

Presentation

Are high oil prices here to stay?

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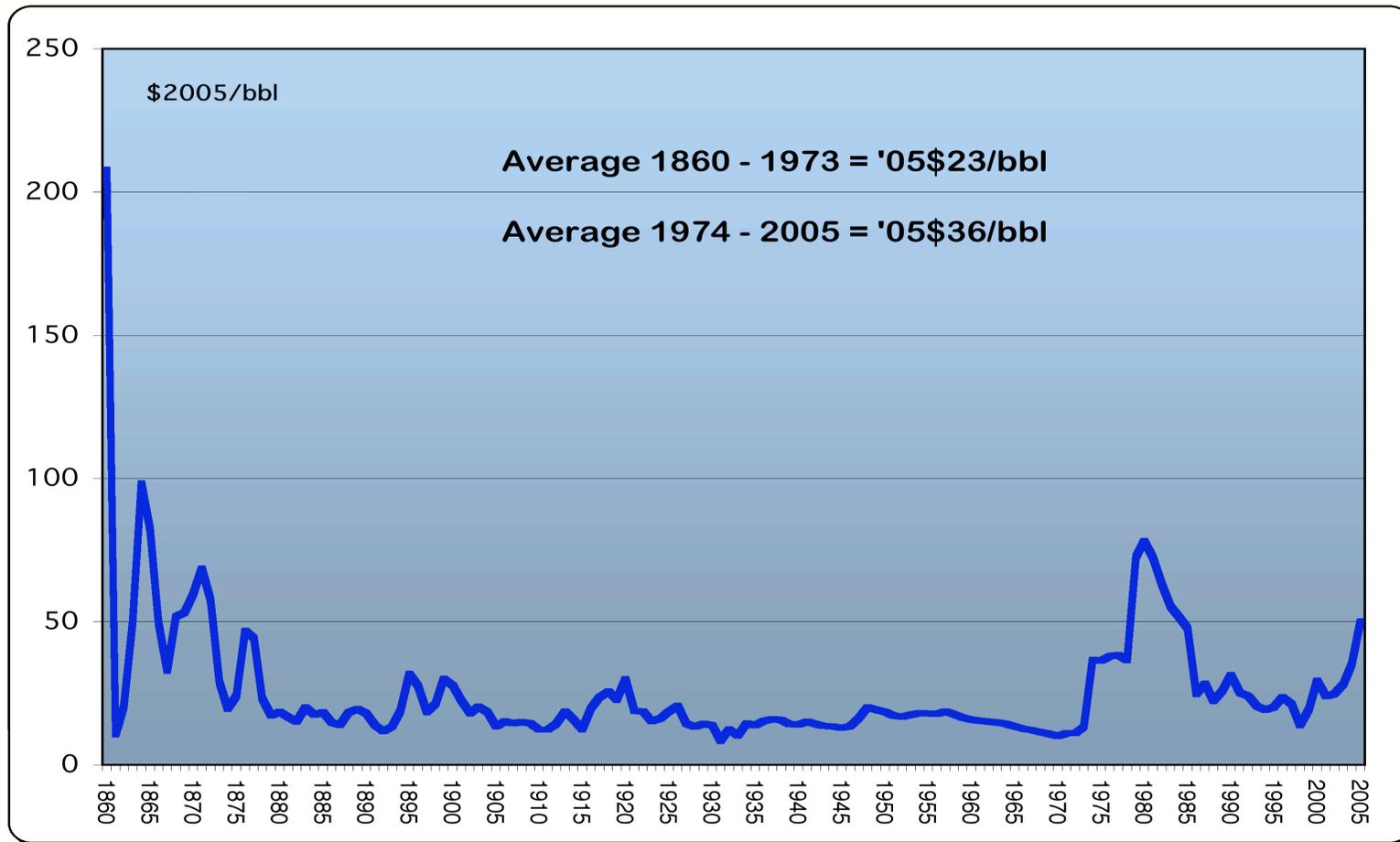
Tokyo — May 2006

The logo for the Centre for Global Energy Studies (CGES) is located in the bottom right corner. It consists of a yellow square with the letters 'CGES' in black, positioned on top of a grey rectangular bar with a blue outline.

CGES

How high are oil prices by historical standards?

Sources : BP and CGES



Oil prices in 2005 were higher in nominal terms than they have ever been. They were also higher in real terms than during any period since 1870, except for the second oil price crisis and its aftermath.

Some tantalising questions

- **How did we get to these high oil prices in the first place?**
- **In what way can they be justified? On a cost basis? Due to strong demand? Due to expectations?**
- **Is there a deeper problem? Peak oil, for instance?**
- **If not, what needs to happen for oil prices to weaken?**
- **How far can oil prices fall? Will OPEC let them?**
- **What about oil prices in the longer term?**

Non-OPEC supply costs are hardly the reason for high oil prices

	operating costs \$/bbl	capital costs \$/bbl	fully-built-up \$/bbl
California heavy oil	6 - 10	3 - 4	12
W. Canada heavy oil	7 - 11	3 - 4	13
Alberta oil sands	9 - 12	3 - 5	15
Venezuela Orinoco	8 - 10	5 - 7	15
Mexican heavy oil	3	5 - 6	8
US Gulf (> 200 metres)	4	4 - 6	9
Brazil (> 200 metres)	4	3 - 5	8
Angola (Girassol field)	3	4	7
Alaska	4 - 5	3 - 4	8
US stripper wells	12 - 24	2 - 3	20
Malaysia offshore	5 - 6	n.a.	8
N. Sea (BP operated & 7 fields)	average 4	3 - 4	8

Sources : IEA & CGES

Note : around \$2 - \$4/bbl should be added for finding costs, except for the Alberta tar sands and Orinoco heavy oil deposits, which are known.

How then did we get to these high oil prices?

Hurricanes?

The hurricanes caused a temporary price spike; however, we are still short of around 23% of US Gulf oil production (343,000 bpd).

Low inventory cover?

OECD company inventory cover was low in 2004 — at 51 days — then rose slightly in 2005 to 52 days and in 1H06 is likely to average 51.3 days.

Low spare output capacity?

OPEC's spare capacity is currently just under 3.0 % of world oil demand.

Low levels of spare refining capacity?

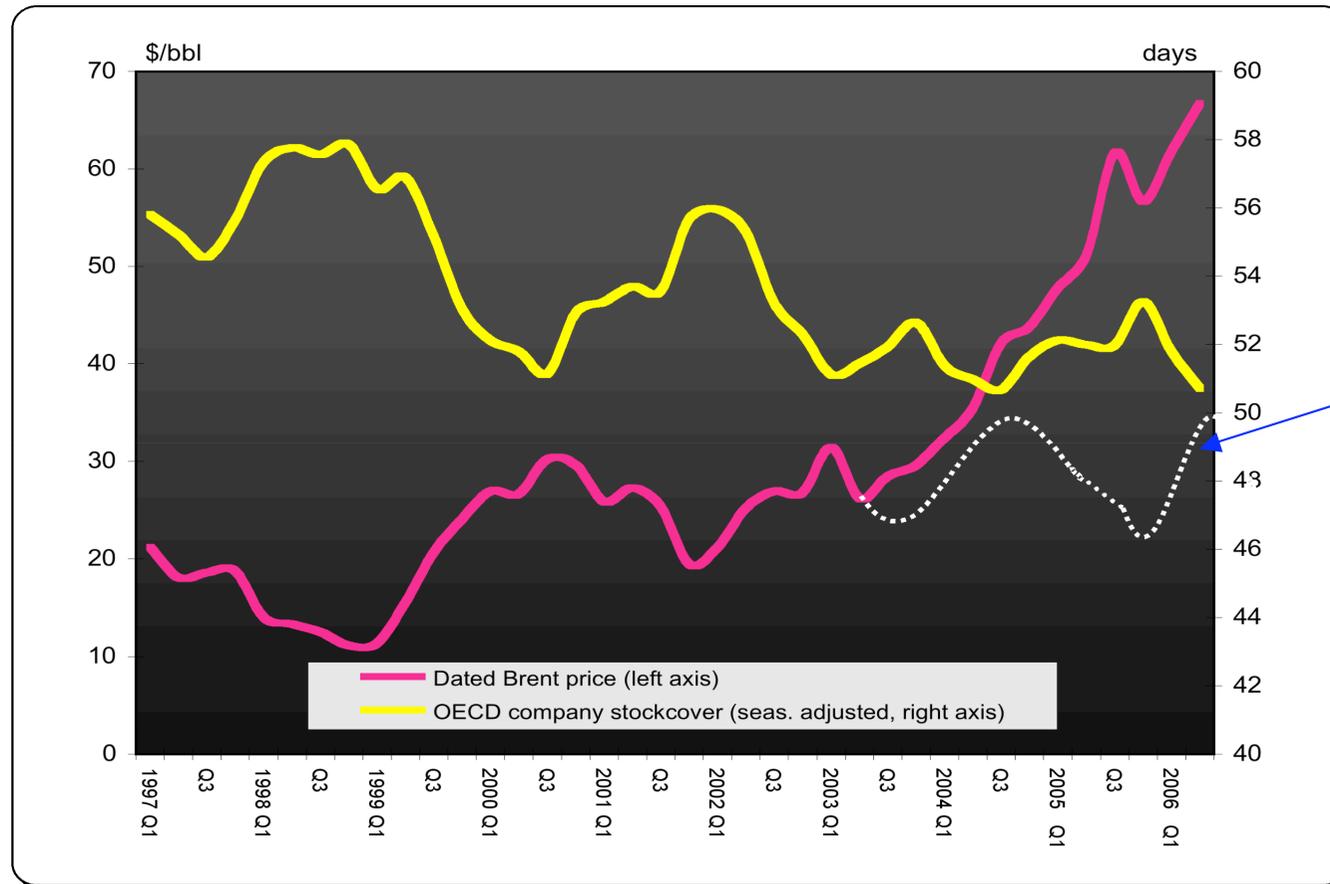
In 2004, global distillation capacity utilisation was 87%; the USA's was 92%.

Fears about the industry's ability to cope?

There is a widely held view that we have entered a new era of oil scarcity because oil output is thought to be peaking.

Is low stock cover to blame for the high oil prices?

Sources : IEA and CGES



Until the second quarter of 2003 oil prices seemed to be the mirror image of OECD company inventory cover, rising when cover was low and falling when cover was high. From 2Q03 onwards forward cover has oscillated between 51 and 53 days' worth and yet oil prices have risen almost relentlessly, suggesting a (perhaps temporary?) severing of the relationship between stock cover and prices.

The role of oil demand growth

	2003 tbpd	2004 tbpd	2005 tbpd
OECD	*685	830	158
of which USA	270	350	20
Non-OECD	198	1278	683
Former CPEs	690	1045	218
of which China	513	860	100
GRAND TOTAL	1573	3152	1058

* Of which 375 tbpd were due to special factors.

