



# The Fundamentally Bullish Case for Oil Stretches Through 2008, at Least

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April 2006

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# Outline

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- ◆ What has driven oil prices up to historic heights in recent years. Average price hit \$57/bbl WTI last year. We expect \$64 in 2006; \$66 next year; and \$62 in 2008. Our normalized price sits at \$43.
- ◆ Fundamental themes have survived, indeed should strengthen this year. Rising oil demand growth meets lumpy, uncertain oil supply gains
- ◆ Look further out: We find that oil stays scarcer than commonly realized. Its high price is needed to curb demand. More likely than not, change comes slow. Demand projections over-shoot, because supply cannot reach it, until material change materializes.
- ◆ Growing scarcity of oil is key of this decade's oil rally. Commodity markets are trading this notion, equities are not the only ones who seem unaware.

# UBS Global Oil Supply/Demand Balance

Even though Q4 and Q1 featured some demand weakness [weather, government intervention, dislocations and lastly price], supply shocks had the bigger effect. Stocks fell. First half of this year, demand growth resumes and supply fails to catch up, keeping stocks low.

MMBbld	2004	3Q05	4Q05	1Q06	2Q06E	3Q06E	4Q06E	2006E	2007E	2008E
<b>TOTAL DEMAND</b>	<b>82.3</b>	<b>83.1</b>	<b>83.9</b>	<b>85.2</b>	<b>83.8</b>	<b>84.5</b>	<b>86.0</b>	<b>84.9</b>	<b>86.7</b>	<b>88.5</b>
% YoY Growth of which:	3.7%	1.5%	-0.1%	0.9%	1.8%	1.7%	2.5%	1.7%	2.1%	2.2%
N America YoY %	3.3%	0.9%	-0.6%	-0.6%	1.2%	1.3%	2.6%	1.1%	1.5%	1.4%
China YoY %	17.3%	4.9%	1.8%	5.0%	9.7%	5.6%	6.7%	6.7%	6.0%	5.5%
Mideast YoY %	6.9%	5.2%	5.0%	5.5%	5.6%	5.5%	5.8%	5.6%	6.8%	7.2%
<b>TOTAL SUPPLY</b>	<b>82.7</b>	<b>83.4</b>	<b>83.5</b>	<b>84.3</b>	<b>84.6</b>	<b>85.3</b>	<b>85.9</b>	<b>85.0</b>	<b>87.1</b>	<b>88.9</b>
YoY Growth	+3.0	+0.5	-0.2	+1.0	+0.6	+1.9	+2.4	+1.5	+2.1	+1.8
YoY Non Opec Chg.	+0.9	-0.2	-0.2	+0.5	+0.6	+1.5	+1.6	+1.1	+1.1	+0.5
<b>BALANCE</b>	<b>+0.4</b>	<b>+0.3</b>	<b>-0.3</b>	<b>-0.9</b>	<b>+0.8</b>	<b>+0.8</b>	<b>-0.1</b>	<b>+0.1</b>	<b>+0.5</b>	<b>+0.4</b>
<b>OECD Stock Cover</b>	<b>50.5</b>	<b>52.9</b>	<b>51.3</b>	<b>52.5</b>	<b>52.1</b>	<b>51.2</b>	<b>50.9</b>	<b>50.9</b>	<b>51.4</b>	<b>51.4</b>

Source: IEA, DoE, OPEC; national energy statistics agencies including OMV, AFP, UP, ANP, PTT, CERI; national oil companies, including PEMEX, international oil companies including BP and its Statistical Review of World Energy; Reuters, Bloomberg; and UBS estimates and forecasts.

# Demand, Growth Resumes ...

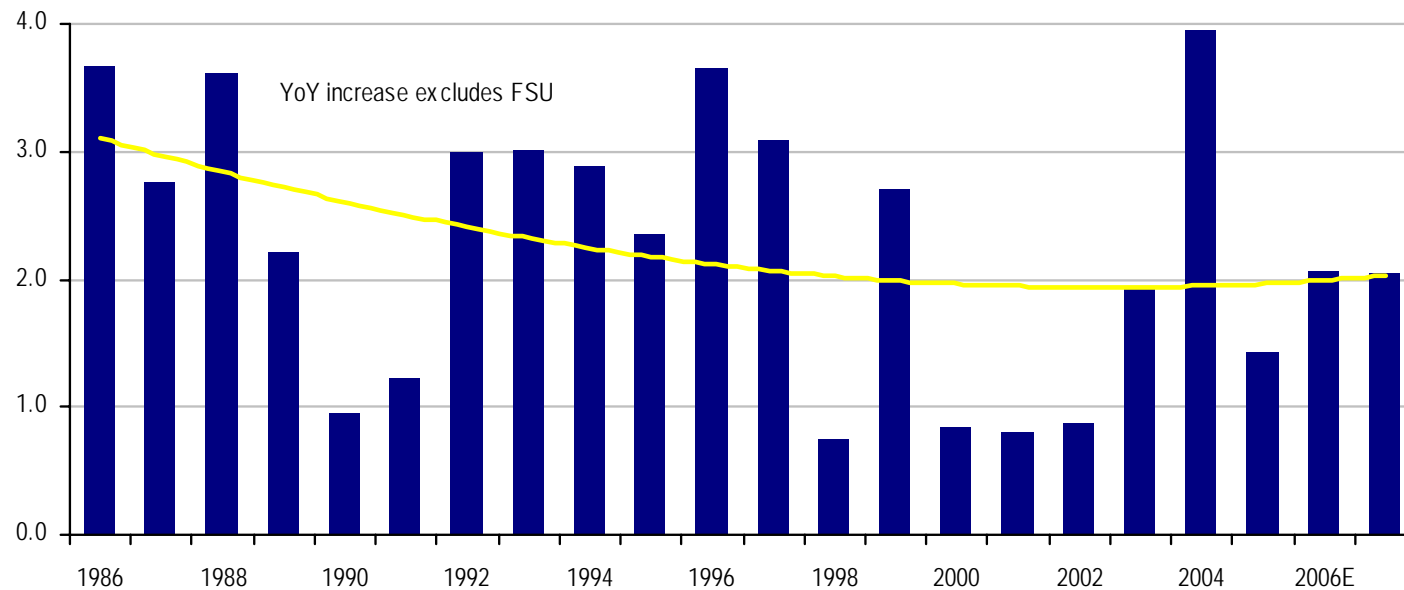
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- ◆ In the US, economy looks robust. Transport-fuel growth, however, stumbled in March. Trend is 2.1%, last year 1.8% before hurricanes.
- ◆ Big question mark is China. All indicators point to growth. Stock building exacerbates the impact.
- ◆ Elsewhere, under-estimating Mideast; Surprisingly robust Europe economy; Latin America and Japan upside?

