INTERNATIONAL ENERGY AGENCY/AGENCE INTERNATIONALE DE L'ENERGIE

OIL MARKET REPORT

A MONTHLY OIL MARKET AND STOCKS ASSESSMENT

www.oilmarketreport.org

INTERNATIONAL ENERGY AGENCY

AGENCE INTERNATIONALE DE L'ENERGIE

13 May 2008

HIGHLIGHTS

- **NYMEX Light Sweet Crude futures** were double levels of a year ago in early May, topping $126/bbl as strong demand from Asia and tight distillate markets pushed prices higher. Sentiment was further underpinned by crude outages, particularly in Nigeria and the North Sea. Refining margins rose in April, but remain volatile.

- **Global oil product demand** has been lowered for both 2007 and 2008, to 85.8 mb/d and 86.8 mb/d respectively. Slower economic growth, high prices and 2006 baseline adjustments suggest that OECD oil demand will contract for the third successive year in 2008. Non-OECD demand growth in 2008, led by China and the Middle East, remains strong at 3.7% or 1.4 mb/d, leaving growth for the world as a whole at 1.2% (+1.0 mb/d).

- **April global oil supply** fell by 400 kb/d month-on-month to 86.8 mb/d, pulled lower by North Sea outages, lower FSU output and weaker OPEC supplies. Although 1Q08 non-OPEC supply (ex-Angola and Ecuador) was unchanged from a year ago, OPEC supply stood 1.7 mb/d higher. Non-OPEC output growth in 2008 is now seen averaging 680 kb/d, compared with 550 kb/d in 2007.

- **OPEC April crude supply** averaged 31.9 mb/d, 255 kb/d below March. Strike action and pipeline sabotage cut Nigerian April supply by 150 kb/d to 1.9 mb/d. Effective OPEC spare capacity stands at 2.3 mb/d on paper, although refinery outages, crude quality and high prices mean much of this oil would be difficult to market under current conditions.

- **End-March OECD industry stocks** dipped by 1.3 mb. Together with a 19.0 mb downward revision to distillate stocks in February, this draws 1Q08 stocks by 18.7 mb or 0.2 mb/d - slightly less than the 0.4 mb/d five-year average draw. Stock cover was broadly unchanged in March at 53.3 days.

- **April global refinery crude throughput** 72.8 mb/d is seen as a seasonal trough, with output stifled by poor economics and maintenance. Runs should rise through the second quarter to meet driving season demand, however recent improvements in Atlantic Basin gasoline supply are expected to keep margins volatile.

Next Issue: 10 June 2008

CONTENTS

MARKET OVERVIEW: DO WE NEED MORE OIL?

With oil prices reaching $125/bbl, calls for more oil are getting louder. But do we really need more oil? To answer this, we need to look at the current balances, forecasting risks and some of the market perceptions that may have been driving the oil price.

First, we need to step back from the detail and simply define that, in our opinion, this is a bull market driven primarily by demand potential outstripping slow supply growth – notably non-OPEC. With no slack in the system, prices have had to rise to choke off demand growth and bring the market into balance.

This report sees further downward adjustments to demand, and they may not be the last. Despite an aggressive cut last month in our US demand forecast, further downward revisions are needed this month. Official March European data are also exceptionally weak. We are currently treating this as a symptom of an early Easter together with price and weather distortions, but if it extends into April, we may have to trim demand further.

Other downside pressures may also emerge. Faced with the realisation that high prices may be with us for some time, several countries, such as Indonesia, are reassessing the budgetary reality of sustaining oil price subsidies. It will not be easy to unwind them (many countries are wary of civil unrest, and may therefore try to cushion low-income earners with other payments), but when such shifts do come, they could cause temporary downward shocks to demand.

It is, however, unlikely that there will be any short-term shift in the demand picture for China and the Middle East, the two key growth regions. China has recently entrenched its subsidy regime by deciding to compensate Sinopec and PetroChina's losses with monthly payments, and there are again question markets over data. In the Middle East, there is increased discussion of the need for energy efficiency, but with higher oil prices more than compensating for higher domestic subsidy payments, an imminent slowdown in demand is unlikely.

On balance, though, despite continued strength in China and the Middle East, it would seem that the risks to demand remain on the downside. While consumers may be adjusting to high oil prices, the full impact of current high oil prices in excess of $120/bbl, if sustained, has yet to be factored into either behaviour or forecasts.