2.0 %

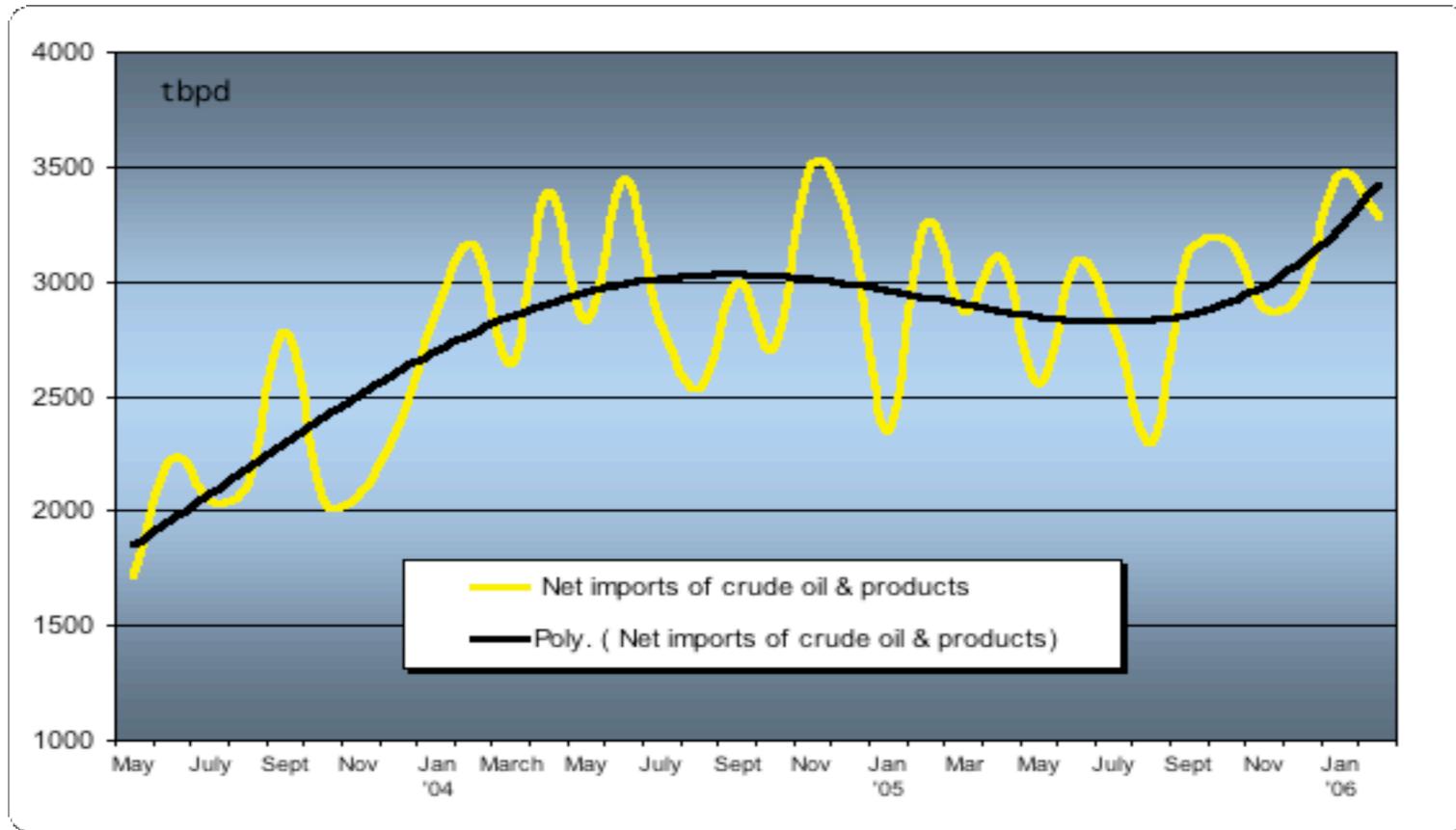
4.0 %

1.3 %

Note that the trend rate of oil demand growth since 1986 has been 1.6% per annum. Oil demand growth of only 1.3% in 2005 occurred despite strong economic growth, suggesting that the oil price increases have started to bite.

The China syndrome — net imports of crude oil and products

Sources : IEA and CGES



Between the summers of 2003 and 2004 there occurred a 1-mbpd step up in net Chinese imports of crude oil and products, which first levelled off in late 2004 and then seemed to be on the decline in 2005. Chinese net imports are now growing once again. This pattern is heavily influenced by China's oil inventory cycle.

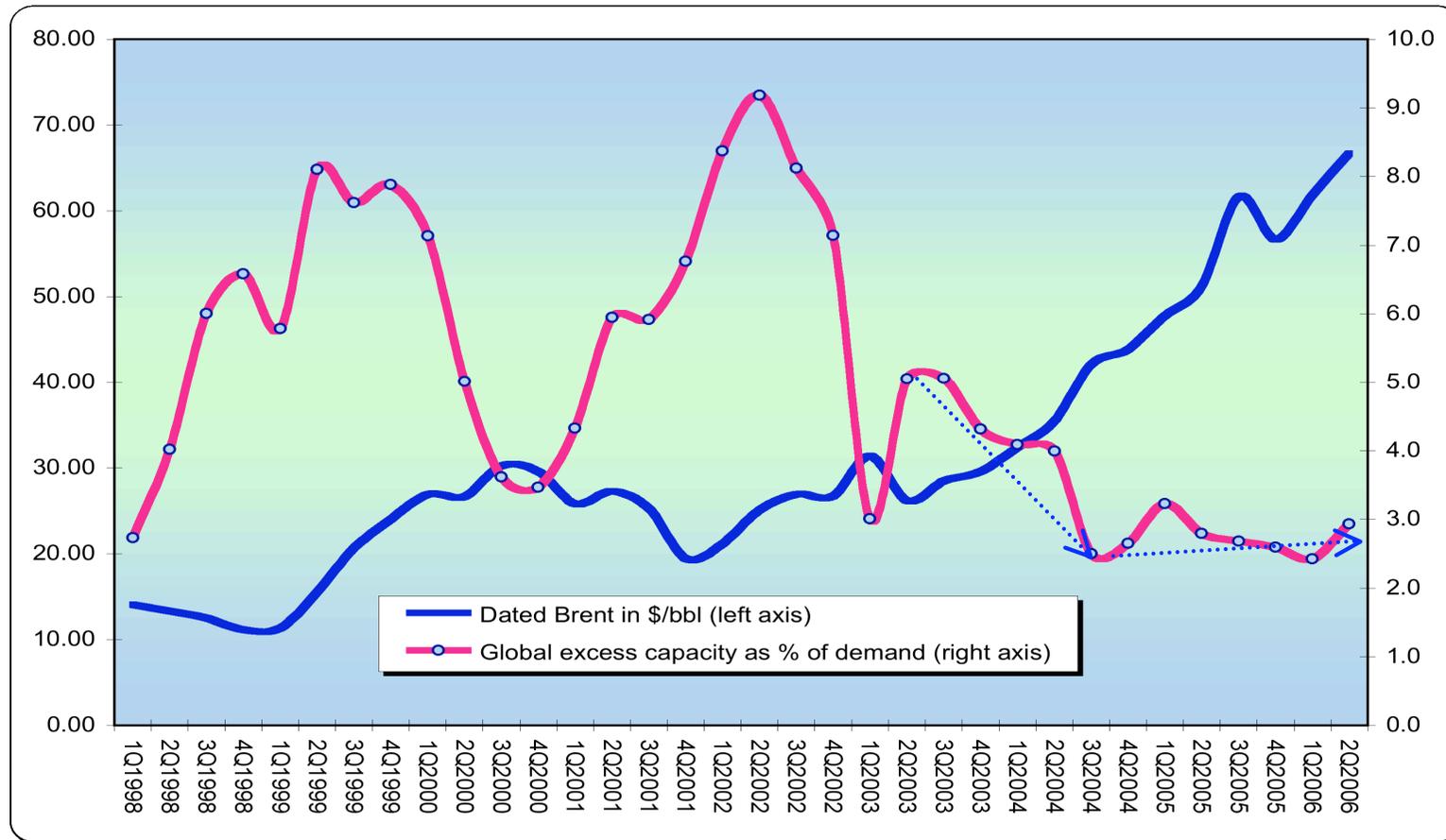
The implicit subsidy on gasoline in China in 2005

Sources : Deutsche Bank and CGES

Gasoline price at pump (RMB/ltr)	4.25	
Of which VAT @ 17%	0.62	
Of which import tax @ 6%	0.24	
Less oil consumption tax	0.20	
Gasoline price net of taxes (RMB/ltr)	<u>3.19</u>	
Chinese gasoline price in \$/bbl	63.40	@ RMB 8 per \$
Ex-ref. gasoline price (Singapore, \$/bbl)	72.00	
Normal downstream margin (\$/bbl)	5.00	
International price of gasoline (\$/bbl)	<u>77.00</u>	
Implicit subsidy in \$ per barrel	13.60	

OPEC's spare output capacity currently holds the key to high oil prices

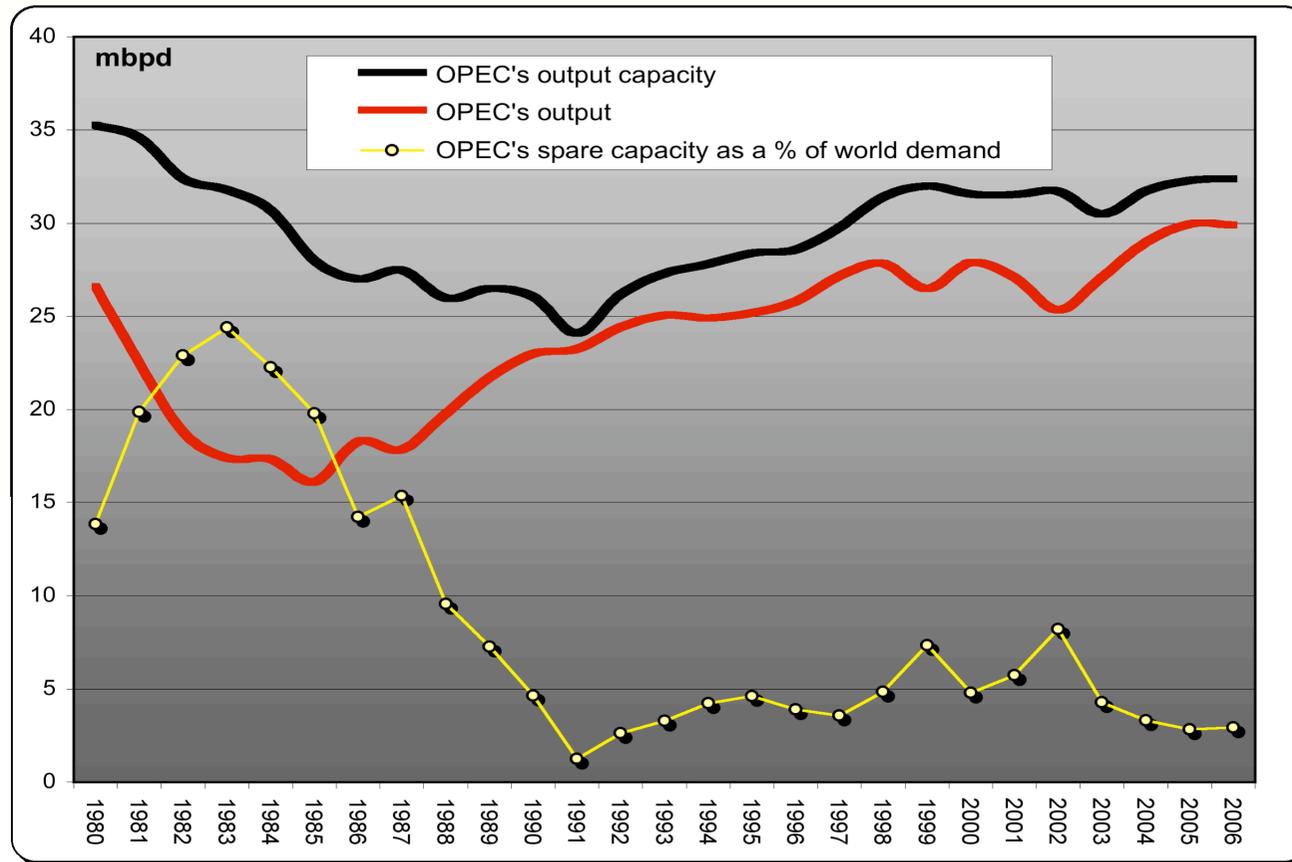
Sources : PIW, OPEC and CGES



Low spare capacity (as a % of global demand) is associated with high prices and vice versa. However, the relationship is distorted by OPEC's occasional drives to push up oil prices by constraining production and thus raising spare capacity (e.g., in 1998-99 and again in 2002). Between 2Q03 and 3Q04 spare capacity got much tighter. It is just under 3% at present.