# Global Oil Demand Keeps Growing ...

Since markets began setting oil prices in late 1985, recessions & financial crises & war dented oil demand growth. Price alone has had little effect, even now at \$60+ ...

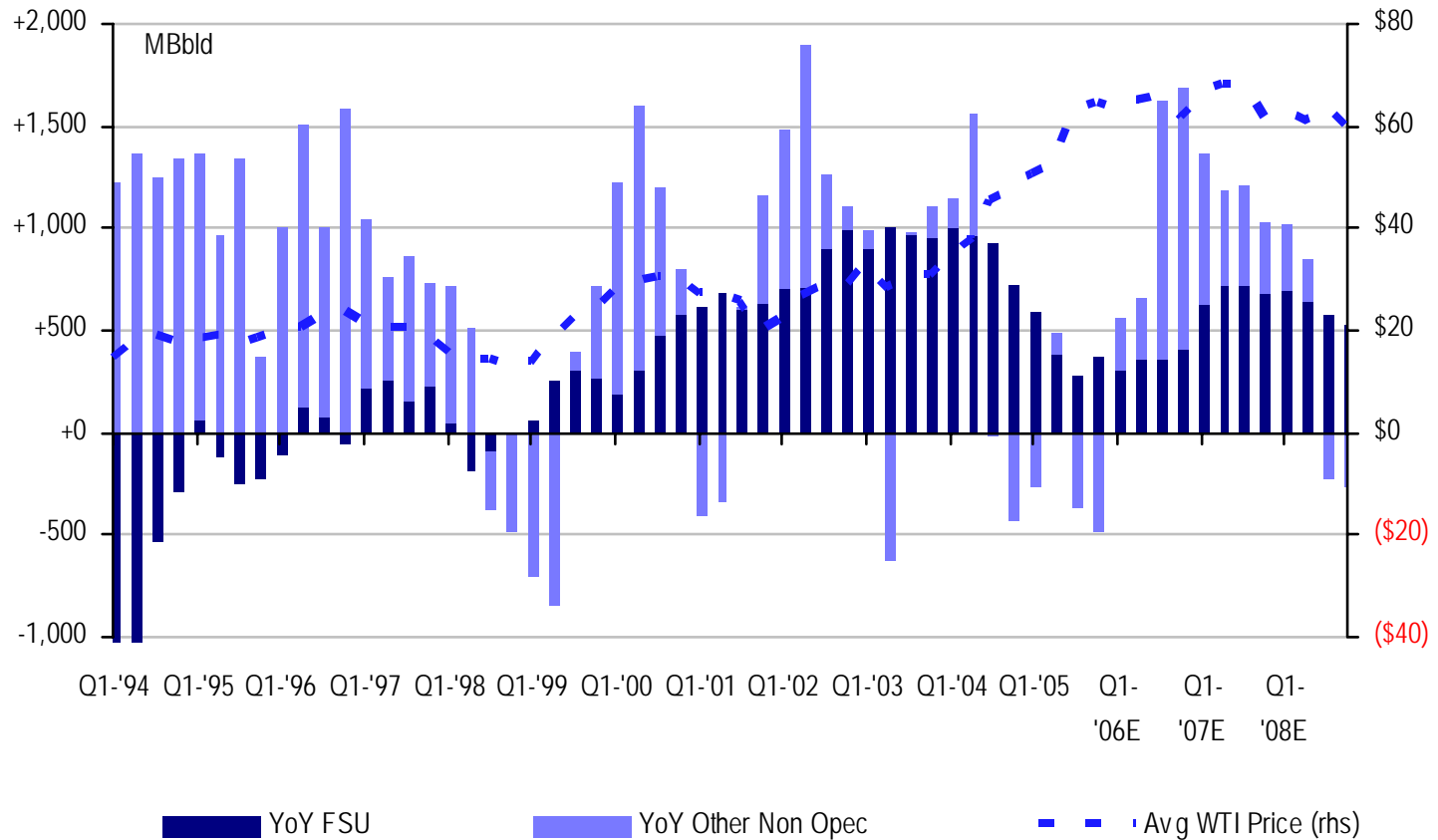
GLOBAL OIL DEMAND GROWTH PROVES LESS ELASTIC TO PRICE



Source: IEA, BP and its Statistical Review of World Energy; Reuters, Bloomberg; and UBS estimates and forecasts.

# Supply Side: No Great Response To Price

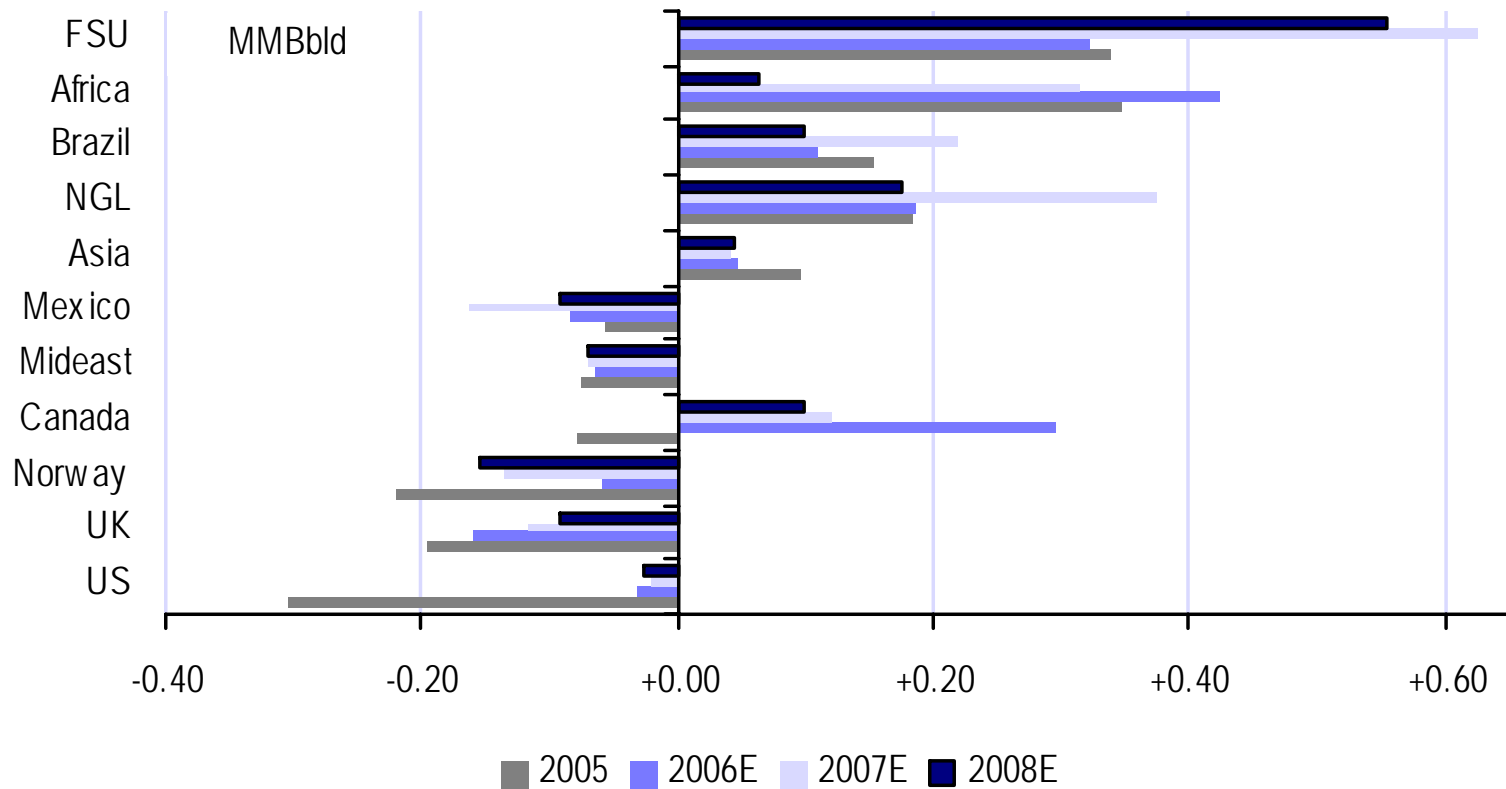
Outside the Former Soviet Union, non-Opec YoY growth averaged -100kbd in the 3-years ended Q4-2005