Looking at the other side of the equation, supply-side risks extend beyond ongoing project slippage and the approaching Hurricane season. In particular, rising food prices have put biofuels policies under scrutiny. While it seems unlikely that biofuel targets will be reversed in the near future, it is sobering to realise the amount of oil that would be need to replace them. Just offsetting the biodiesel and ethanol added to the US and European markets since 2005 would require around 1 mb/d of additional crude oil supplies to be processed.

The most recent data and estimates suggest that the oil market should have been in surplus for the past two months and should remain in that position for the rest of 2008 - as long as OPEC maintains output at current levels. From an OECD stock position such an outcome is not yet visible. Most likely, the restocking is taking place in non-OECD countries, where there are little data, while OECD refiners are adjusting for weak demand and seasonal 2Q maintenance through lower imports. So do we need more oil?

Consumer countries are calling for more OPEC oil to ease prices. They are right – it would. More crude would prompt a more rapid crude stock build and would improve refining margins, allowing more distillates to be produced. On the other hand, OPEC is saying that the market is well supplied, and that stocks should build. The issue here, as we have been arguing for the past 18 months, is one of stock levels

and timing. The market can only express its demand for higher stocks in a supply-constrained market through higher prices. And if some players are determined to build stocks they have to do so in competition with those who need the crude to meet current demand – therefore creating a competitive upward spiral in prices. To the list of upward pressures we should also add perceptions.

By setting output at a level that should allow stocks to rebuild throughout the second and third quarters and indicating it would only address the level of stocks in September (when the economic impact of the financial crisis would be more apparent) OPEC was probably hoping to send a signal of stability and confidence to the market. Instead, the market saw a completely different message: producers were comfortable with prices above $100/bbl and they would not react quickly to replenish stocks or adjust output should demand prove unexpectedly robust.

There is also the perception of a *ratchet effect* from higher prices. OPEC may, with the exception of Saudi Arabia, have only a limited ability to raise output, but every member has the ability to cut output. Therefore, the perception is that with spare capacity at low levels, OPEC can support a higher level of prices. If traders feel OPEC is signalling it is comfortable with $100/bbl, then fundamentals are appraised from that new base. OPEC's silence as we neared $120/bbl raised perceptions of an even higher floor.

OPEC's focus on stocks as a barometer of adequate supply reinforces this perception. Basic economics would argue that if prices move higher than the equilibrium level where supply equals demand, then there should be a tendency for stocks to rise. By cutting supplies to reduce stock levels, a higher equilibrium price is achieved, further reinforcing the *ratchet effect*. These are, however, just perceptions. They could change easily, particularly if stocks build rapidly.

There are some early signs of changing market conditions. Brent and WTI forward spreads are close to contango, implying that that either stocks are building or that storage is being booked to take crude. Reports of a large build in floating storage for Iranian crude have also emerged in recent weeks. This may give the market greater confidence that a 'normal' 2Q stock build is underway. But even if we can see this process beginning, the truth is that due to the lack of weekly stock data outside of the US and Japan, any second-quarter OECD stockbuild will not be fully apparent until mid-July. In addition, given the magnitude of recent OECD revisions, end-June inventory levels will not be known accurately until September.

The key question is how to halt the upward spiral in prices. Clear evidence of a seasonal stockbuild would help. OPEC could kick-start the process by giving at least a clear indication that it will rapidly provide more oil if stocks do not build in the very near future. An even more powerful signal would be to provide more oil now. To the extent that current prices also embody an element of concern over future supplies, an ongoing commitment to investment would also help.

DEMAND

Summary

- **Global oil product demand** has been adjusted down for both 2007 and 2008. World demand is now estimated at 85.8 mb/d in 2007 (+1.3% or +1.1 mb/d over the previous year and 150 kb/d below last month's report). In 2008, demand is expected to average 86.8 mb/d (+1.2% or +1.0 mb/d over 2007, and -390 kb/d compared with our last report). These revisions are due to significant adjustments to preliminary OECD data in 1Q08, and to 2006 baseline changes in non-OECD countries, which were carried forward.

- **OECD oil product demand** has remained largely unchanged in 2007, but has been lowered by almost 190 kb/d to 48.8 mb/d in 2008 (-0.7% or -0.3 mb/d on an annual basis). The changes result from large downward revisions to preliminary data in 1Q08. Oil product demand in OECD North America turned out to be much weaker than expected, providing further evidence of the effects of the economic slowdown and high prices. In OECD Europe, both diesel and residual fuel deliveries were also much lower than anticipated across the continent. In OECD Pacific, a larger-than-expected contraction in Japanese gasoline offset continued strong demand for residual fuel oil and direct crude for power generation.