OPEC's spare production capacity

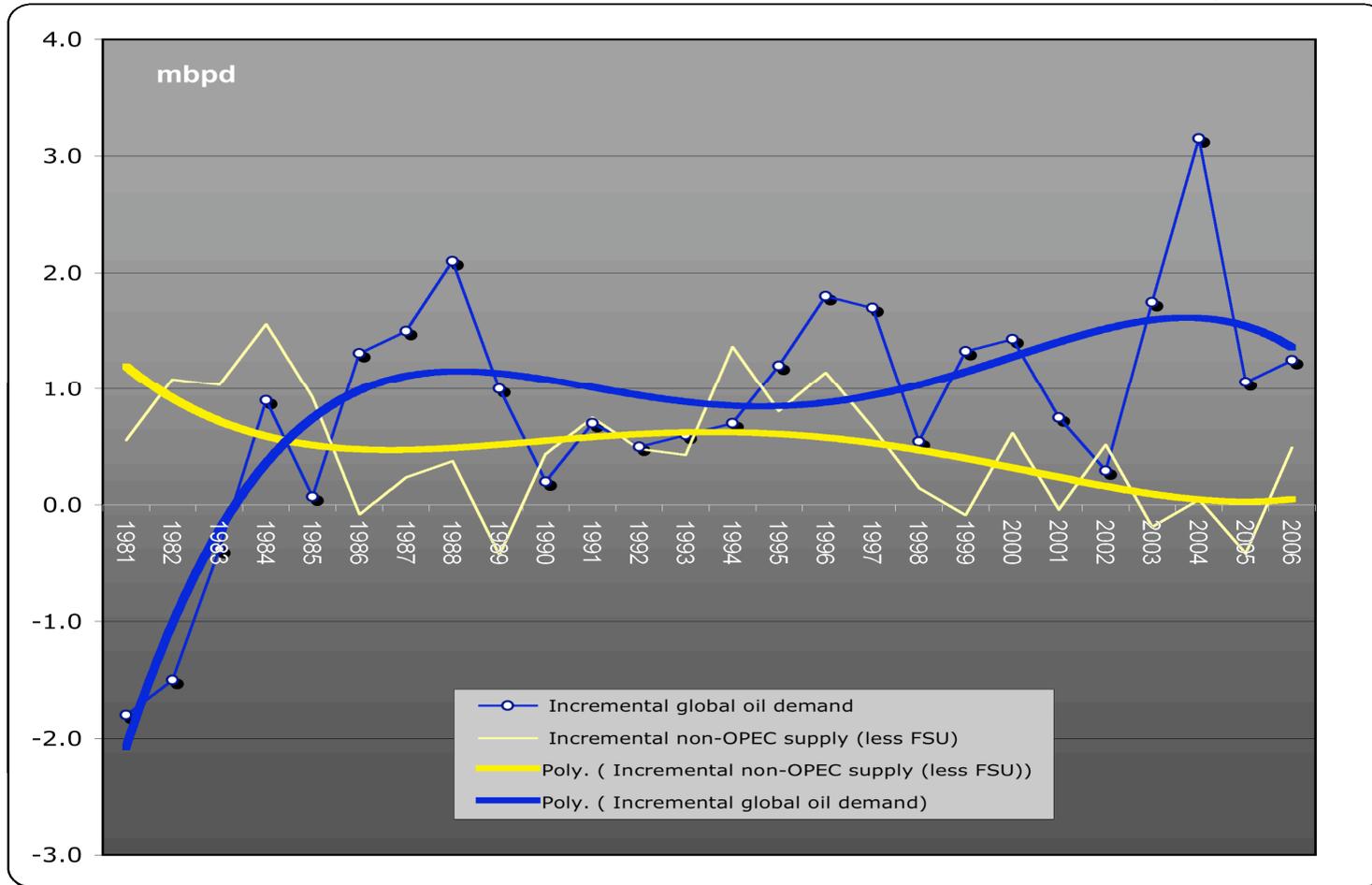
Sources : PIW, IEA, OPEC and CGES



By 1991, OPEC's huge spare capacity of the early 1980s had been completely eroded through declining capacity and rising output. Spare capacity grew after 1991, aided by OPEC's voluntary output restraint in 1999 and 2002. Since 2002, OPEC's spare capacity has narrowed significantly and it is expected to rise only marginally this year. Note how OPEC's capacity has hardly increased between 1998 and 2006.

Fears about where incremental non-OPEC supplies are heading

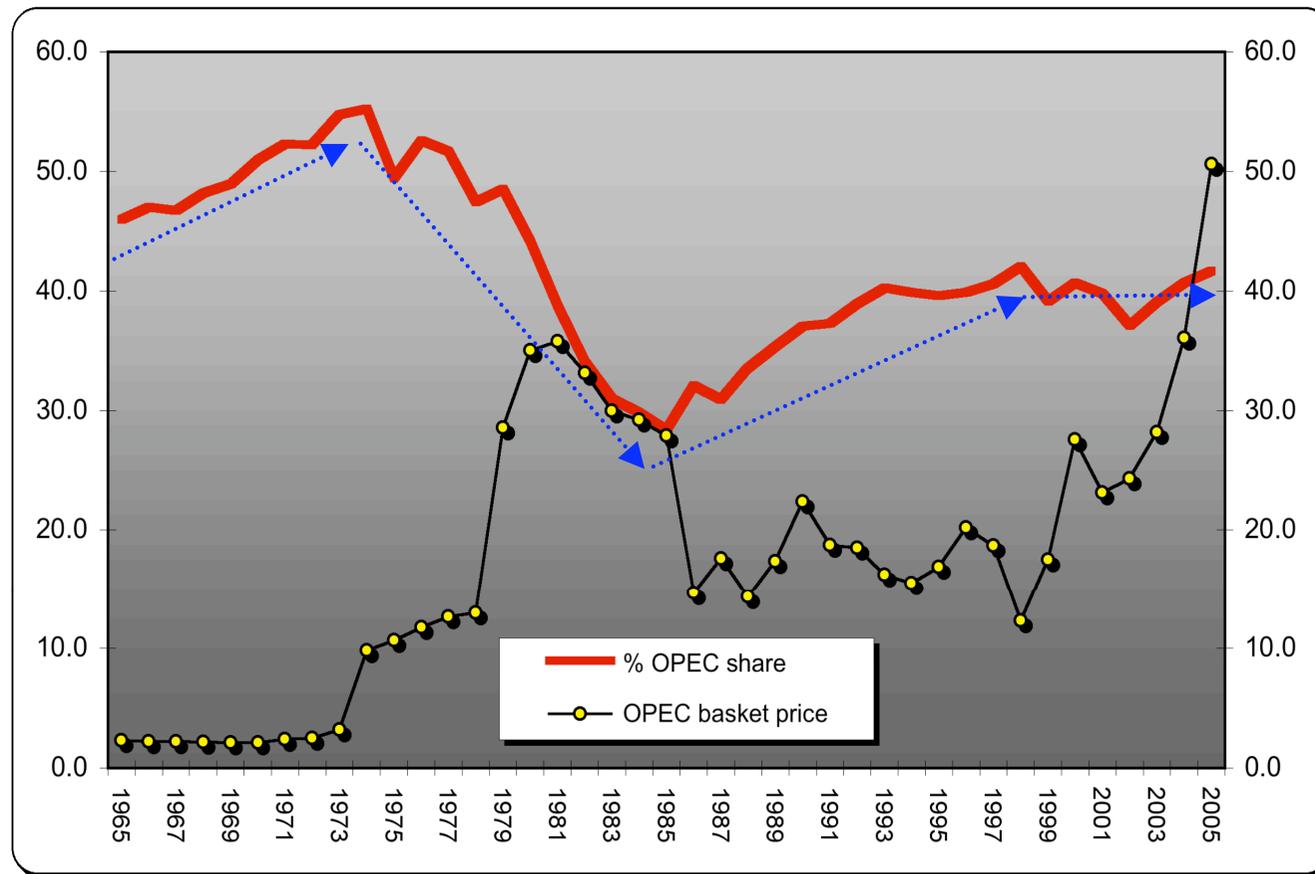
Sources : IEA, BP and CGES



The market has noticed how incremental non-OPEC production (excluding the former Soviet Union) has been trending downwards in recent years, whereas oil demand growth has been stronger.

OPEC's % share of global oil demand

Sources : BP, IEA and CGES



OPEC's percentage share is a function of the price of oil. Ultra low prices in the 1960s encouraged strong growth in OPEC's share. The price spikes of the 1970s led to demand destruction and non-OPEC supply growth. Much lower oil prices from the mid-1980s onwards put OPEC's share on a rising trend, until soaring prices after the trough of 1998-9 (partly as a result of OPEC's output restraint) arrested OPEC's share growth.

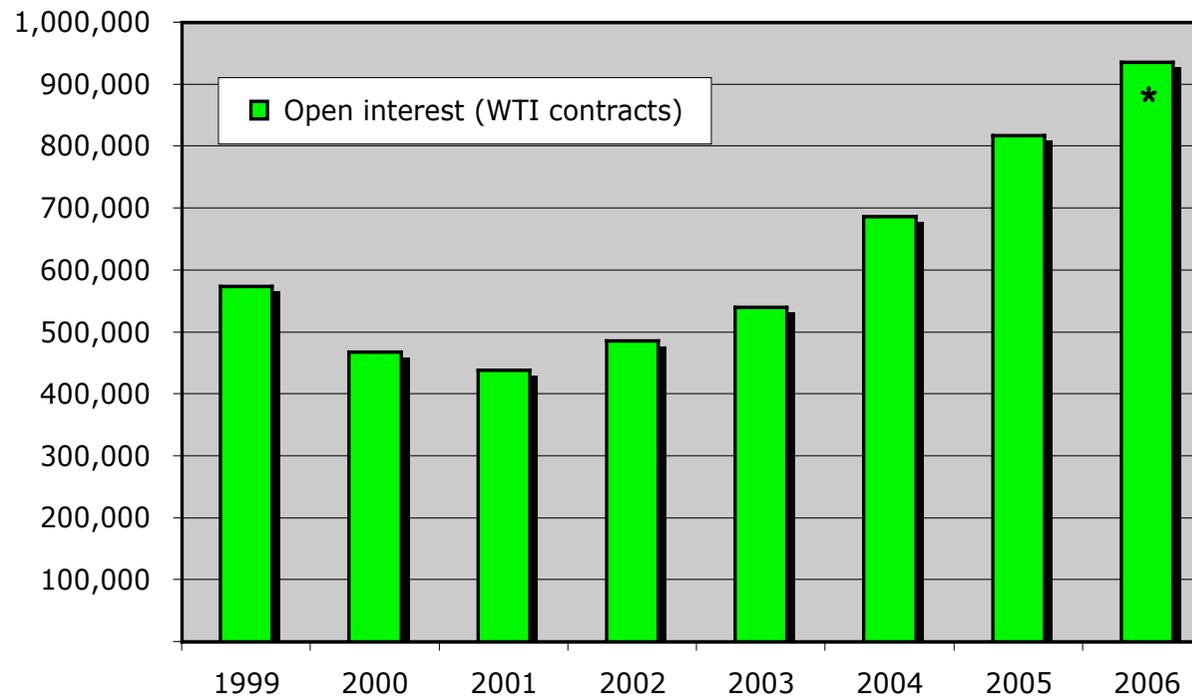
A deep-seated concern about the oil industry's ability to cope with strong oil demand growth at a time of insufficient spare production capacity seems to have been the key factor behind the high price of oil.

Such a concern can find an outlet in the futures markets. Having recourse to crude futures markets allows oil producers, utilities, airlines and others to offset some, or indeed all, of the price risk involved. There are always speculators and others ready to assume such risk in the expectation of guessing right and making gains.

The growth in open interest at NYMEX

* For 2006, data until week ending the 18th of April were used.

Sources : NYMEX and CGES



There has been a doubling of open interest at NYMEX since 2001. Much of this surge occurred in 2004 and 2005. A new investor class has emerged of commodity investors, hedge funds and financial players. The funds tracking commodity indices (like the Goldman Sachs and Dow Jones-AIG indices) have grown dramatically from \$8bn in 2000 to \$70bn in 2005.