Source: DoE IEA, DoE, OPEC; national oil companies, including PEMEX, international oil companies including BP and its Statistical Review of World Energy; Reuters; and UBS estimates and forecasts.

# Non-Opec Winners And Laggards

Non-Opec growth: Less and from fewer sources



Source: IEA, DoE, OPEC; national oil companies, including PEMEX, international oil companies including BP and its Statistical Review of World Energy; Reuters; and UBS estimates and forecasts.

# Global Supply Growth In Detail

Supply cuts in the fourth quarter of '05 not only from the US.  
YoY growth lags behind until H2 of this year

Y-o-Y volume growth by region (including Opec members, non-crude and processing gains)

(MMBbld)	Q4-'05	Q1-'06	Q2-'06E	Q3-'06E	Q4-'06E	05E/'04	Q1-'06	Q2-'06E	Q3-'06E
North America	-823	-101	-157	631	631	-482	254	-157	631
of which US	-901	-465	-406	410	518	-367	18	-406	410
South America	266	67	-18	258	150	135	115	-18	258
Europe	-439	-236	-222	-17	-17	-384	-122	-222	-17
Africa	615	444	358	399	502	629	426	358	399
Mid East	-235	592	275	227	596	431	422	275	227
FSU	373	307	362	356	407	406	358	362	356
Asia/Pacific	48	-33	31	27	109	108	34	31	27
<b>Total</b>	<b>-195</b>	<b>1,041</b>	<b>630</b>	<b>1,881</b>	<b>2,377</b>	<b>841</b>	<b>1,487</b>	<b>630</b>	<b>1,881</b>
Opec Crude	-418	135	-373	-91	372	422	11	-373	-91
Opec O.Oil	328	338	351	341	319	266	337	351	341
Non-Opec (Inc.Proc.Gns)	-105	568	651	1,631	1,687	154	1,139	651	1,631

Source: IEA, DoE, OPEC; national oil companies, including PEMEX, international oil companies including BP and its Statistical Review of World Energy; Reuters; and UBS estimates and forecasts.

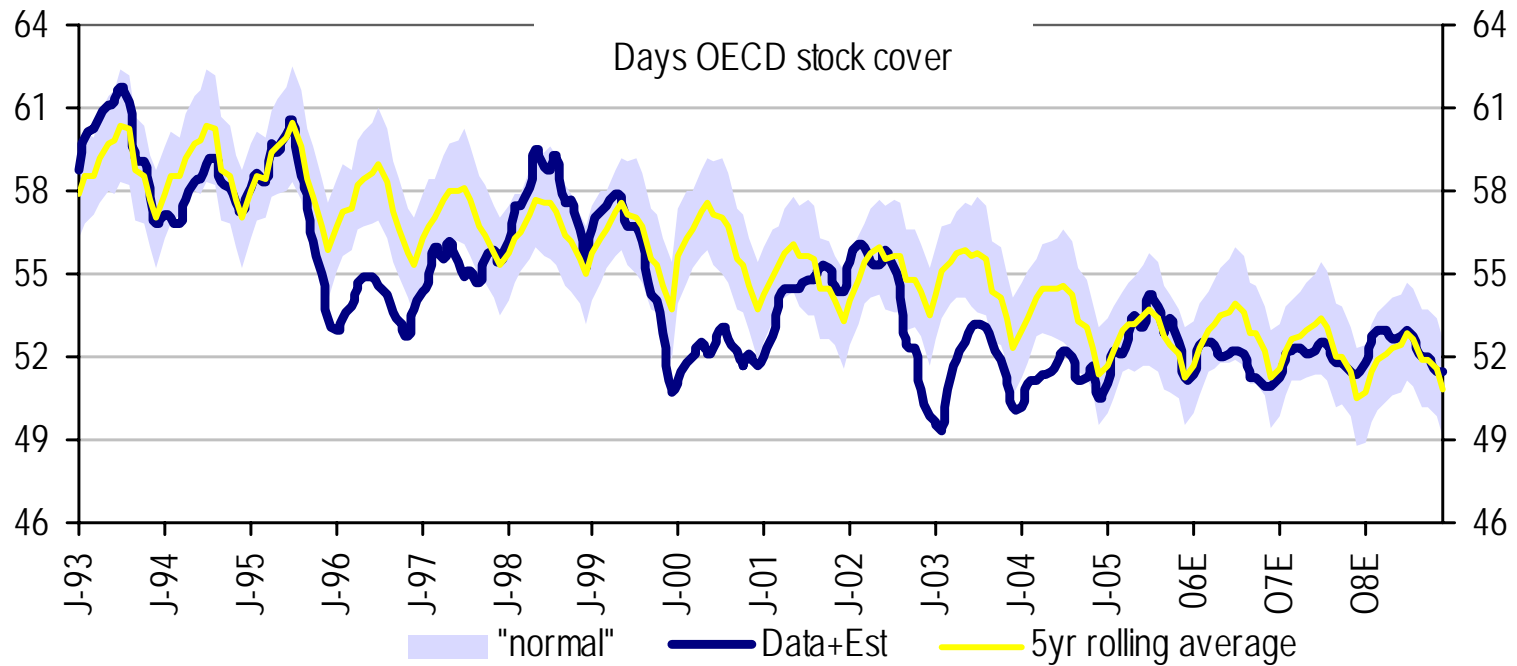
# Supply Side Uncertainty...

