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26 January 2005

Oil

Executive Summary

- World oil supply averaged 84.4 mb/d during December 2004, according to International Energy Agency (IEA). Global demand averaged 84.0 mb/d in the fourth quarter of 2004.

- Oil prices have risen by 34% for the whole of 2004 to reach US$42.76/bbl on 31 December 2004.

- The spike in oil price has been due mainly to fears of supply disruptions in view of persistent global demand, especially from China, and dwindling US oil inventory levels.

- Geopolitical developments will be a key theme driving oil prices this year. The main drivers for the high risk premium are likely to come from uncertainties in Iraq, Nigeria, Iran and Russia.

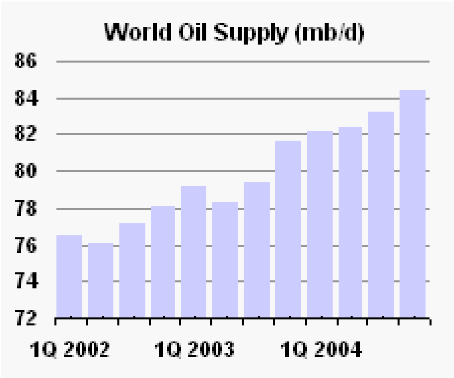
- According to International Energy Agency (IEA), world oil supply is expected to average 84.2 mb/d in 2005, a 2.1% increase, assuming OPEC maintains its current level of output.

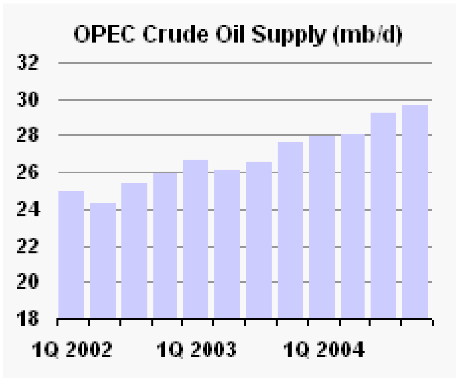
- IEA has projected oil demand to grow at 1.8% in 2005, down from the 3.3% growth expected last year, reflecting a more moderate global economic growth.

- The current high oil price incorporates a risk premium based on fears of supply disruption and price speculation. The artificially high prices are not supported by supply and demand fundamentals.

Review of Developments in 2004: Supply vs. Demand

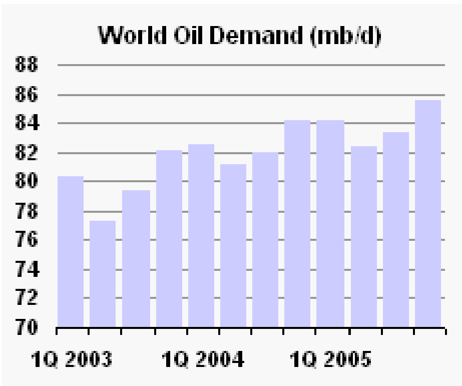
In December 2004, world oil supply averaged 84.4 mb/d, down by 45 kb/d from November. OPEC produced a total of 29.5 mb/d, with higher Iraq and UAE volumes offsetting lower supply from Nigeria and others. Non-OPEC output fell 165 kb/d due to disruptions in Norway and Canada and lower Russian output.





Source: IEA

Global demand for oil for Q4 of 2004 averaged 84.0 mb/d, up from Q3's demand of 81.9 mb/d. This represents a 2.3% yoy increase and a 2.6% qoq gain. Q4 demand was stronger than expected in North America, Europe and China but weaker in OECD Asia, India and Russia. The estimated global oil demand for the whole of 2004 averages to about 82.4 mb/d. This amounts to about 3.3% yoy growth rate for 2004.



Source: IEA

The Geopolitics of Oil

Throughout the 1990's, oil was deemed as just another commodity. It was a decade when supplies were taken for granted and extra capacity were readily available to fuel growth of the world economy. Light crude was trading at an average of US$20/bbl. Although this paradigm has gradually changed in the recent years, 2004 was when it became most apparent that politics have returned to the oil market.

While demand has been increasing steadily over the years, developments in exploration efforts have not been able to keep pace. Although worldwide production is running near its threshold levels, there is no cushion in the system to weather a potential blow to producers like Iraq and Russia. A major contributing factor to heightened oil prices in 2004 was unfavourable political developments in major oil producers. Such risks to vulnerable supplies are what the market terms as "risk premium." Politics have now become a fundamental element that drives oil prices and we shall evaluate the main drivers for last year's risk premium in oil prices:

- **IRAQ** - Supply from Iraq continued to be affected by terrorist fighting and sabotage on its oil fields and pipelines. Although it has the largest spare capacity in the market, those space capacities can not be relied upon due to its highly volatile and uncertain environment.

- **RUSSIA** - Russia is the second largest oil producer in the world and Yukos produces close to 20% of its total output. Yukos' pending bankruptcy battle due to the multi billions of dollars in back taxes it owes the state has caused much uncertainty over its oil supply. Output has recently been slashed as Yukos defaulted on some of its oil export contracts after the Russian government sold off one of its major production unit Yuganskneftegaz in December.

- **SAUDI ARABIA** - The largest oil producer in the world has been pumping oil at almost close to full capacity. About one-quarter of the world's proven reserves lie in Saudi Arabia.

- **VENEZUELA** – Political unrest resulting in chaos and protests before President Hugo Chavez won a referendum allowing him to stay in power.

- **NIGERIA** - The issue of ethnic and labour abuse of expatriate quota and influx of foreign oil workers into the country pitched oil labour unions against many oil companies, including Shell and ExxonMobil leading to frequent industrial unrest in the industry.

- **IRAN** – Political tensions in the Persian Gulf remain fragile over Iran's nuclear and missile programs.

Economics of Oil Price: Uncertainty and Information

M.J. Economides, a Professor at the University of Houston who has advised Russian oil companies, predicted that light crude will trade at US$100/bbl somewhere in 2005. On the other end of the spectrum, F.P. Leuffer, a senior managing director and senior energy analyst for Bear Stearns, predicts that oil price will average at about US$25/bbl in 2005.

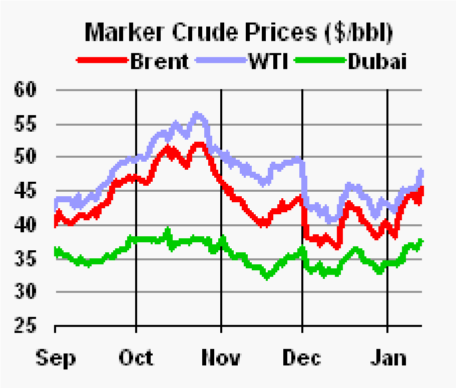
The huge divergence within the two predictions may seem irrational but an analysis of the volatility of oil prices in 2004 makes these two forecasts equally plausible. The oil market carries more risks of huge shocks to supply and (to a lesser extent) demand than most markets for commodities. The New York Times gave a hypothetical scenario where demand for oil could be hurt at an instant if say; someone invented a cold fusion generator that could power machineries or heat a house at twice the efficiency and half the cost. On the supply side, we constantly witness political conflicts and cartels behaviour shifting the equilibrium price of oil up and down.

Prof S. Figlewski of NYU says that the main driver of volatility in oil prices is uncertainty. If a stock of a company is seen as risky, fewer investors will be willing to trade them and the market becomes less liquid. This explains why prices move in fits and starts rather than in a smooth continuous trend. A little bit of new information, along with other buying or selling pressures will move the price by a lot. A recent example involves the ongoing winter episode of temperatures being above, and then below normal levels. Coupled with inconclusive reports of stockpiles being more, and then less than necessary, oil prices have reacted sensitively to every latest development.

The second cause of volatility in oil prices is a result of poor (or a lack of) information. Theoretically, as people do not know all the factors being incorporated in oil prices, they would assume that it is the correct price. Both the buyers and sellers are not able to capture the entire rationale of why oil is priced at a certain level. Fear of a lack of supply is what Prof. Economides is arguing why oil prices are inefficiently kept above the competitive price.

Without knowing the real state of global oil supply, people tend to be willing to pay more for a barrel of oil than its efficient price.

Below is a chart showing the price movements of various crude oil since September 2004. Brent and WTI were especially volatile.



Source: IEA

Impact of persistent high oil price

The impact of high oil prices on world growth will depend largely on the magnitude and duration of the price increase. Citigroup Smith Barney estimates how a US$10/bbl temporary and permanent price hike will reduce the GDP growth of various economies.

Effects of US$10 Temporary Price Hike

	GDP (% points)		
	2004E	2005E	2006E
US	0	-0.1	-0.2
Japan	-0.1	-0.3	-0.4
China	-0.2	-0.4	-0.1
India	-0.2	-0.3	0
S Korea	-0.1	-0.2	-0.3
Singapore	-0.3	-0.1	0.1
Taiwan	-0.1	-0.2	-0.1

Effects of US$10 Permanent Price Hike

	GDP (% points)		
	2004E	2005E	2006E
China	-0.2	-0.7	-1
India	-0.2	-0.7	-0.8
S Korea	-0.1	-0.4	-0.8
Singapore	-0.3	-0.6	-0.4
Taiwan	-0.1	-0.4	-0.6

Source: CSB

Outlook: Demand & Supply

IEA expects the growth rate of oil demand to slow to 1.44 mb/d in 2005. World oil demand will average 83.9 mb/d, a 1.8% yoy increase. Growth is expected to slow in the US and China in light of an economic softening. A forecast of global oil demand broken down by region is as follow:

Global Oil Demand by Region

(mb/d)

			Annual Change (%)	
	Demand 2004	**Demand 2005F**	**2004**	**2005F**
North America	25.1	25.3	2.0	0.8
Europe	16.45	16.55	1.7	0.6
OECD Pacific	8.7	8.61	-1.2	-1.0
China	6.33	6.69	14.7	5.7
Other Asia	8.6	8.81	5.6	2.4
Former Soviet Union	3.7	3.82	3.6	3.2
Middle East	5.9	6.17	5.7	4.5
Africa	2.8	2.90	2.4	3.3
Latin America	4.9	5.00	3.6	2.2
World	**82.37**	**83.85**	**3.3**	**1.8**

Source: IEA

A forecast of global oil supply output are as follows:

Non-OPEC Oil Supply

(mb/d)

			Annual Change (%)	
	2004	**2005F**	**2004**	**2005F**
North America	14.63	14.85	0	1.5
Europe	6.09	5.89	-3.2	-3.4
Pacific	0.58	0.54	-14.3	-6.9
Total OECD	**21.30**	**21.28**	**-1.4**	**-0.9**
Former Soviet Union	11.17	11.77	8.7	5.4
Europe	0.17	0.16	0	-5.9
China	3.46	3.53	2.9	2.0
Other Asia	2.74	2.73	3.8	-0.4
Latin America	4.04	4.35	0	7.7
Middle East	1.89	1.84	-5.0	-2.6
Africa	3.41	3.71	9.7	8.9
Total Non-OECD	**26.89**	**28.08**	**5.1**	**4.4**
Processing Gains	1.83	1.86	0	5.6
Total Non-OPEC	**50.03**	**51.23**	**2.2**	**1.0**

Source: IEA

OPEC Oil Supply

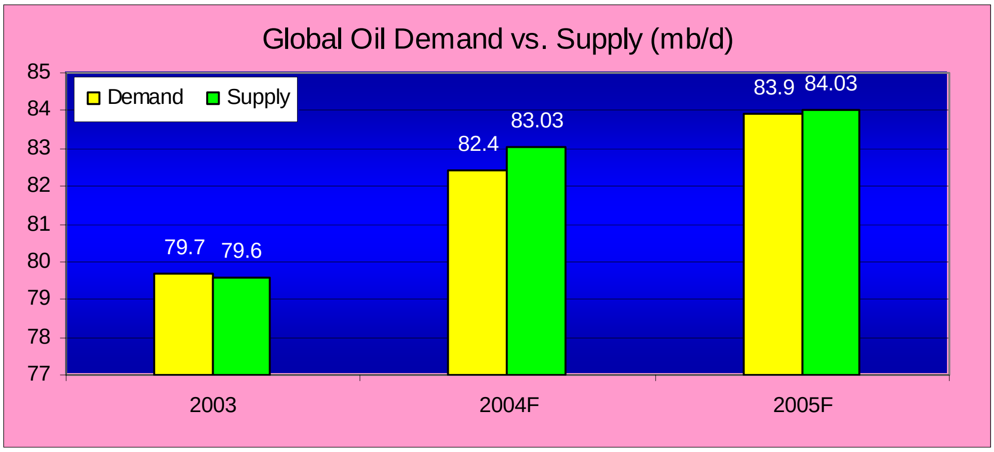
(mb/d)

	2004F	**2005F**
Crude	28.7*	28.0
NGLs	4.3	4.8
Total	**33.0**	**32.8**

Source: IEA

* OPEC's crude supply for 2004 is the average of its previous 4 quarters output.

According to IEA's demand and supply projections, the chart below shows that there is sufficient supply to meet demand.



Source: IEA

However, there are several key risks that challenge the oil supply forecast for 2005:

- **OPEC** might decide to reduce production. An OPEC source said that the cartel will consider cutting formal output of 1 to 1.5 mb/d in its 30 January meeting if the WTI falls below US$40/bbl. That seems unlikely for now as the WTI closed at US$48.61/bbl on 24 January 2005.

- **Iraqi** oilfields and pipelines continue to be targets for terrorist sabotages. Currently, the days leading up to the 30 January Iraqi election look vulnerable.

- Potential labour and ethnic crisis at **Nigerian** oilfields may resurface.

- Military action from the U.S. and Israel against **Iran** over its nuclear programs cannot be ruled out.

- **Saudi Arabian** oilfields look susceptible to further Al-Qaeda sabotages.

Outlook: Oil Price

Oil prices are expected to continue to rise in 2005 as a moderate global economic growth will continue to ramp up demand for energy resources. Inventory levels in the US are believed to be still low and demand from China is expected to rise next year. Furthermore, geopolitical risks in major producers continue to persist. Tensions with Iran's nuclear program, labour unrest in Nigeria and further sabotage on Saudi Arabian facilities are some factors that may underpin oil prices in 2005.

Despite expectations of higher oil prices in 2005, there are industries leaders who think that record oil prices of 2004 will not be repeated this year. John Browne, Chief Executive of BP, believes that record prices of 2004 were not a reflection of an underlying supply shortage. He argues that it was because demand grew twice its normal rate, and that has caused insecurity. Browne sees surplus capacity growing in 2005, especially outside the OPEC cartel. People in the same camp as Browne also believe that U.S. inventories of oil, while low at the moment, are rebounding smartly and are keeping well ahead of demand.

Conclusion

The current high oil price has factored in a very high oil risk premium based on fears of supply disruption and price speculation. The artificially high prices are not supported by supply and demand fundamentals and as such, we should see prices subsiding once these fears diminish.

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