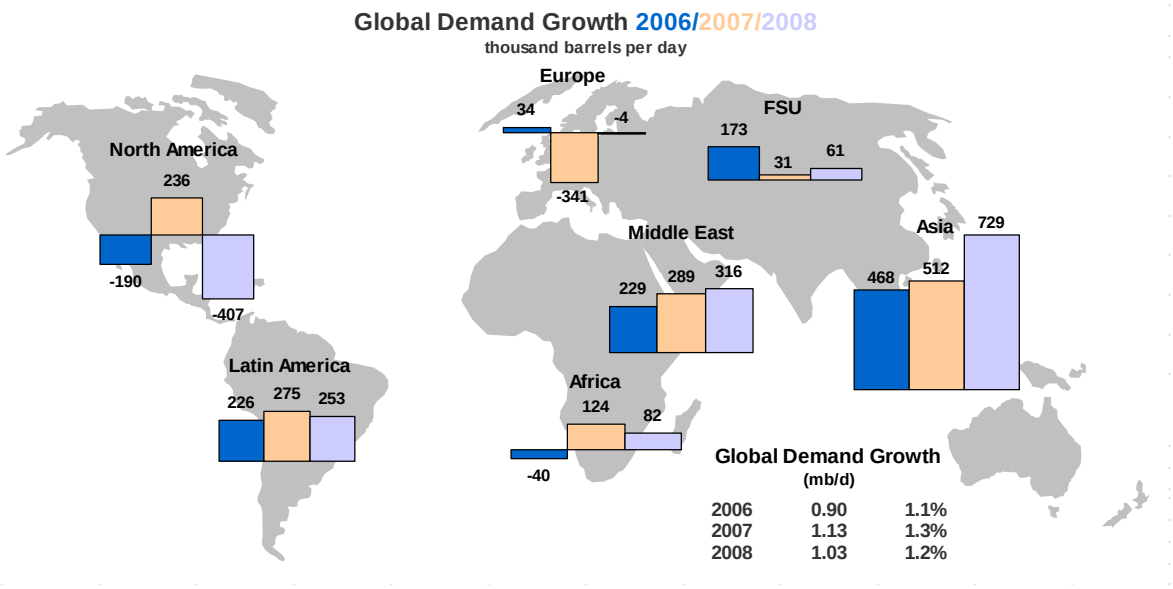
Global Oil Demand (2006-2008)

(million barrels per day)

	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Africa	2.9	2.9	2.8	2.9	2.9	3.0	3.0	2.9	3.1	3.0	3.1	3.1	3.0	3.2	3.1
Americas	30.4	30.4	31.0	30.8	30.6	31.1	31.0	31.2	31.3	31.1	30.5	30.9	31.2	31.3	31.0
Asia/Pacific	25.2	24.1	23.7	24.9	24.5	25.3	24.8	24.3	25.6	25.0	26.2	25.5	25.0	26.3	25.7
Europe	16.8	16.0	16.3	16.5	16.4	16.0	15.7	16.1	16.4	16.0	16.0	15.7	16.1	16.2	16.0
FSU	4.0	3.9	4.2	4.2	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.0	4.3	4.4	4.2
Middle East	6.1	6.1	6.4	6.2	6.2	6.4	6.5	6.7	6.4	6.5	6.7	6.8	7.1	6.8	6.8
World	**85.4**	**83.4**	**84.4**	**85.5**	**84.7**	**85.9**	**84.9**	**85.4**	**87.0**	**85.8**	**86.6**	**86.0**	**86.6**	**88.1**	**86.8**
Annual Chg (%)	0.8	1.0	1.2	1.4	1.1	0.6	1.8	1.2	1.7	1.3	0.8	1.3	1.4	1.3	1.2
Annual Chg (mb/d)	0.6	0.8	1.0	1.2	0.9	0.5	1.5	1.0	1.5	1.1	0.7	1.1	1.2	1.1	1.0
Changes from last month's report (mb/d)	-0.17	-0.17	-0.19	-0.14	-0.17	-0.15	-0.15	-0.16	-0.15	-0.15	-0.70	-0.27	-0.27	-0.30	-0.39

- **Non-OECD oil product demand** has been revised down by roughly 140 kb/d to 36.7 mb/d in 2007 (+3.9% or +1.4 mb/d over the previous year) and by about 200 kb/d to 38.1 mb/d in 2008 (+3.7% or 1.4 mb/d). The changes are essentially related to 2006 baseline reappraisals across all continents, suggesting that many small, oil-importing countries have been more affected by rising oil prices than previously thought. This also highlights data-quality issues, notably in Africa, Asia and the Middle East. Nevertheless, oil demand growth in key emerging markets is expected to remain strong and generally supportive of resilient oil demand globally.