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- ◆ Already 2006 is proving quite turbulent:
  1. Russia, 100kbd lingering weather, longer-term supply security, companies report less growth
  2. Nigeria, 650+kbd still, simmering violence
  3. Iran, broke taboo in threatening “oil weapon”
  4. Kuwait, internal audit shows lower reserves
  5. Gulf of Mexico -500kbd and other set-backs
- ◆ Soon to add??: Venezuela, Iraq, Chad & Sudan

# Bottom-Line: Inventories Remain Low

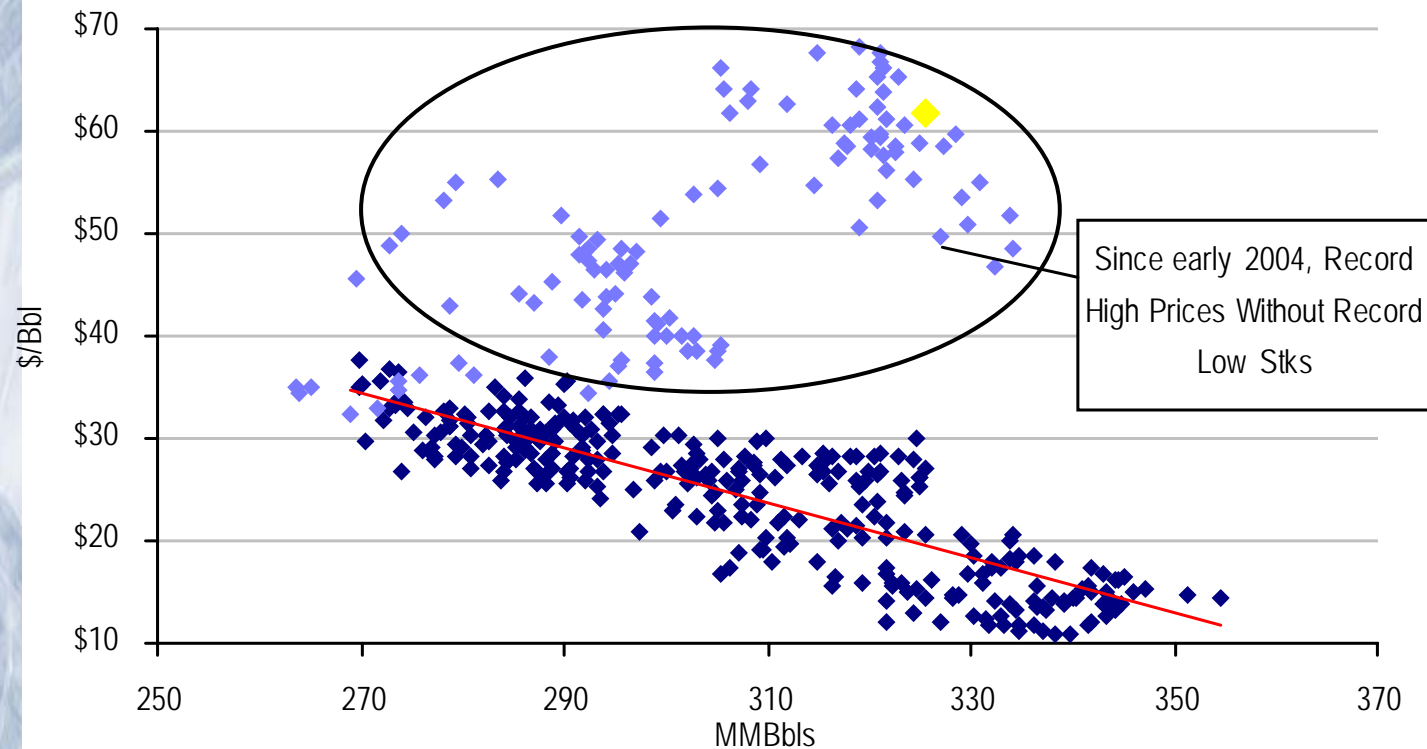
Even as the concept of what is "normal" for inventory cover changes. Against a sliding 5-yr range, stocks stay tight too.



Source: IEA, UBS estimates

# Old Stocks-to-Price Relationship is Gone

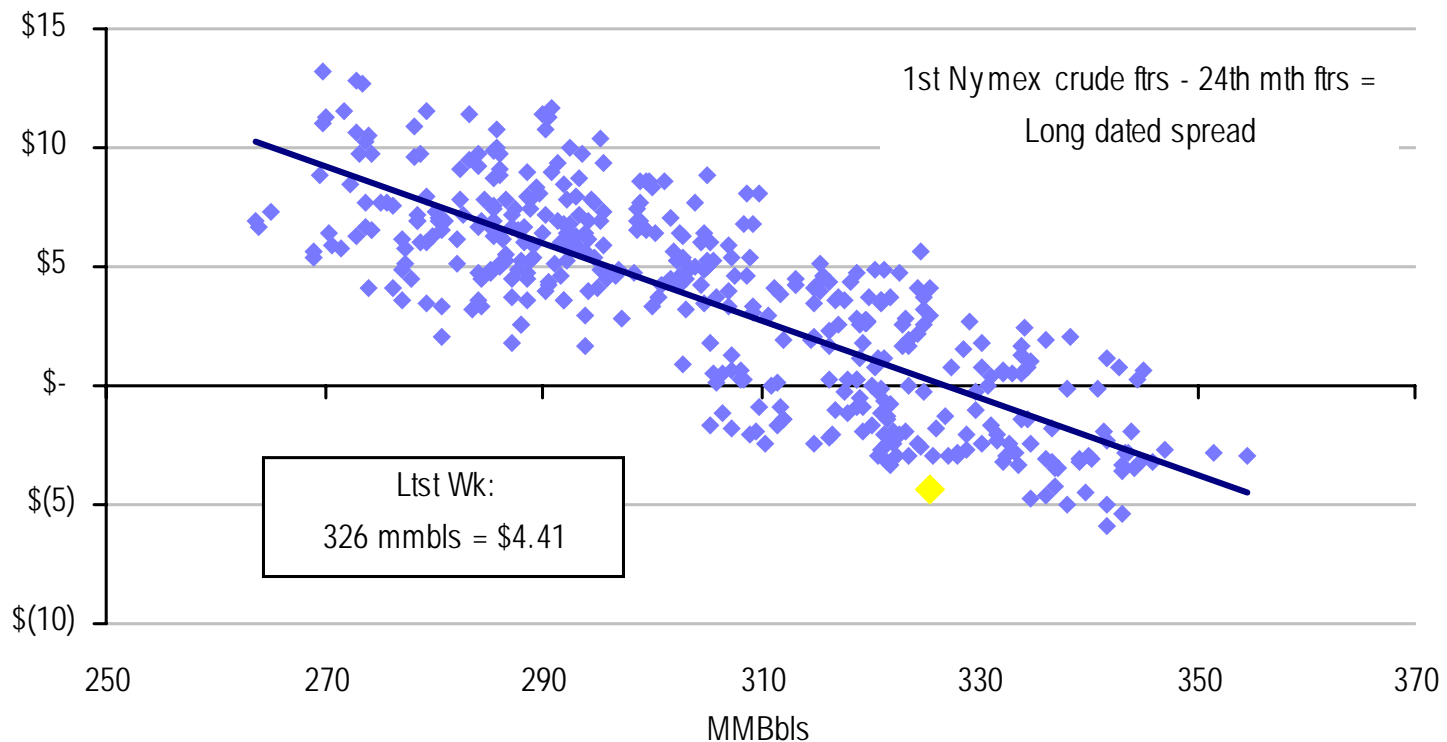
Old stocks-to-price relationship is gone: Prompt WTI futures versus weekly US crude oil stocks 1/1998-present