How futures positions change with changing expectations

Price changes	<i>Expectations</i>	Positions	
		short	long
Price rising	<i>Price to rise further</i> <i>Price to fall</i>	reduce rapidly - increase +	increase + reduce -
Price falling	<i>Price to fall further</i> <i>Price to rise</i>	increase + reduce -	reduce rapidly - increase +

Every change in a WTI futures position on NYMEX implies an underlying expectation of where the oil price is heading next. Thus, by studying actual changes in the futures positions of the commercials (hedgers) and non-commercials (speculators) we can infer what their expectations have been during various periods.

Implied oil price expectations from behaviour on NYMEX

Sources : NYMEX and CGES

From week	WTI \$/bbl	to week	WTI \$/bbl	No of weeks	$\Delta \ln$ % per wk	Price Changes	Commercials		Non-commercials	
							short	long	short	long
28-Dec-04	45.8	5-Apr-05	56.7	14	1.5	rising	to fall	no change	no change	to rise
5-Apr-05	56.7	24-May-05	49.3	7	-2.0	falling	to rise	to rise	no change/fall	to fall
24-May-05	49.3	2-Aug-05	61.4	10	2.2	rising	to fall	to fall	to rise	to rise
2-Aug-05	61.4	30-Aug-05	69.5	4	3.1	rising	to fall	to rise	to fall	to rise
30-Aug-05	69.5	29-Nov-05	57.1	13	-1.5	falling	to rise	to rise	to fall	fall then rise
29-Nov-05	57.1	31-Jan-06	67.8	9	1.9	rising	to fall	fall then rise	to rise	to rise
31-Jan-06	67.8	28-Feb-06	61.1	4	-2.6	falling	to rise	to rise	to fall	to fall
28-Feb-06	61.1	18-Apr-06	71.1	7	2.2	rising	to fall	to fall	to rise	to rise

When oil prices are rising non-commercials (speculators) expect them to continue to do so and vice versa when they are falling. This behaviour is consistent with speculators following price movements rather than leading them. Commercials (hedgers) tend to expect prices to do the opposite of what they are actually doing.

What about the fundamentals in 2006?

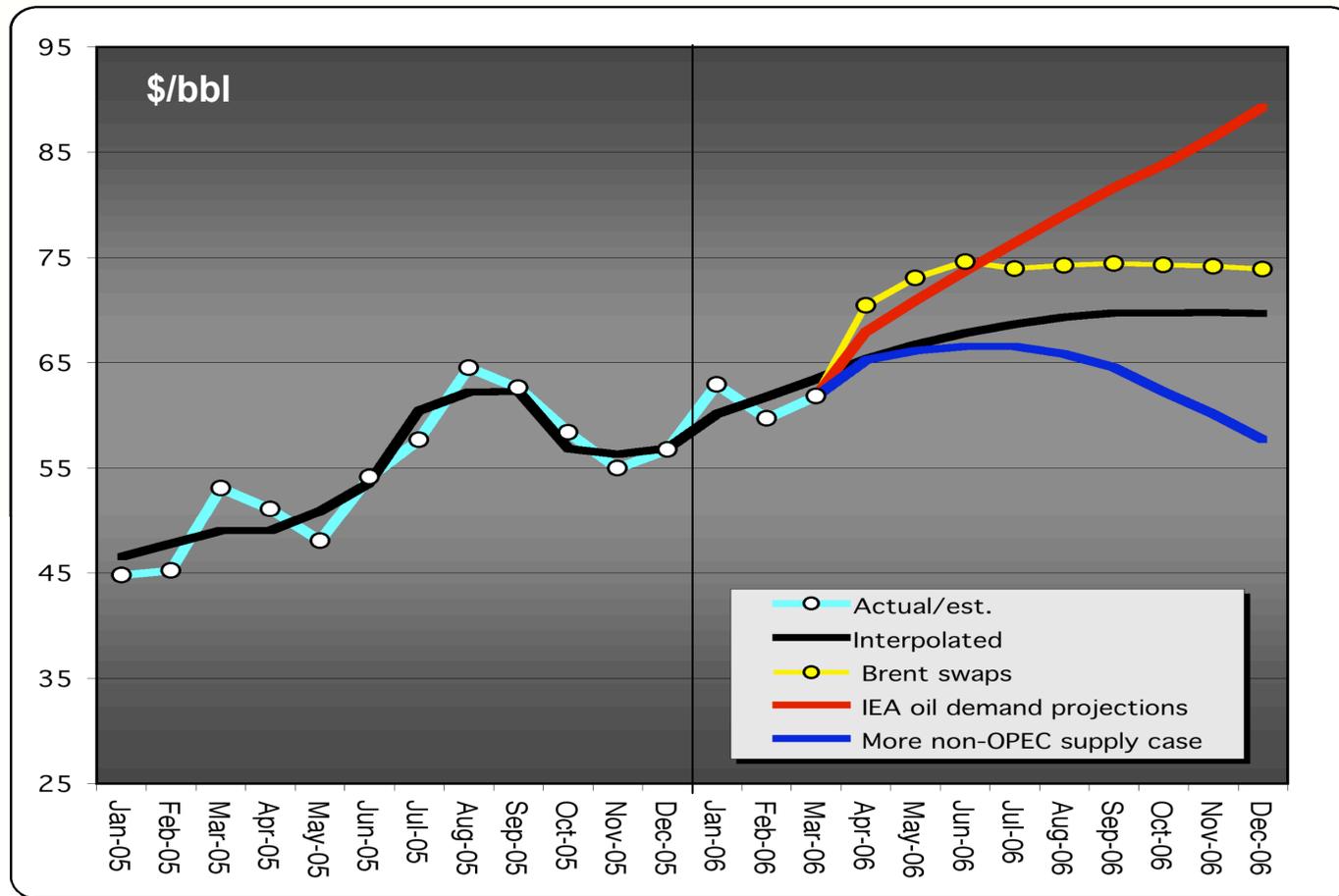
	1Q	2Q	3Q	4Q	2005	2006
	mbpd	mbpd	mbpd	mbpd	mbpd	mbpd
Demand	85.7	83.7	84.4	85.6	83.6	84.9
non-OPEC supply *	54.6	54.8	55.2	56.0	54.0	55.1
Call on OPEC **	31.1	28.9	29.2	29.6	29.6	29.7
<i>Call on OPEC oil ^</i>	<i>30.7</i>	<i>30.7</i>	<i>30.4</i>	<i>30.1</i>	<i>30.7</i>	<i>30.5</i>
OPEC's output	29.9	29.9	30.0	30.0	30.0	29.9
Global stockchange	-1.2	1.0	0.8	0.4	0.4	0.2
Company stockcover (days)	51.1	51.5	51.8	51.6	52.3	51.5
Dated Brent \$/bbl	61.8	66.7	69.3	69.7	54.3	66.9

* including OPEC's NGL production

** zero-stockchange call

^ with desired stockchange

What is the CGES' outlook for Dated Brent this year?



Note that the Brent swaps profile is the one reported by Intercapital on the 24th of April 2006.

The CGES' reference case for Dated Brent sees the price continuing to strengthen in 2006 but at a slower pace, obviously requiring no cuts whatsoever from OPEC. Using the IEA's forecast of oil demand and the CGES' more modest non-OPEC incremental supplies generates much higher prices from April '06 onwards. Should OPEC put more oil on to the market from April onwards (0.5 mbpd), Brent weakens somewhat after July.

The minimum oil price needed by Saudi Arabia, based on expected expenditures and income in 2006

	\$ bn	\$ bn
General expenditure	102.9	83.8
Debt interest	6.3	7.3
Total expenditure	109.2	91.1
Non-oil income	16.2	14.7
Oil revenues* (CGES est.)	169.4	133.5
Expected surplus	+ 76.4	+ 57.1

2005 actuals

- With Saudi output at 9.5 mbpd (the expected 2006 average), the minimum OPEC basket price required to cover expected Saudi general expenditure in 2006 less non-oil income is **\$34/bbl**.
- To cover general expenditure plus debt interest (less non-oil income) the required price is **\$36/bbl**. To also retire \$37bn of debt (the actual amount retired in 2005) needs **\$49/bbl**. The CGES expects the OPEC basket price to be around **\$62/bbl** in 2006.

* Including government income from NGL exports

When will oil prices trend downwards?

When oil demand growth slows up sufficiently

Oil demand growth has slowed up dramatically since 2004; it needs to stay low.

When non-OPEC oil supplies start picking up again

Non-OPEC supplies will grow again from this year onwards, reaching a peak in 2010; they are expected to decline gradually thereafter.

When OPEC's spare capacity rises above 5% of global oil demand

If OPEC's plans materialise, spare capacity should exceed 8% by 2008.

When refineries are able to produce enough low-sulphur products

Between now and 2010 China, India and the M. East will have 3.3 mbpd of new distillation capacity and 1.4 mbpd of extra hydrotreating capacity.

When the politics of oil look less disturbing

Iraq and Iran are major problem areas and unrest in Nigeria has worsened.

Expected increases in OPEC's capacity

Sources : PIW, Argus, OPEC and CGES

	2006	2007	2008	2009	2006-9
	tbpd	tbpd	tbpd	tbpd	tbpd
Saudi Arabia	300	300	600	900	2100
Iraq	300	500	500	500	1800
Iran		120	150	300	570
Kuwait	100	150	100	150	500
U.A.E.	50	200	100	100	450
Qatar	20	80	30	30	160
Libya	100	75	100	100	375
Algeria	60	60	50	100	270
Nigeria	-300	400	55	100	255
Venezuela	-40	90	100	200	350
Indonesia		20	20	20	60
TOTAL	590	1995	1805	2500	6890
TOTAL less Iraq	290	1495	1305	2000	5090
Incremental demand	1250	1070	1200	1400	4920

The CGES estimates that at the end of 2005 OPEC's capacity was at 32.3 mbpd, with Iraq's at 1.7 mbpd. In 2006 OPEC's net capacity increase will be very modest. Over the whole period from 2006 to 2009 OPEC's capacity is expected to rise by 6.9 mbpd (5.1 mbpd excluding Iraq) versus global incremental oil demand of 4.9 mbpd.

Are we running out of oil — the pessimists' arguments

- The world depends on a few gigantic but geriatric oilfields. The largest 14 fields, with an average age of 44 years, account for over 20% of world production — and old fields tend to decline rapidly.
- New discoveries are not as prolific and costs are rising everywhere. The twelve giant oilfields found in the last decade produce only 1/10 of the oil produced by 36 giant fields discovered over 40 years ago.
- Saudi Arabia's oilfields have been overworked and are tired; their decline rates are thus higher than the industry has been led to believe.
- Quoted proven reserves figures for most oil producing countries are overstated: they are either politically-motivated (as for a number of OPEC states) or based on untried, expensive technology.

Declining size of giant oilfields

Discovery date	Fields found number	current output tbpd per field
Pre-1950s	19	557
1950s	17	330
1960s	29	242
1970s	24	236
1980s	15	176
1990s	11	126

Source : Simmons & Company

Extent of Saudi oilfield depletion (1-1-04)

Oilfield	%	Discovered
Shaybah	5	1975
Haradh	10	* 1948
Marjan	13	1967
Zuluf	16	1965
Abu Safah	21	1960
Safaniya	26	1951
Berri	28	1964
Ghawar total	48	1948
<i>Ain Dar in Ghawar</i>	<i>60</i>	
Abqaiq	73	1940
Saudi Aramco total	28	

* Part of the Ghawar complex of fields.

Source : Saudi Aramco

The optimists' arguments

- We cannot talk about running out of oil, simply because we do not know how much oil the world had to start with.
- The '*running out of oil*' scare has been with us since 1860 and is trotted out with regularity.
- Finding oil is a matter of looking for it and the motivation for the search is economic. High prices provide enough of a stimulus, most of the time.
- Knowledge and technology expand our horizons and those of oil too.
- For what it is worth, proven global conventional oil reserves are higher than they have ever been.
- Global Reserves-to-Production ratios have been above 40 years' worth since 1987.

