range \$13.694-\$2.400 levels, only on break of the same possible to extend its gains till 38.2 %(\$6.07). However, if market sustains below the \$5.05 (23.6%) levels it is likely to trade sideways to lower for coming quarter.

According to Bollinger band principle, market witnessed a lower band support and there after heading towards its middle line (\$6.500 levels) showing possibility of higher prices movements. The momentum indicator RSI (14) monthly is trading at 0.45 levels and showing higher potential.

Technical outlook:

Market is witnessing a resistance at \$5.05 levels, breach of same expecting prices to gain further in the near term.

Recommendation: We recommend buying above \$5.05 levels for the target of \$6.7 then \$8.11 levels with the stop loss below \$3.155

Supports: \$4.2, \$3.05 Resistance: \$5.475, \$6.7

Natural gas MCX: Supports: 200, 145 Resistances: 260,319

Note: Supports and resistances are derived keeping USD/INR constant 47.55.

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