Source: DoE, UBS

# Better Way to Relate Prices and Stocks

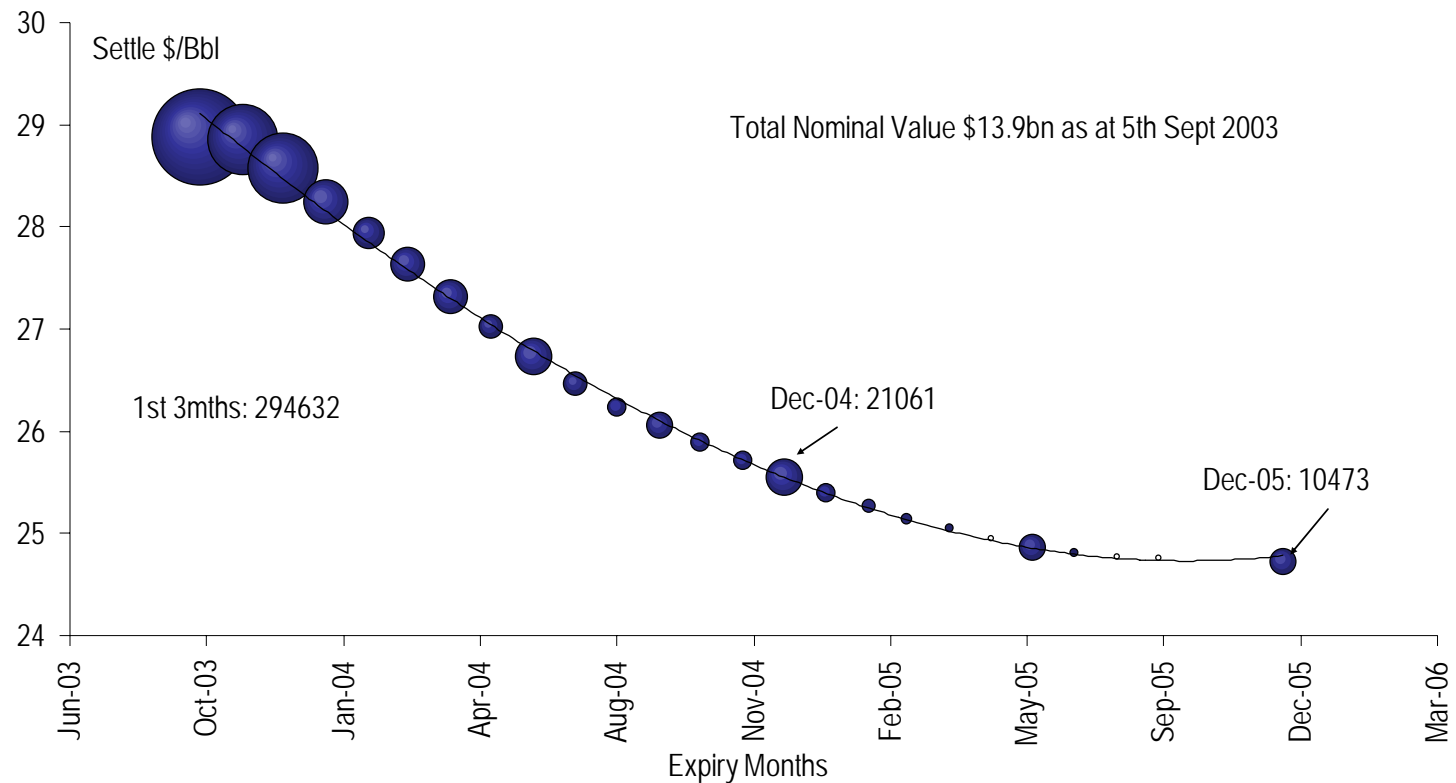
Better way to relate prices and stocks is to look at the shape of the curve, the spread between long-dated and prompt futures contracts (Nymex CL1-CI24)