Recent large discoveries (with total peak output = 7.2 mbpd)

Field		Year of discovery	Peak output tbpd
Hassi Berkine South	(Algeria)	1995	230
Ourhoud	(Algeria)	1994	220
Girassol	(Angola)	1996	250
Dalia	(Angola)	1997	230
Kizomba A	(Angola)	1998	200
Kizomba B	(Angola)	1998	250
Marlim	(Brazil)	1985	530
Albacora	(Brazil)	1985	200
Barracuda/Caratinga	(Brazil)	1989/94	200
Darkhovain	(Iran)	1993*	200
Azadegan	(Iran)	1999	400
Kashagan	(Kazakhstan)	2000	500
Karachaganak	(Kazakhstan)	1979	200
Tenghiz	(Kazakhstan)	1979	500
Cupiaga	(Colombia)	1993	200
Cusiana	(Colombia)	1988	300
Cantarell	(Mexico)	1976	2000
Snorre	(Norway)	1979	200
Norne	(Norway)	1992	150
Grane	(Norway)	1999	200

Source : OGJ and various

* rediscovery



The concept of gross additions to oil reserves :

Gross additions to oil reserves =
changes in oil reserves
***plus* oil production**

Gross additions to oil reserves comprise
discoveries + extensions + revisions

Gross additions to oil reserves

Sources : OGJ & CGES

	1990-2000 bn bbls/year	2000-2005 bn bbls/year
OPEC	13.5	26.6
Non-OPEC*	7.8	8.4
<i>*excluding FSU, China & E. Europe</i>		
WORLD	25.4	42.2

NB. Global production of crude oil in 2005 amounted to 26.4 billion barrels.

Running out of oil — the US case

Proven oil reserves - end 1973

35 bn bbls

R/P ratio at the end of 1973

10 years

Proven oil reserves - end 2005

21 bn bbls

R/P ratio at the end of 2005

11 years

Cumulative output 1974 to 2005

86 bn bbls

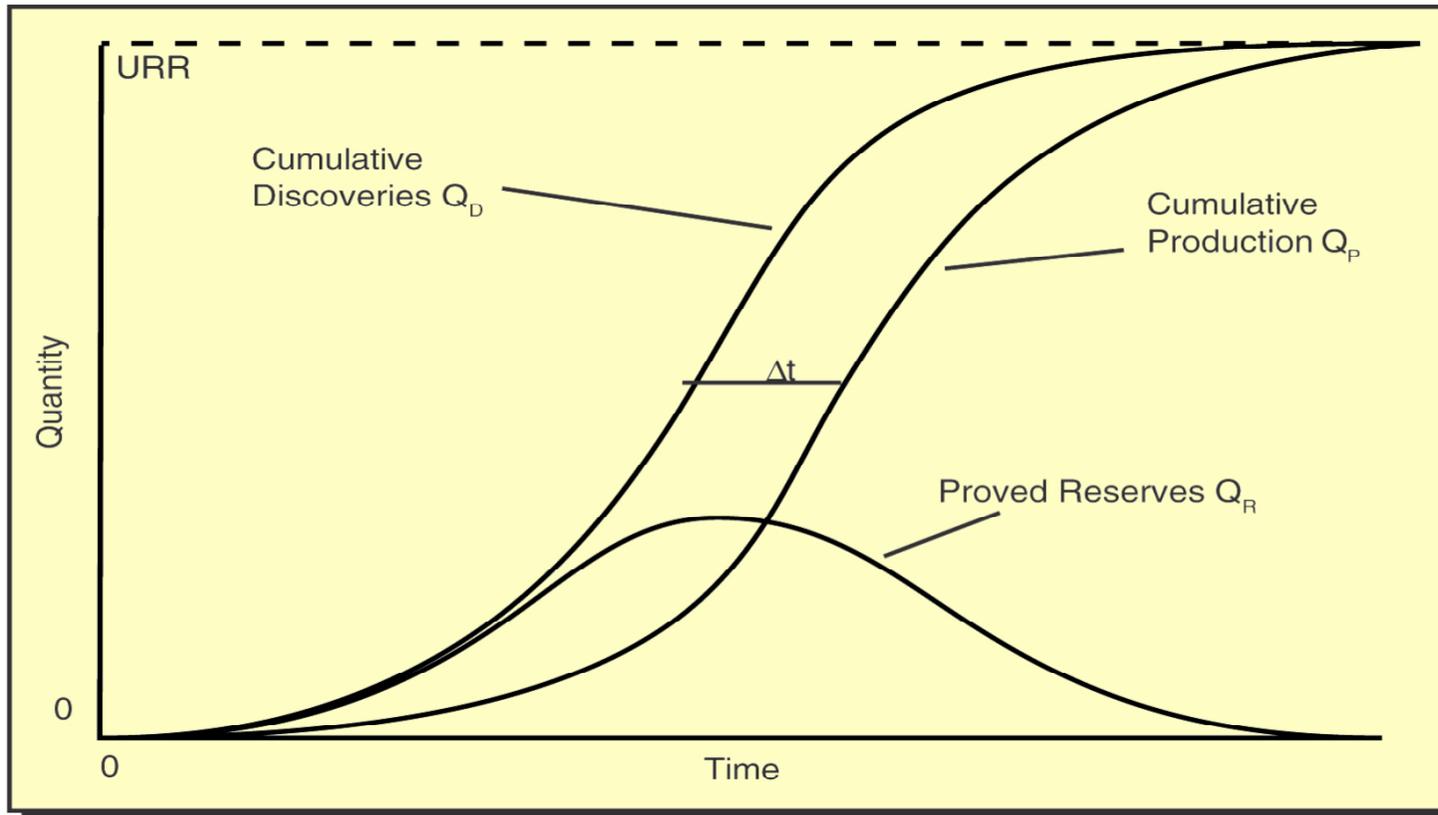
1. Proven reserves in the US are obviously lower now, but output is lower too, keeping the R/P ratio above the 10-year level.
2. The US definition of proven oil reserves seems to be somewhat restrictive.
3. Each year the US replaces almost as much oil as it produces. Most of this oil comes from reserves growth in existing fields.
4. The onward march of knowledge and technology is relentless.

The global oil reserves situation at present

	<u>bn barrels</u>
Cumulative oil production ¹	1,012
Remaining oil reserves ²	1,117
Reserves growth ³	423
Undiscovered conventional oil ³	448
GRAND TOTAL	3,000

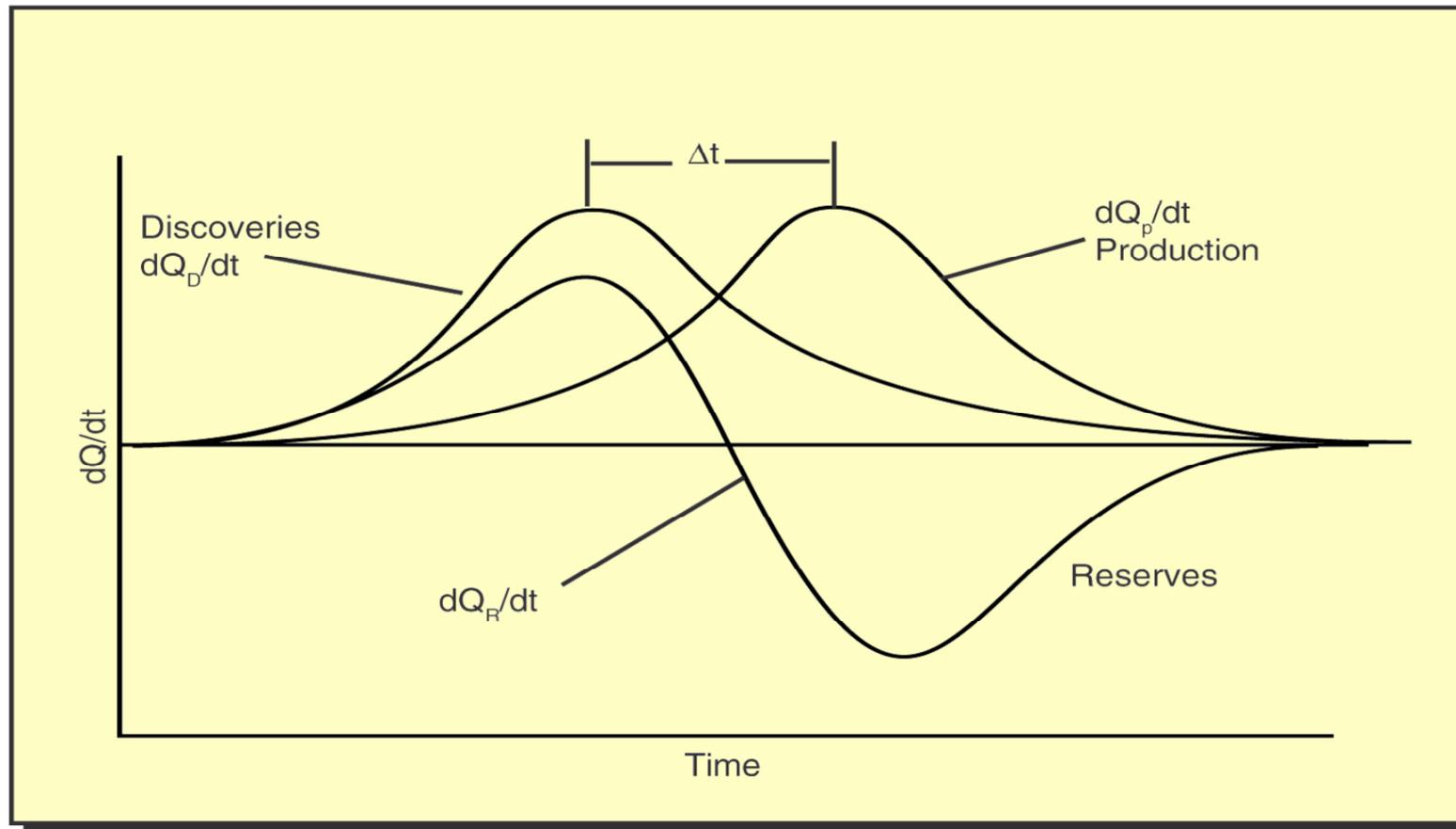
1. Until the 1st of January 2006. The figure refers to crude oil only. Sources are the Oil and Gas Journal, DeGolyer and MacNaughten, and the CGES.
2. On the 31st of December 2005, as reported by the Oil & Gas Journal. Note that we have excluded tar sands from Canada's total as given by the OGJ.
3. We have arrived at these figures by subtracting cumulative output and remaining oil from 3,000 bn bbls and then pro-rating the result by the US Geological Survey's split between reserves growth and undiscovered oil.