- **China has adopted several measures to ensure that the domestic market is well supplied in the run-up to the Olympic Games.** Beijing is seeking to avoid a repeat of the politically embarrassing oil product shortages that have beset the country since 2H07. Although end-user prices will remain capped given inflationary concerns, the government will subsidise, on a monthly basis, state-owned PetroChina and Sinopec for their downstream losses. In addition, it will refund the value-added tax (17%) levied on gasoline and gasoil imports during 2Q08. Finally, it has ordered wholesalers to hold stocks equivalent to at least 15 days of last year's sales, starting on 1 May.



OECD

According to preliminary data, total OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) contracted by 2.8% year-on-year in March, with losses in North America, Europe and the Pacific. Oil product demand in **OECD North America** (which includes US Territories) fell by 3.1% driven by the ongoing US economic slowdown; all product categories posted losses. In **OECD Europe**, demand fell by 2.3%, largely because of lower diesel deliveries in key consuming countries and residual fuel oil weakness across the continent. In **OECD Pacific**, a larger-than-expected contraction in Japanese gasoline offset continued strong demand for residual fuel oil and direct crude use for power generation, with overall demand declining by 2.8%.

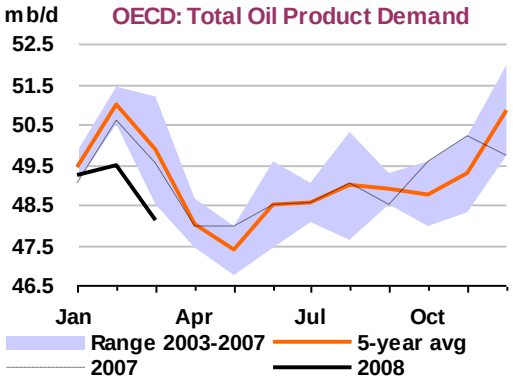
OECD Demand based on Adjusted Preliminary Submissions - March 2008
(million barrels per day)

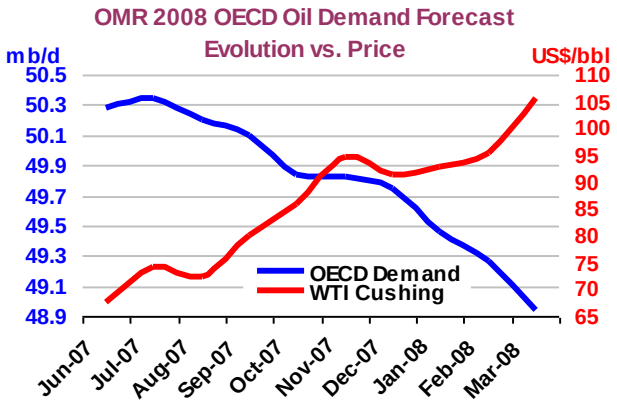
	Gasoline		Jet/Kerosene		Diesel		Other Gasoil		RFO		Other		Total Products	
	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa	mb/d	% pa
OECD North America*	**10.58**	**-1.1**	**1.83**	**-0.3**	**4.03**	**2.7**	**1.24**	**-17.4**	**1.10**	**-17.5**	**5.90**	**-4.55**	**24.68**	**-3.1**
US50	9.05	-1.5	1.58	-1.3	3.47	3.3	0.72	-25.8	0.59	-23.8	4.51	-4.4	19.92	-3.3
Canada	0.68	0.9	0.12	8.4	0.21	1.4	0.36	-2.5	0.15	2.6	0.80	0.9	2.33	0.9
Mexico	0.75	1.2	0.07	5.8	0.28	-2.3	0.12	-2.3	0.23	-19.1	0.52	-13.6	1.96	-6.3
OECD Europe	**2.37**	**-5.1**	**1.24**	**3.2**	**4.14**	**-3.0**	**1.93**	**-1.1**	**1.67**	**-3.2**	**3.55**	**-1.7**	**14.91**	**-2.3**
Germany	0.47	-8.1	0.19	3.6	0.60	-4.0	0.40	12.8	0.18	-4.4	0.55	-8.8	2.40	-3.1
United Kingdom	0.42	-4.0	0.35	5.4	0.46	0.7	0.14	-1.9	0.07	-3.8	0.36	4.6	1.80	0.8
France	0.19	-13.9	0.15	1.0	0.64	-6.3	0.31	-9.8	0.09	10.8	0.43	-2.7	1.81	-5.7
Italy	0.26	-9.7	0.08	-2.3	0.53	-4.5	0.09	-6.2	0.24	-18.7	0.41	4.2	1.61	-5.8
Spain	0.15	-8.7	0.12	9.8	0.50	-10.0	0.23	-13.5	0.21	-0.4	0.37	-0.7	1.56	-5.8
OECD Pacific	**1.43**	**-9.8**	**0.97**	**-16.4**	**1.23**	**-5.7**	**0.58**	**-7.2**	**1.01**	**3.3**	**3.31**	**6.0**	**8.53**	**-2.8**
Japan	0.88	-13.9	0.66	-21.9	0.59	-10.3	0.43	-11.8	0.60	25.1	2.03	6.0	5.19	-4.0
Korea	0.16	-0.7	0.18	-6.5	0.29	-4.2	0.14	10.5	0.39	-17.5	1.10	7.0	2.26	-1.0
Australia	0.32	-3.8	0.11	7.9	0.30	1.4	0.00	-46.0	0.02	-20.0	0.17	-3.1	0.92	-1.3
OECD Total	**14.37**	**-2.7**	**4.05**	**-3.8**	**9.40**	**-1.0**	**3.75**	**-8.0**	**3.78**	**-6.4**	**12.77**	**-1.2**	**48.12**	**-2.8**