Source: DoE, UBS

# How Does All This Relate To Prices

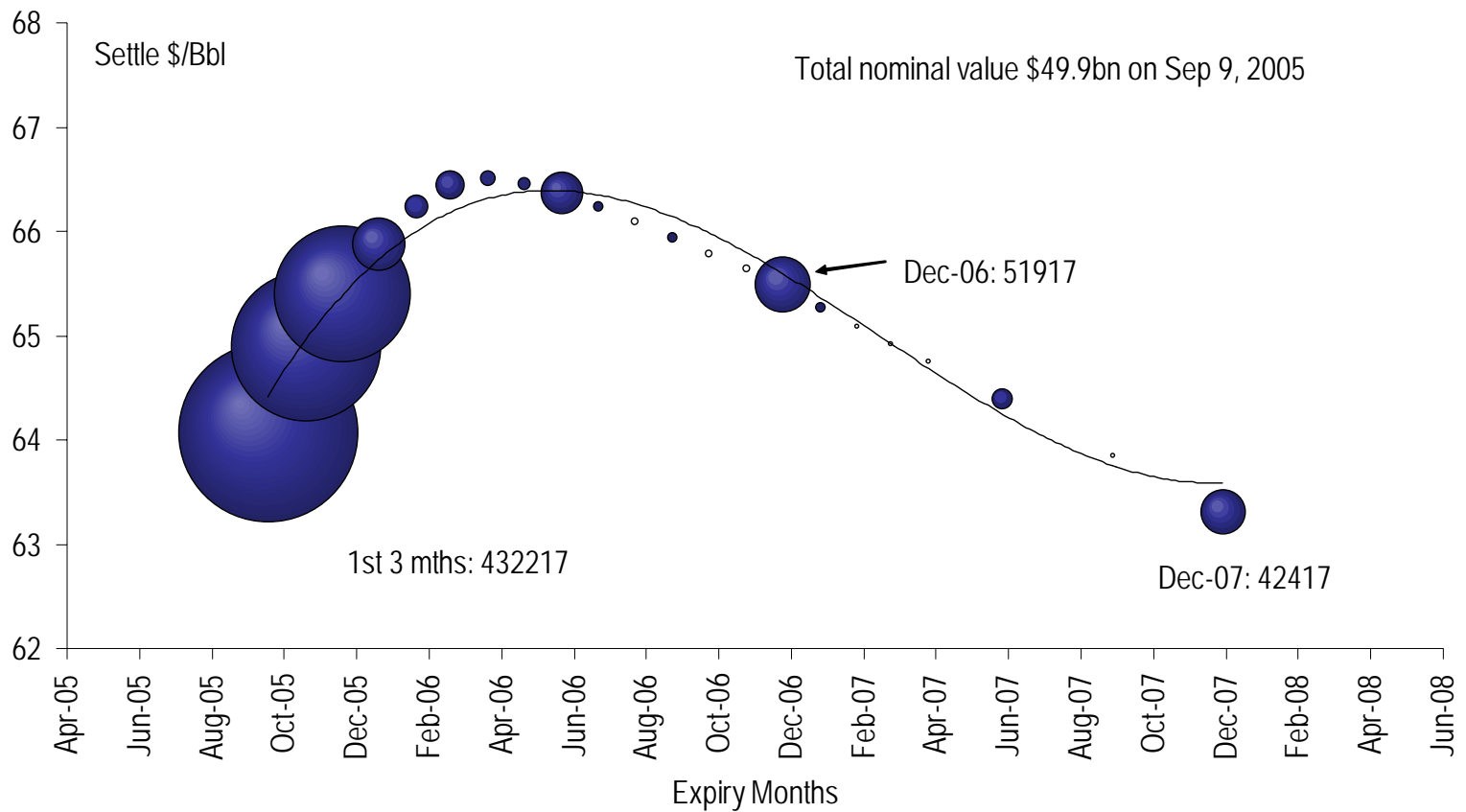
The way things were on Nymex – mid 2003 a rather boring crude oil contract strip:



Source: Nymex

# Great Deal Of Money Has Flown Into Oil

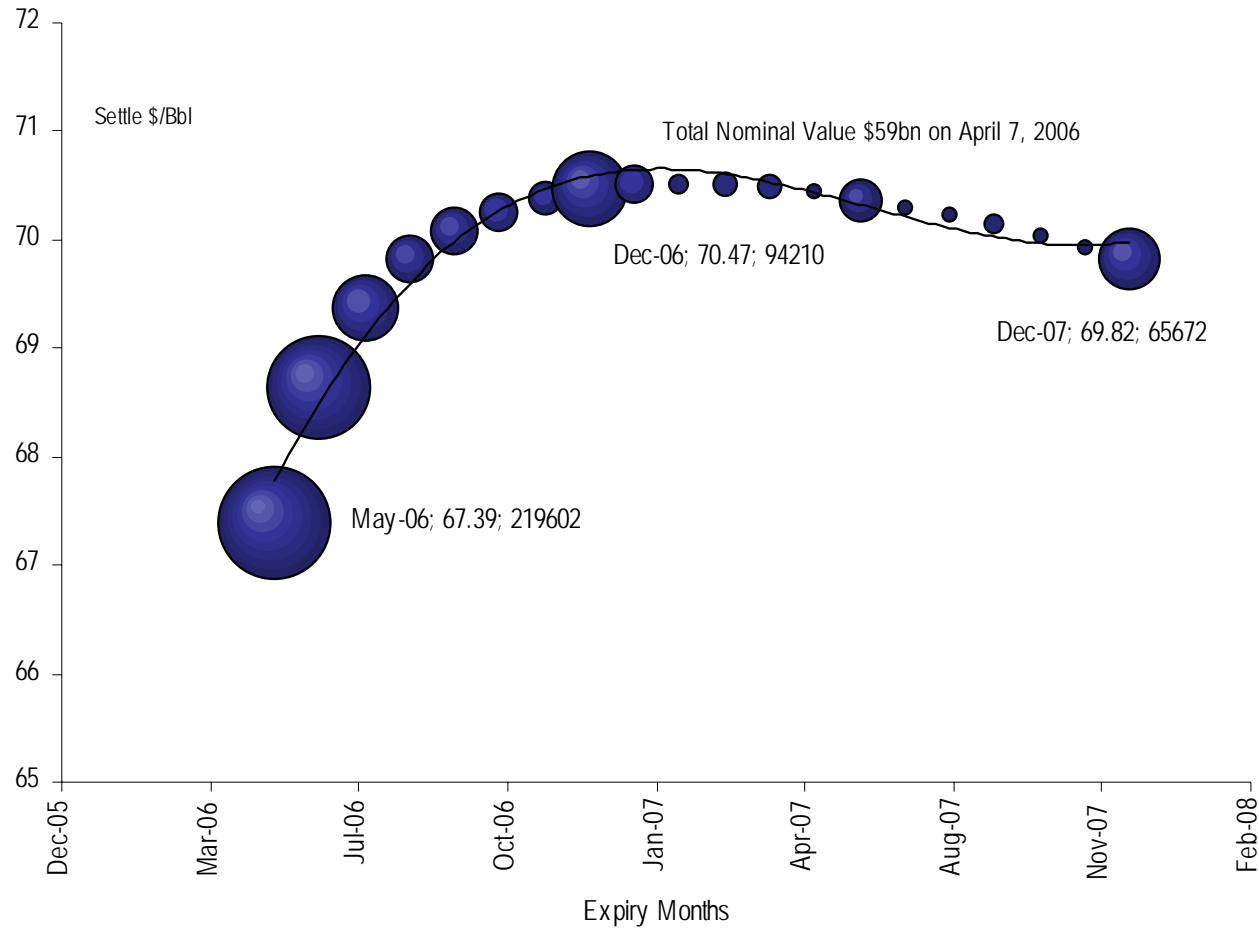
Nymex crude oil contract strip near its late Sept'05 peak



Source: Nymex

# Nor Does That Money Flee Easily

When this curve flattens, where goes the prompt???

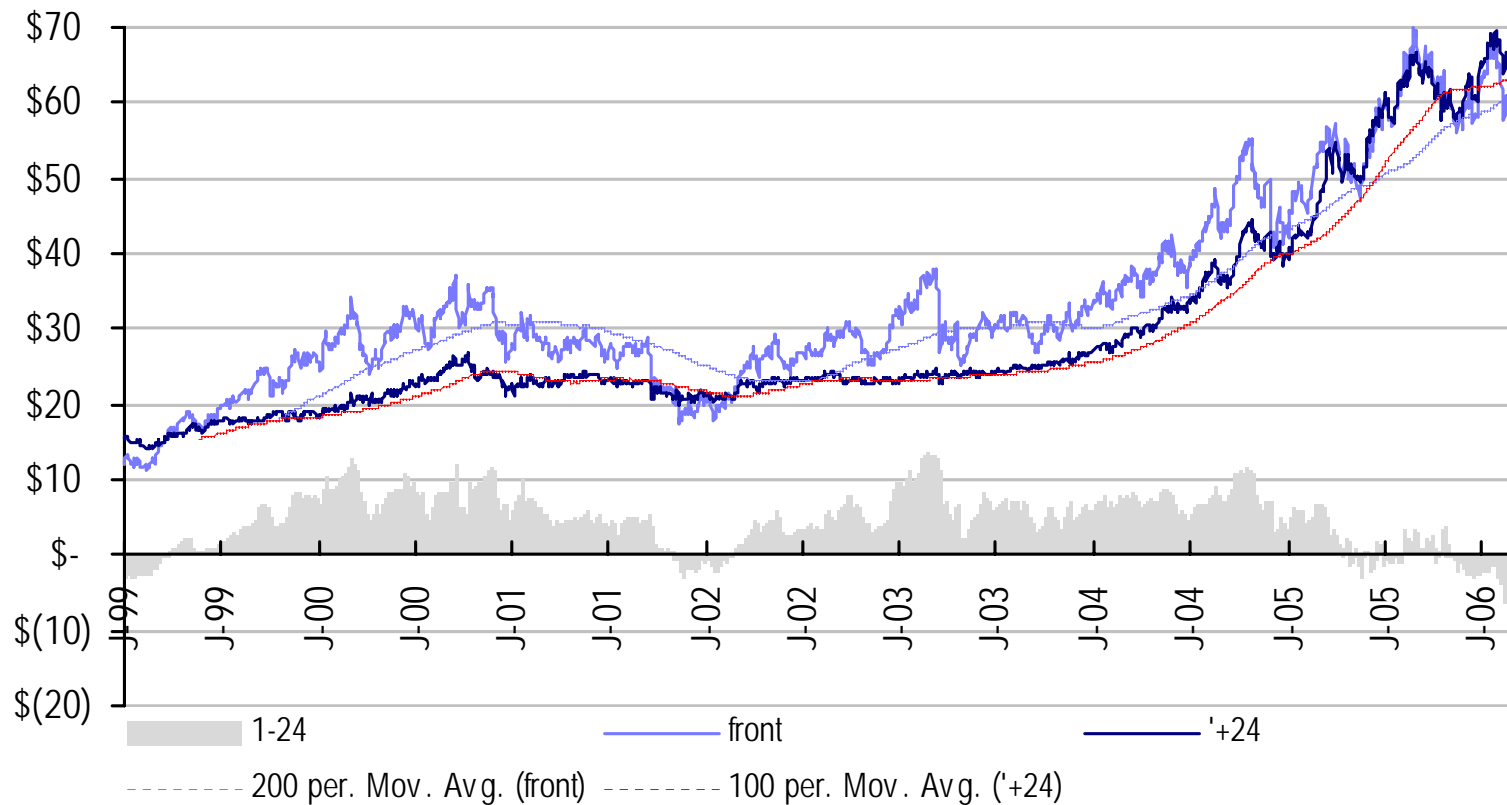


Source: Nymex

# Pricing Focus Shifted Into The Future

Daily oil futures settlements prices 01/1/99-03/02/06

Generic Nymex Crude Oil Futures Contracts #1 and #24 (two year forward)



Source: Nymex

# Further Out, Price Risk Stacked To Upside

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- ◆ So far this decade oil markets have shaken up nearly every tenet of the conventional wisdom on oil prices (eg, no demand destruction, no supply bounce, no price crash)
- ◆ Won't give you a new "paradigm", but we do know/think that odds are stacked overwhelmingly toward higher than "normal" oil prices going forward
- ◆ Growing scarcity of oil spells Opportunity for oil sector segments (eg, mid-stream, E&P); for other energy (eg, alternative energy, nuclear, clean-coal) and associated non-energy plays (eg, those delivering efficiency premiums)
- ◆ Especially in emerging markets, as that's where more supply will need to come from and where demand growth is gravitating

# Long-term Oil Price Involves “Cost”

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- ◆ Our normal price \$43/bbl WTI is a judgment of where we think costs for the least-efficient, significant segment of oil producers anywhere had risen last summer
- ◆ Relatively high floor price summarizes bottom-line under several trends/drivers lifting price: upstream capacity constraints (including rigs, people, pipe, support vessels, offshore kit), possibly part of long investment cycle
- ◆ Among those drivers: host government expectations (“greed”); more oil having to come from frontier areas; and depletion of mature/existing producing provinces
- ◆ These effects are exacerbated by stubborn believe in \$20 oil as the natural mean (eg, [John S Herold survey signals inability of industry to control cost and access resources on their terms](#))

# Opec and Its Latest Business Statement

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- ◆ Much simpler way to get at a floor-price is listening to Saudi Arabia's oil minister, Ali al-Naimi: "Opec is a business organization, and a political organization no more... All every member wants is more money."
- ◆ To clarify, he later mentioned that \$50 to \$60 per barrel is fair. A point on which Hugo Chavez of Venezuela remarked that he would defend \$55 for Venezuela's export basket price