Martin King Hubbert's hypothesis

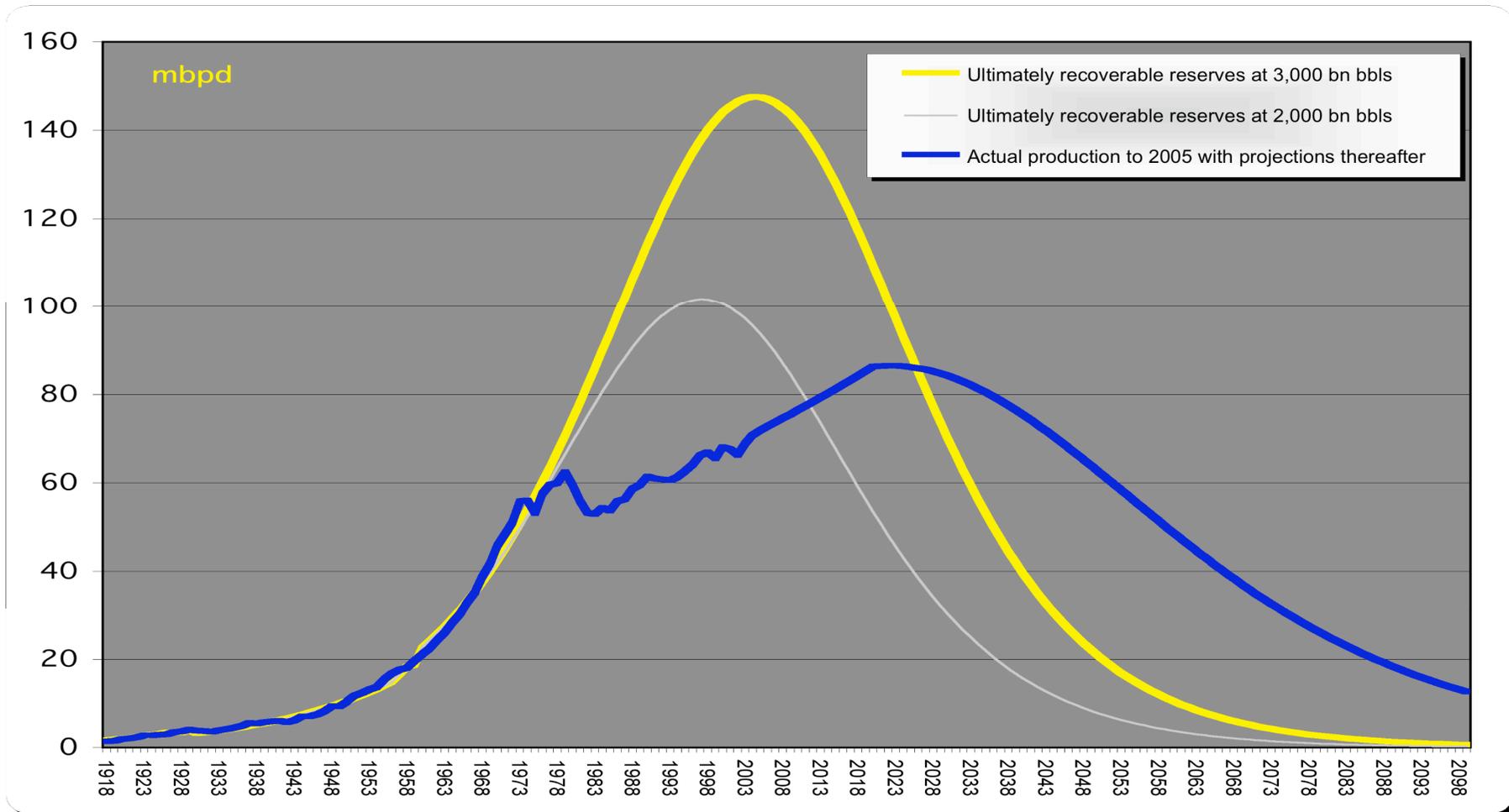


Note that URR stands for ultimately recoverable oil reserves.

The Hubbert hypothesis : rates of oil discovery and production

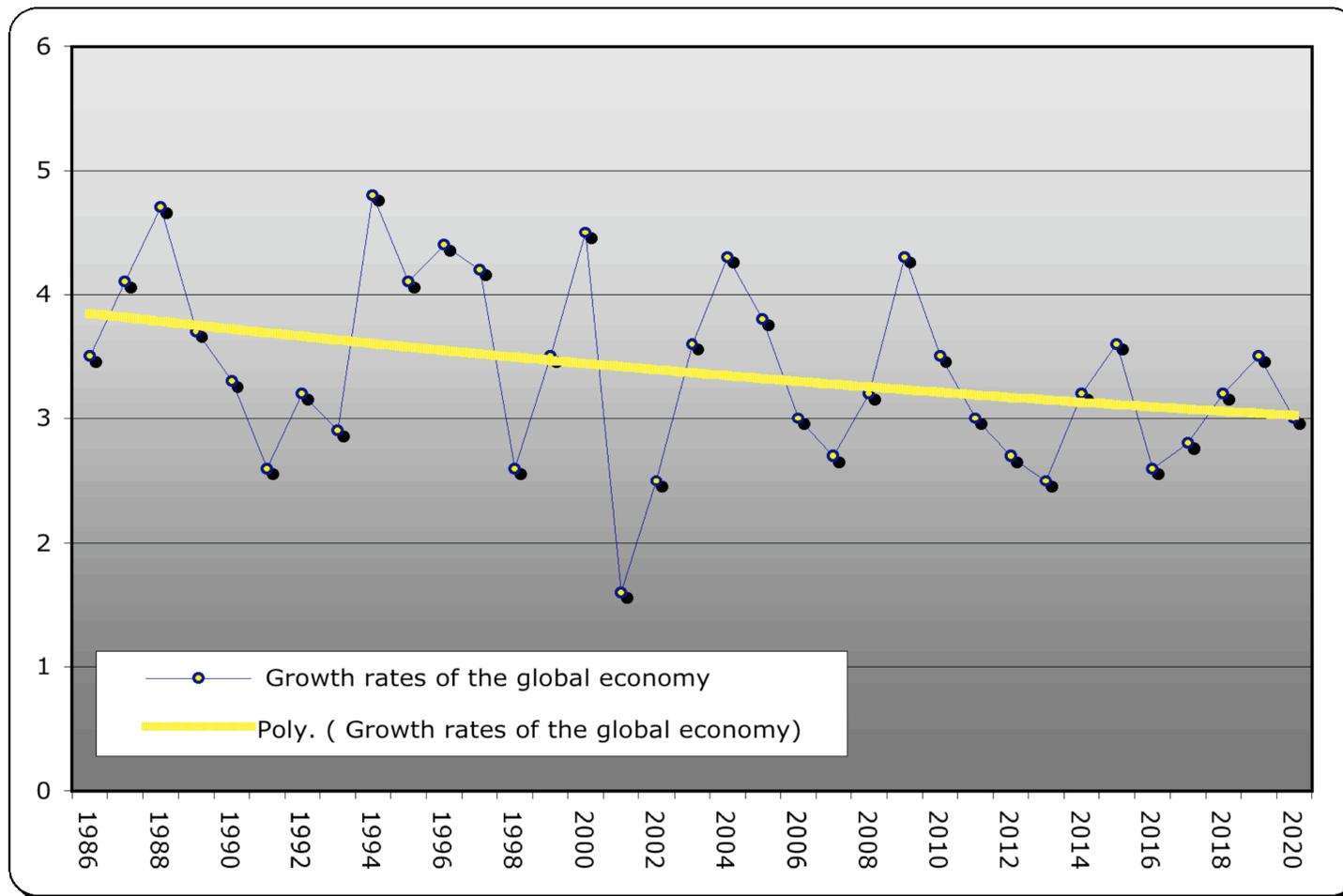


Two Hubbert curves of conventional oil versus actual output (in mbpd)



- Global conventional crude oil production between 2005 and 2020 rises at a rate of 1.4% per annum (the CGES' base case for oil demand). Thereafter, having peaked in 2022 at 86.5 mbpd, it declines at a rate that generates a cumulative output figure of 2,888 billion barrels (96% of the ultimately recoverable reserves) by 2100.

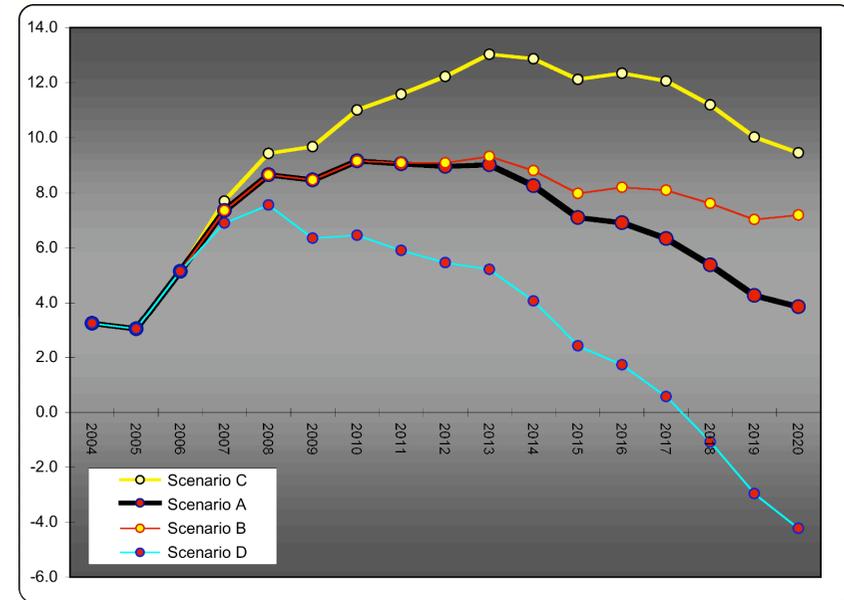
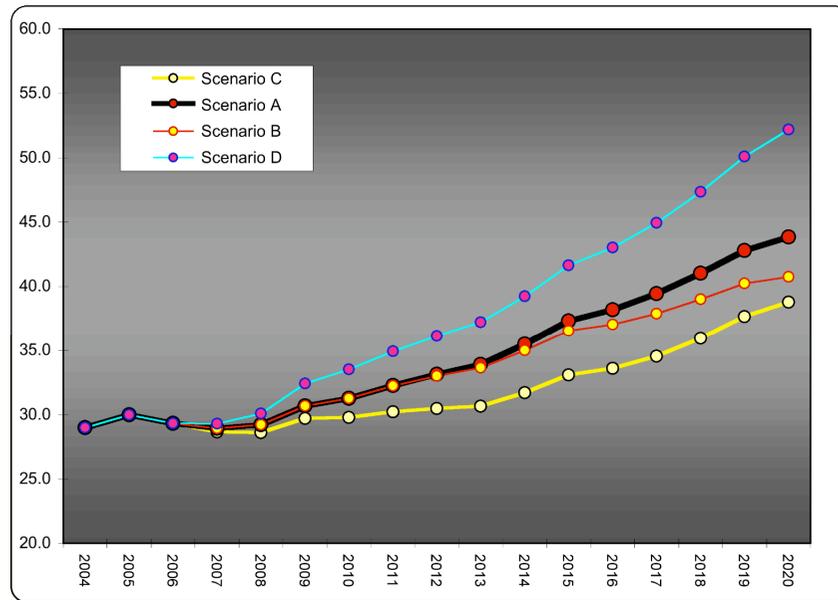
World* economic growth to 2020



* Excluding the former centrally-planned economies.

Sources: IMF and CGES

The need for OPEC oil and OPEC's % spare capacity to 2020



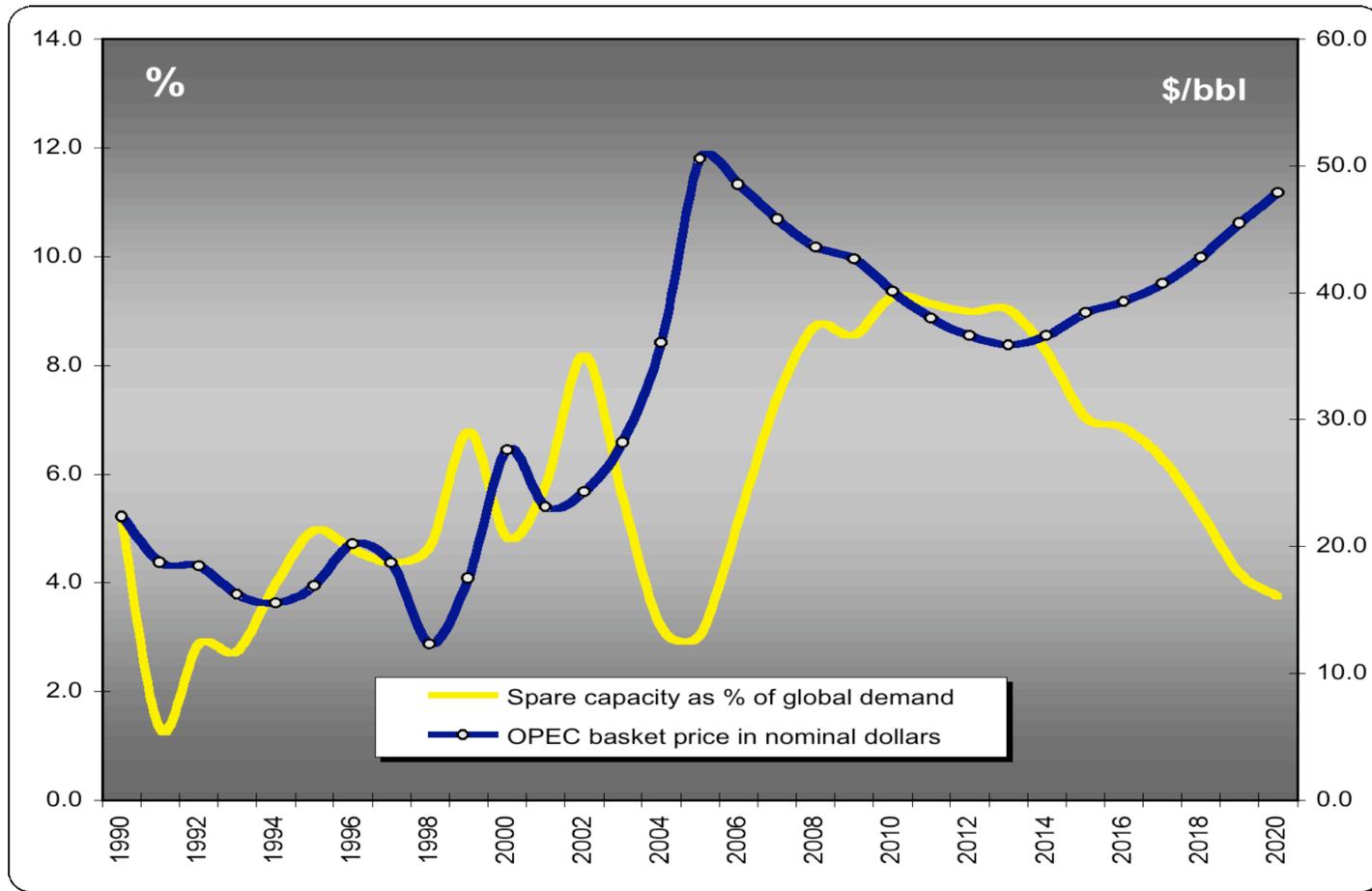
- Assumptions** : global economic growth at 2.9% pa versus 3.5% pa from 1986-2004; US inflation at 2.5% pa; the Kyoto Protocol is not adopted by the US and incompletely implemented elsewhere in the developed world; inroads of hybrid and fuel-celled vehicles are not significant before 2015. Scenario A is the reference case view, based on a slow rate of increase in Iraqi oil production, while in Scenario B Iraqi output rises faster. In Scenario C the price of oil stays at \$50/bbl and in Scenario D it remains at \$30/bbl.
- Remarks** : global oil demand increases at 1.3% a year versus 1.6% over the period 1986-2004; oil demand of 99 mbpd in 2020 is much lower than the 105-107 mbpd projected by the IEA, EIA and OPEC. Oil prices averaging \$42/bbl and lower economic growth act together to constrain oil demand growth. Non-OPEC supplies reach and stay at a plateau from 2010 till 2015; they decline remorselessly thereafter, eroding OPEC's spare capacity and putting upward pressure on oil prices once again.

Oil fundamentals in the longer term — base case

	2004	2008	2010	2020
	mbpd	mbpd	mbpd	mbpd
Global oil demand	82.1	85.4	88.5	99.0
<i>of which China</i>	6.3	7.8	8.5	12.4
N-OPEC oil supply	49.9	51.6	52.5	48.2
<i>of which the FSU</i>	11.4	13.4	14.5	13.2
OPEC's NGLs etc	3.8	4.7	5.0	7.0
Call on OPEC crude	29.0	29.2	31.3	43.8
OPEC capacity	31.7	36.6	39.4	47.7
OPEC's spare cap. as % of demand	3.2%	8.7%	9.2%	3.9%
OPEC basket (\$/bbl)	36.1	43.6	40.1	47.9

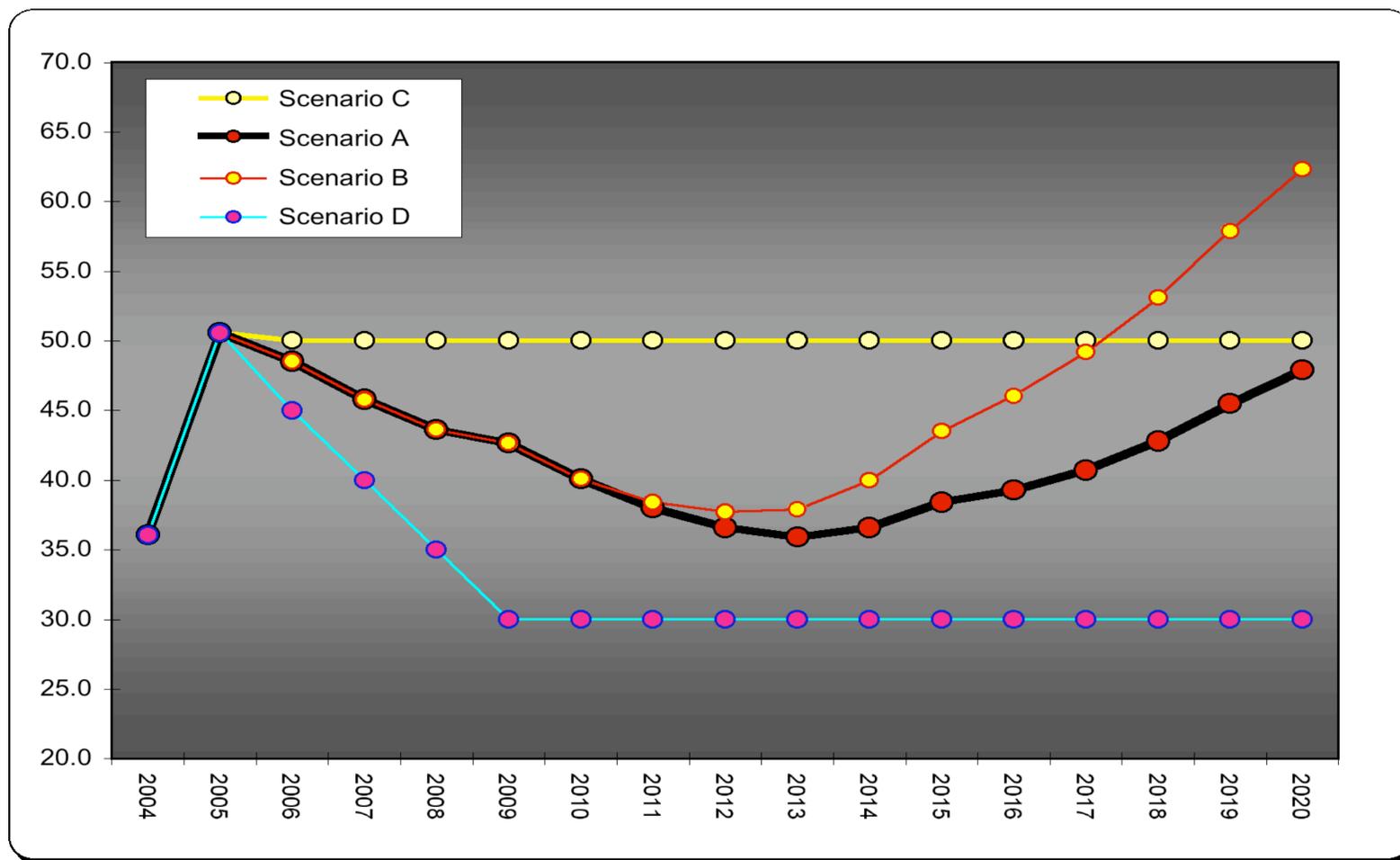
NOTE: the need for OPEC oil is calculated as global oil demand less non-OPEC output (including processing gains) less OPEC's NGLs, yielding the zero stockchange call on OPEC oil, to which we add the oil needed to achieve the industry's oil inventory target level in order to obtain the real requirement for OPEC oil.

Spare production capacity and the price of oil — Scenario A



Sources: OPEC, IEA and CGES

The OPEC basket price — four scenarios



Comparisons of global oil demand forecasts

Exponential rates of change by decade displayed below the forecasts

Sources : OPEC,EIA, IEA & CGES

2000 76.3 mbpd	2010 mbpd	2020 mbpd	Δ'00-'20 mbpd
OPEC	90 1.6 %	107 1.7 %	+31 1.7 %
IEA (2005 reference case)	93 1.9 %	105 1.3 %	+29 1.6 %
EIA reference case	89 1.5 %	107 1.7 %	+31 1.7 %
CGES base case (Price averages \$42/bbl)	89 1.5%	99 1.1%	+23 1.3%
CGES high price case (Price kept at \$50/bbl)	87 1.3 %	94 0.7 %	+17 1.0 %
CGES lower price (Price averages \$33/bbl)	91 1.7 %	107 1.7 %	+31 1.7 %

NB. The global oil demand growth rate over the period 1986-2004 was 1.6% per annum. All forecasts are based on the IEA's global oil demand figure of 76.32 mbpd in 2000.

OPEC's oil export earnings

	\$30/bbl case	\$50/bbl case	Base case
OPEC's exports in 2020	43.4 mbpd	29.9 mbpd	35.0 mbpd
Basket price in 2020	20.7 '05 \$/bbl	34.5 '05 \$/bbl	33.1 '05 \$/bbl
OPEC's earnings in 2020	328 '05 \$bn	377 '05 \$bn	423 '05 \$bn

For purposes of comparison, OPEC's oil exports in 2005 amounted to 24.3 mbpd and the basket price averaged \$50.6/bbl. The Organisation's oil export earnings were \$449bn in 2005.

Provenance of oil imports — 2004

Sources : BP and CGES

<i>From / to -----></i>	USA %	Europe %	China %	Japan %
Latin America	33	3	2	
Middle East	19	26	37	81
West Africa	13	4	16	2
Canada	16			
FSU	2	43	11	1

The USA's oil imports are reasonably well diversified, whereas Europe is heavily dependent (69%) on two major sources (the Middle East and the FSU). Japan is hugely dependent on the oil from the Middle East, which raises many serious questions about the security of its oil supplies. China's reliance on the M. East is greater than Europe's and rising.

Net oil imports (-) and exports

	2005 mbpd	2010 mbpd	2020 mbpd
United States	- 13	- 15	- 17
Europe	- 10	- 10	- 11
Japan	- 5	- 5	- 5
China	- 3	- 5	- 9
Other Asia	- 6	- 8	- 11
Middle East	20	22	31
FSU	8	11	10
West Africa	4	5	6
Latin America	4	3	3

Between now and 2020 the net imports of China, Other Asia, the US and Europe are projected to increase by 16 mbpd, while the net exports of the M. East, the FSU, W. Africa and Latin America are expected to rise by 14 mbpd.