* Including US territories

Moreover, February data were revised down significantly in all three regions. OECD demand thus fell by 2.2% year-on-year. As a result, 1Q08 has been lowered by roughly 570 kb/d, thus weighing on the 2008 prognosis, now estimated at 48.8 mb/d in 2008 (-0.7% or -0.3 mb/d over 2007, and 190 kb/d lower than in our last report). That would signal the third consecutive annual decline in OECD demand since 2005. Prices have played a role, but whereas in 2006 and 2007 demand weakness was accentuated by mild weather and interfuel substitution, in 2008 it will be mostly due to stagnating growth in transportation fuels consumption, notably in North America – further evidence of the double squeeze of the ongoing economic slowdown and rising oil prices. In fact, changing economic conditions in general, and the rise in

prices in particular, are strongly correlated to forecasting revisions in the OECD. When we first issued our 2008 prognosis in July 2007 (with May data), average oil prices were below $49/bbl, and major institutions were anticipating that US GDP growth would be as high as +2.8% in 2008. Ten months later, prices have more than doubled, and the IMF's prediction for US economic growth has been drastically cut to only 0.5%.





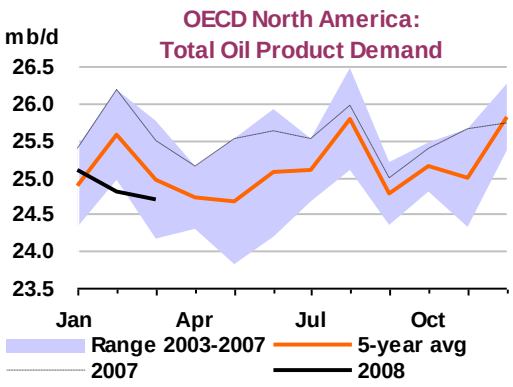
Total OECD Demand by Product
(million barrels per day)

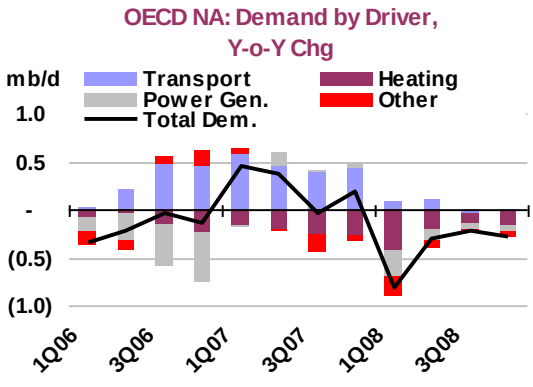
	2006	2007	1Q07	2Q07	3Q07	4Q07	Dec 07	Jan 08	Feb 08*	Latest month vs. Jan 08	Latest month vs. