CIBC World Markets

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TSX Sector Strategy #6

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Crude Markets to Tighten Sending Oil & Gas Index to 2600

Jeff Rubin and Peter Buchanan

Market Weight 20.9% **Recommended Weight 25.9%**

Summary

- We raised our weighting in the oil & gas sector to 25.9%, 5%-pts over the benchmark.
- While the index has risen by about 40% since last May, valuations are only now catching up to cash flow, as the stock market ever so reluctantly begins to acknowledge the permanence of high oil prices. Our forecast of a $50/bbl average crude price this year, and a rise in natural gas prices to over $7/MMBtu should drive further earnings growth. We've raised our 12-month target for the TSX Energy Sector from 2300 to 2600.
- The supply outlook for crude over the next 3-4 years points to ever-tighter markets.
- While approximately 2.7 million barrels per day are expected to come on stream in 2005, the world will lose over a million barrels per day through depletion of conventional supply, leaving net supply increases precariously tight in the face of growing global crude demand. We expect crude prices will average $55/bbl in 2006.

Key Indicators

	Latest (Feb. 28)	2005	2006
WTI ($/bbl)	51.75	50	55
Natural Gas (Nymex, $/MMBtu)	6.73	7.25	8.00

	Latest	12-Month Target
TSX Energy Index	2238	2600
	Consensus	**CIBC WM Estimate**
Fwd. Cash Flow	400	470

Crude Markets to Remain Tight in 2005

Does moderating global economic growth spell slacker energy markets and cheaper prices for crude in 2005? Or is supply growth so limited, that energy markets may get even tighter this year?

Soaring global growth pushed world crude demand growth to a near-record 3.4% pace last year. An expected deceleration in global economic growth from 5% in 2004 to 3.5% this year should shave back growth in crude demand to the 2% range. While a reprieve from the pressures that rocked oil markets in 2004, that's still significantly stronger than demand growth over the last quarter century (Chart 1).

Globalization has been a sparkplug for rising energy use. China consumes twice as much oil as it did a decade ago. It and the rest of East Asia accounted for nearly half of last year's increase in global crude demand. A rise that is now likely to be permanent.

A 2% rise in growth in global oil demand (Chart 2) would boost daily needs from 82.4 million barrels in 2004 to over 84 million barrels this year. With OPEC spare capacity at record lows, it begs the question: where is the world going to come up with close to another 2 million barrels in daily production?

Limited New Capacity Coming On Stream in Next 3-4 Years

Most, if not all, of that increase in global crude supply will come from a number of mega-projects coming on

Chart 1

World Oil Demand vs GDP Growth

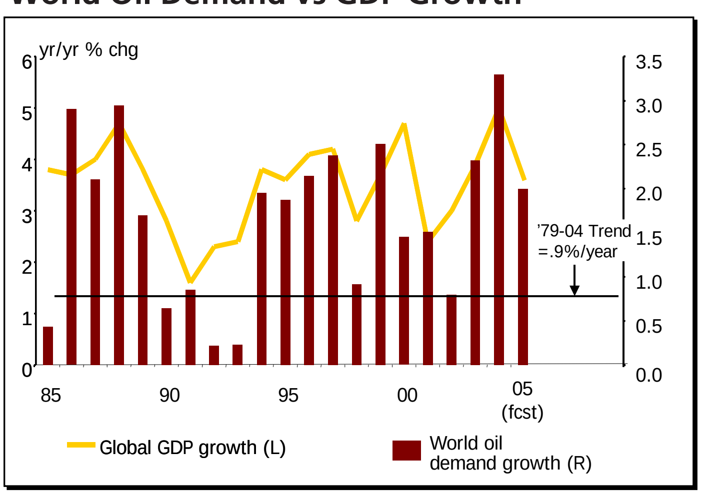
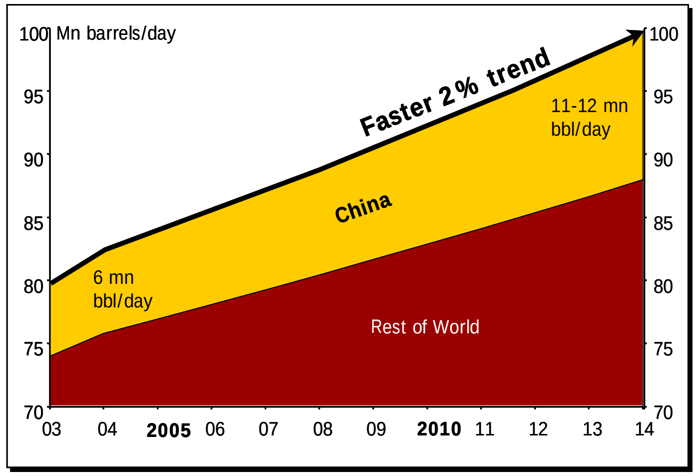


Chart 2

China Will Lift Global oil Consumption by Above-Trend 2% in Coming Decade



stream. The completion of the first phase of the massive offshore Azerbaijan field will add nearly 300,000 barrels per day to global crude supply. The Sakhalin project in Siberia should add another 250,000 barrels per day. In aggregate, summing up all the new sources of supply coming on stream this year (Table 1), world oil supply is expected to increase by a seemingly reassuring 2.7 million barrels per day.