Provenance of incremental oil imports — 2005 to 2020

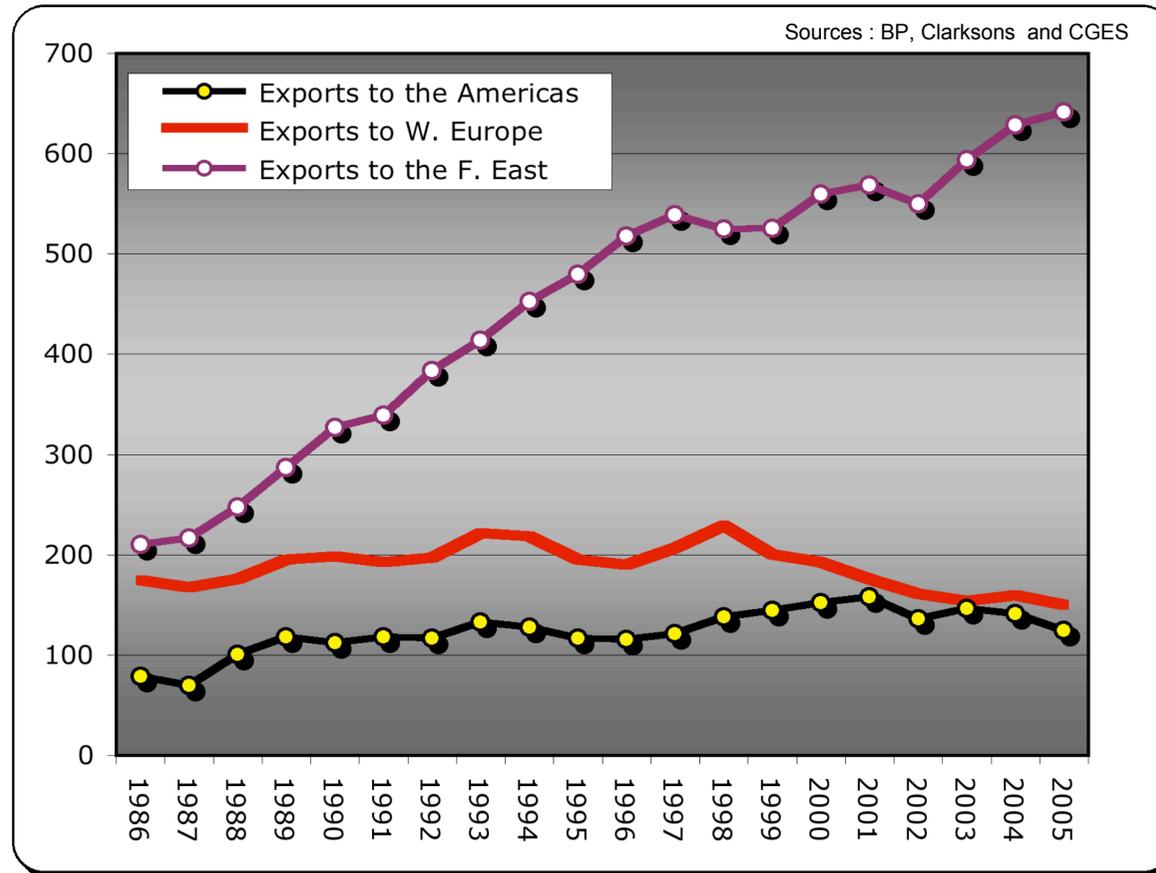
<i>From / to -----></i>	USA Δ mbpd	Europe Δ mbpd	China Δ mbpd	Other Asia Δ mbpd
Latin America	- 1			
Middle East	1		6	4
West Africa	2			
N. Africa	1			
FSU	1	1		

Most of the world's incremental oil demand between now and 2020 is expected to come from China, the United States and Other Asia. China and Other Asia's incremental demand is expected to be satisfied by the Middle East, while the US' additional consumption will be met by West Africa, North Africa, the FSU and the Middle East. President Bush's desire to reduce oil imports from the Middle East by 75% before 2015 seems too optimistic.

Concluding remarks

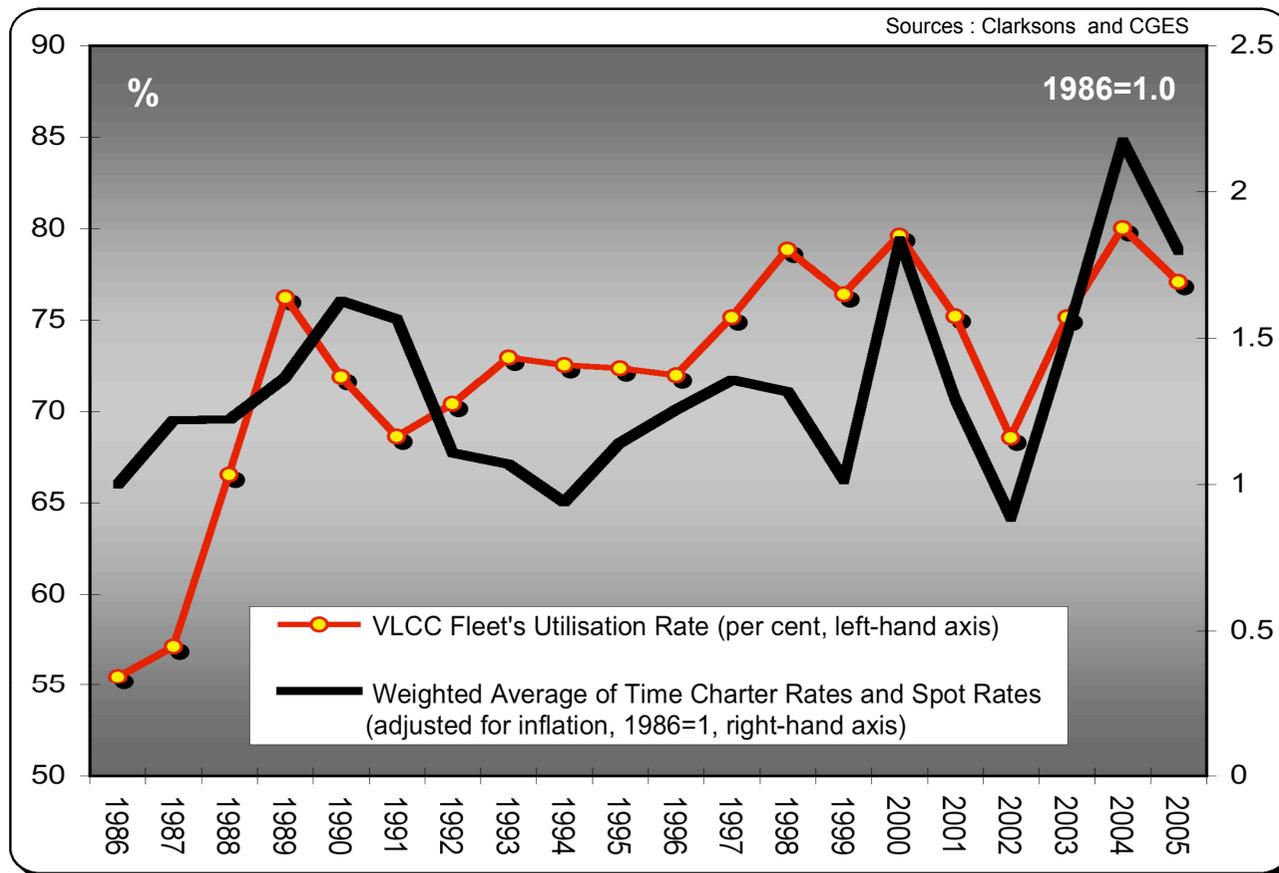
- Oil prices are at current levels because of tight short-term market conditions. The world's spare oil production capacity (all of it in OPEC) is just below 3% of oil demand and the industry's ability to produce middle distillates with low levels of sulphur is severely constrained.
- Oil demand growth was strong in 2003 and especially so in 2004, putting a strain on the world's ability to meet demand. However, demand growth has slowed down sharply since then and oil production capacity is expected to rise.
- What is certain is that the world is not running out of conventional oil — far from it. On the basis of 3 trillion barrels of ultimately recoverable conventional crude oil, we shall pass the 50% stage of recovery sometime after 2020. If we count the Canadian tar sands and the Venezuelan heavy oils as 'oil', the picture is much rosier.
- With so much oil discovered already, or still waiting to be found at a cost far below \$60/bbl, oil prices — **in a rational world** — should not remain at these high levels over the medium term. However, oil in the ground needs investment to become accessible and thereafter a will to produce the oil.
- Most of this oil is in the OPEC countries. The investment sums are not very large (\$100 bn), but nevertheless they need to be set aside. Will they?

Middle Eastern oil exports in million tonnes



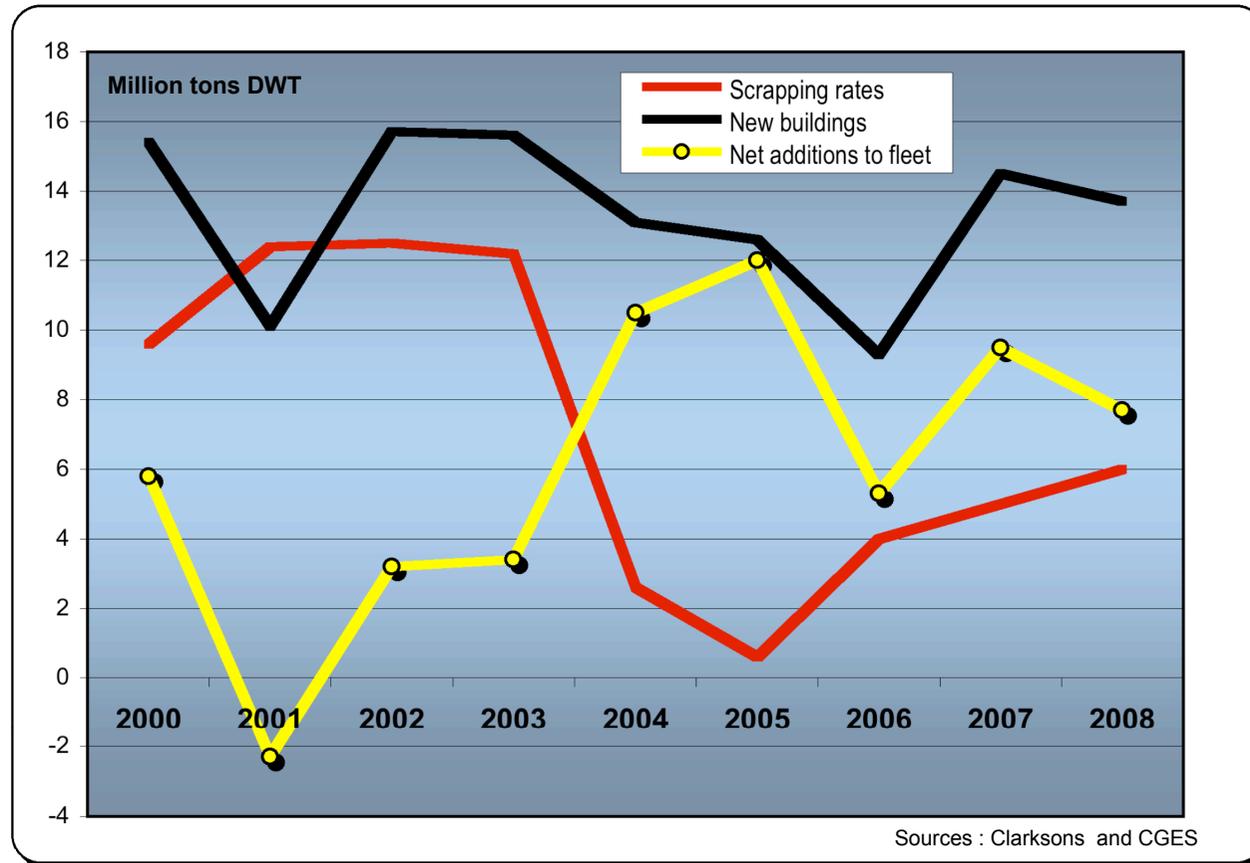
The Middle East's oil exports to these three regions are seaborne. Its exports to the Far East have more than trebled since 1986, whereas its exports to Western Europe and to the Americas have declined (since 1998 and 2001 respectively).

The VLCC utilisation rate and real freight rates



As expected, inflation-adjusted VLCC freight rates are correlated with the utilisation rate of the VLCC fleet. Low oil prices (as in 1986-87 and 1997-98) encourage oil movements, higher utilisation rates and higher freight rates. OPEC's output restraint (as in 1999 and especially in 2002) leads to lower utilisation rates and lower freight rates.

What will happen to the tanker fleet in the near future?



On present trends, the tanker fleet (Panamax, Aframax, Suezmax and VLCCs) should grow by 7.5 million tons a year on average during the period from 2006 to 2008. Surges in new buildings occur a couple of years after freight rate peaks, other things being equal. 2007 and 2008 promise to be years of high deliveries. The tanker fleet is expected to increase in DWT size by 3.7% a year between 2005 and 2008.