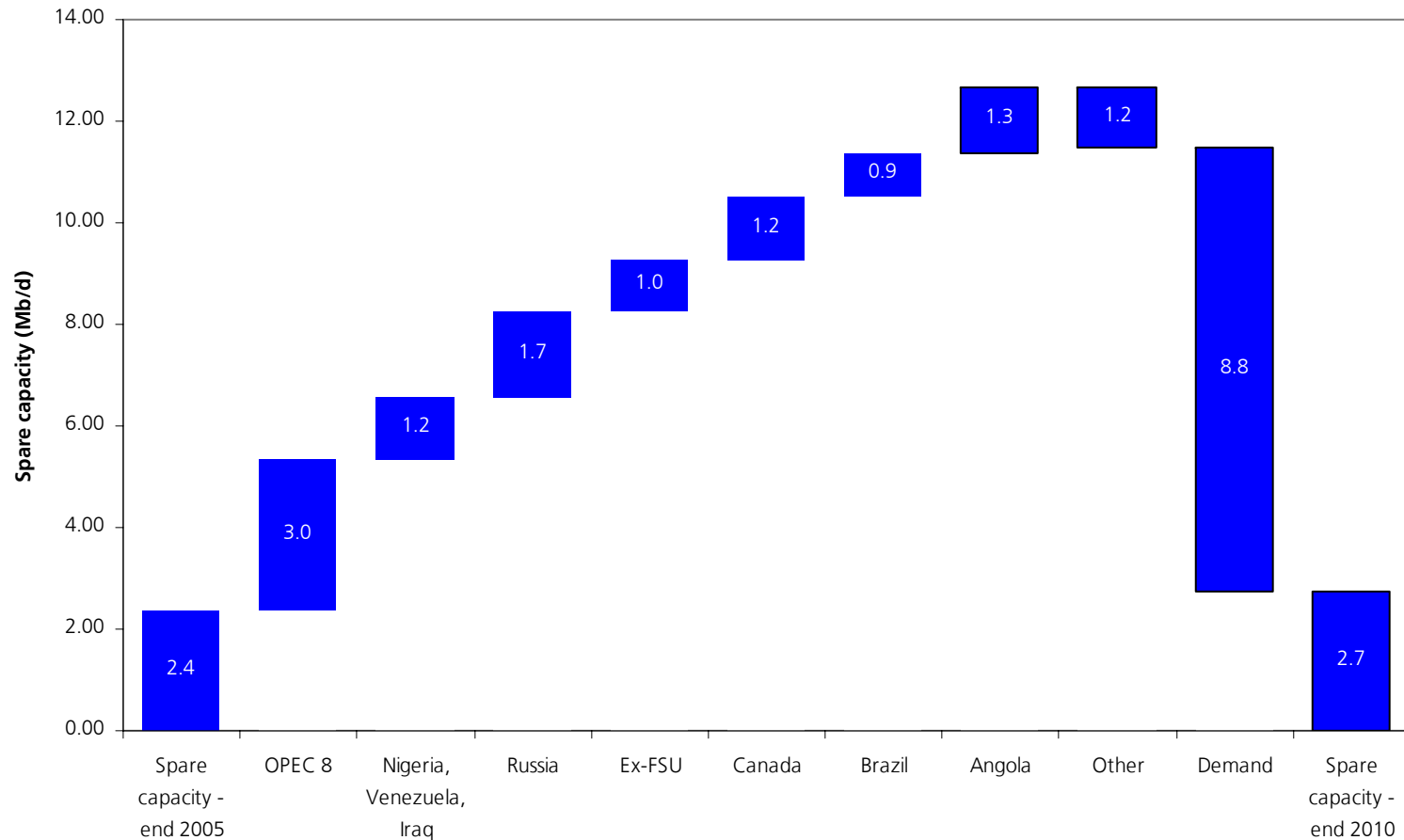
# Demand Side Drivers Are Many & Powerful

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- ◆ Oil demand rises with mega-trends including population growth, economic expansion and trade
- ◆ Higher quality demands add stress on system
- ◆ Over time, demand reduction factors play an increasingly important role too. Think here of efficiency gains, environmental rules and competition from other fuels
- ◆ Room for substitution, however, is significantly more limited than in the 1970s-'80s. Natural gas is scarcer, nuclear has issues (still); coal needs new technology; and alternatives need both technology and time

# One Way To Illustrate Ongoing Scarce-ness

Spare-capacity growth of next to nothing through 2010



Source: UBS Estimates

# Not a Question of Resource but Capacity

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- ◆ Not only are there limits to capacity all up and down the supply chain currently, there are limits to how fast oil production capacity can grow
- ◆ Best work includes not just resource recoverable, but also politics, legal and other societal structures, industry make-up, financial realities, technology and competition
- ◆ On current trends, production-capacity peaks before demand would
- ◆ That cannot happen. Most likely: demand will have to give. Price and politics are the predictable drivers behind such demand side change

# Risks, or How We May Be Wrong

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- ◆ System risks (war, pandemics, economic depression, large-scale terrorism etc)
- ◆ Timing, over time things change and technology, ingenuity, laws of unintended consequences etc are beyond our predictive capabilities: what we now think will take a long time, may get resolved quicker
- ◆ Most of these come with some advance warning however

# Conclusion

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- ◆ Aside from system risks, there is much smaller oil price risk to the downside than most think
- ◆ Until something changes (economic recessions, pandemics, war, terrorism)
- ◆ Aside from finding the resource, getting that energy to market (eg, pipelines, terminals, tankfarms, distribution racks)
- ◆ May still take much more time for oil price thinking to shift in this direction

# Contact information

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## Jan Stuart Global Oil

Mr. Stuart is an executive director and oil economist in the energy group of UBS Investment Research. He provides fundamental analysis of oil markets worldwide, focusing on oil price estimates, supply/demand forecasts and other key indicators.

Prior to joining UBS, Mr. Stuart was head of research for Energy Futures at Fimat, a subsidiary of Société Générale. Before that he was head of Global Energy Futures research for ABN Amro. Prior to that, Mr. Stuart was editor of Petroleum Intelligence Weekly and the bureau chief of Oil Market Intelligence.

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# Risk statement

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Oil prices are extremely volatile in the short, medium and long term, as they are frequently affected by inherently unpredictable events, including natural disasters. In history, oil prices have proved consistently unpredictable because so many political, geological, and economic trends and events affect the supply of and demand for oil.

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UBS rating	Definition	UBS rating	Definition	Rating category	Coverage <sup>1</sup>	IB services <sup>2</sup>
<b>Buy 1</b>	FSR is > 10% above the MRA, higher degree of predictability	<b>Buy 2</b>	FSR is > 10% above the MRA, lower degree of predictability	<b>Buy</b>	40%	35%
<b>Neutral 1</b>	FSR is between -10% and 10% of the MRA, higher degree of predictability	<b>Neutral 2</b>	FSR is between -10% and 10% of the MRA, lower degree of predictability	<b>Hold/Neutral</b>	50%	31%
<b>Reduce 1</b>	FSR is > 10% below the MRA, higher degree of predictability	<b>Reduce 2</b>	FSR is > 10% below the MRA, lower degree of predictability	<b>Sell</b>	11%	30%

1: Percentage of companies under coverage globally within this rating category.

2: Percentage of companies within this rating category for which investment banking (IB) services were provided within the past 12 months.

Source: UBS; as of 31 December 2005.

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**Forecast Stock Return (FSR)** is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months.

**Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (an approximation of the equity risk premium).

**Predictability Level** The predictability level indicates an analyst's conviction in the FSR. A predictability level of '1' means that the analyst's estimate of FSR is in the middle of a narrower, or smaller, range of possibilities. A predictability level of '2' means that the analyst's estimate of FSR is in the middle of a broader, or larger, range of possibilities.

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