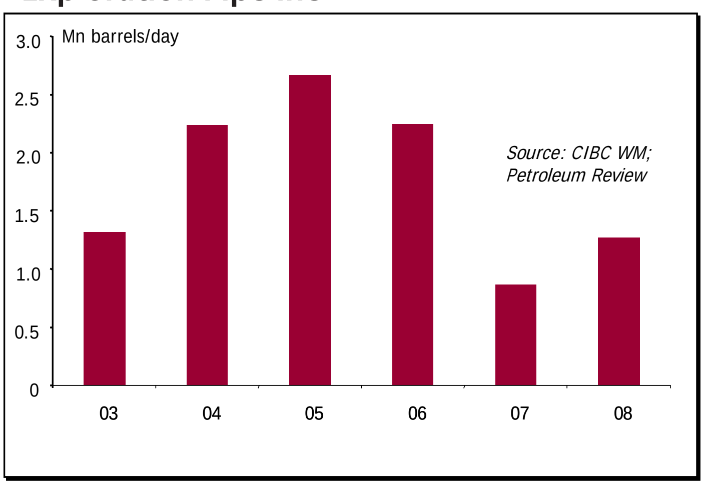
Scheduled new production, however, trails off markedly in 2006, with only another 2.2 million barrels per day expected to come on stream—the largest being Kashagan Phase I, in the Caspian. An even-smaller increase is scheduled for 2007, when only about 900,000 new barrels per day will be added to global production (Chart 3). Throwing in these increases, global supply rises only marginally to 87 million barrels by 2006 and even less so to barely over 88 billion barrels a day in 2007. Given the average six-year lead time needed for crude mega-projects, the die is pretty well cast for global crude supply for at least the next several years.

The projected additions to capacity are gross additions, not net additions. The distinction is significant because every year production declines in operating wells due to natural depletion. A typical individual Middle Eastern well loses over 20% of production every year. According to energy experts like Matthew Simmons, rising water cut rates in Saudi's principal oil field, Ghawar, raises doubts even about the sustainability of Saudi's oil production.

Table 1
Major Sources of New Crude Supply in 2005

Location	Project Name	Capacity ('000 barrels/day)
Brazil	Barracuda-Caratinga	273
Azerbaijan	ACG Complete Phase 1	270
Nigeria	Bonga South	250
Russian Far East	Sakhalin I	250
Gulf of Mexico	Thunder Horse	200
Nigeria	Erha	150
Russia Siberia	Prirazlomnoye	150
Brazil	Roncador III	145
Khanty-Mansiisk	Salym fields	120
Brazil	Frade	110
Brazil B60 Santos	Jubarte+Cachalote	110
NE Abu Dhabi	NEAD project	110
Brazil	Marlim Leste	100
Eastern Canada	White Rose	100
Gulf of Mexico	Holstein	100
Gulf of Mexico	Mad Dog	100
Trinidad	Greater Angostura Phase 1	80
Venezuela offshore	Corocoro Phase 1	50
Total		**2,668**

Chart 3
Limited New Capacity in the "Exploration Pipeline"



On a global scale, annual depletion is now running at over one million barrels per day, reducing global supply by 1½% every year. Consequently, there is a requirement for new discoveries just to keep world oil production constant over time. More troubling, however, is increasing evidence pointing to a rising global depletion rate in coming years as more fields pass their Hubbert curve peaks. During the next three years production from Mexico, Oman and even the Saudi-Kuwaiti Neutral Zone will start to decline, joining a growing list of oil-producing provinces whose production is already falling. The London-based Energy Institute estimates that losses from depletion, already running at 1.1 million annually, will rise further as this occurs (Chart 4).

Subtracting these depletion estimates from scheduled supply additions leaves the world's crude market precariously tight over the foreseeable future (Chart 5). This year's projected production rise of nearly 3 million barrels a day, when netted against a 1.1 million barrel depletion loss, leaves just enough supply to accommodate our projected 2% rise in

Chart 4
Global Depletion Now Surpasses 1 Million Barrels Annually

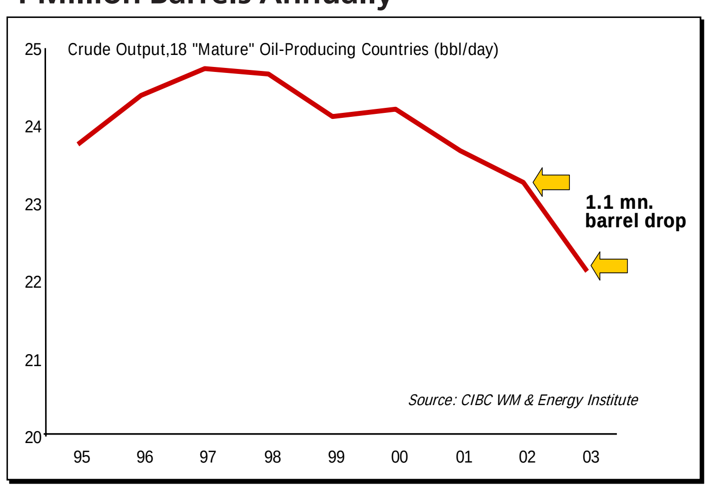
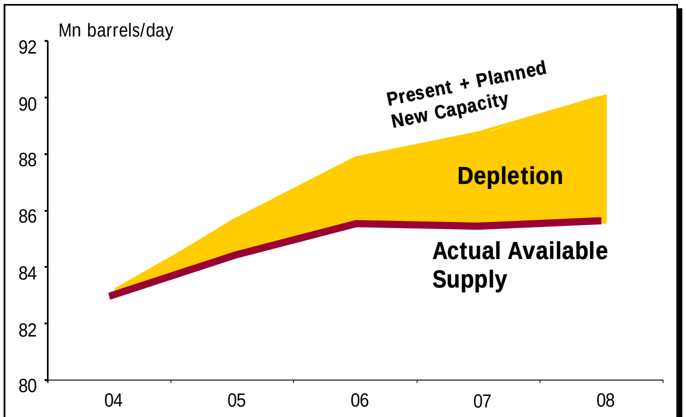


Chart 5

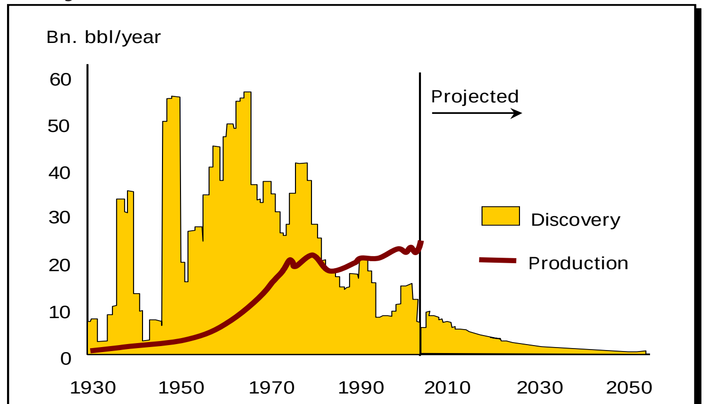
"Running Faster to Stand Still": Planned New Capacity Largely Just Offsets Depletion



Source: Petroleum Review, CIBC WM calculations

Chart 6

New Discoveries Replacing Only Half of Oil Produced



Source: Association for the Study of Peak Oil & ExxonMobil (2002). Revisions backdated to year field discovered.

global crude demand. It's well short of what would be required to accommodate another year of robust demand growth like what we saw last year.

Oil companies' exploration arms have been hard enough pressed as it is to keep up with rising global oil demand. Crude discoveries readily outstripped oil consumption from WWII's end through the mid-1970s. But new discoveries these days are replenishing less than half of the reserves lost to production (Chart 6). The world consumed about 29 billion barrels of oil in 2004. That's well above the 10-15 billion barrel annual pace of new reserve additions from exploration efforts. Global oil discoveries in fact peaked over thirty years ago. Discoveries in the "lower 48" peaked in the 1930s, four decades before production. If that pattern holds globally, global oil production may be much nearer to a peak than many experts have hitherto believed (Chart 7).

Concerns about supply shortages have elevated crude prices to an average of almost $50/bbl over the last 60 trading days. Given the outlook for supply growth net of depletion, there is little reason to believe that prices in 2005 will average any lower. And longer term, still-higher prices will likely be needed as new additions to world supply come at ever-greater costs.

Chart 7

Will Global Oil Production Peak 40 Years After Discoveries Like US?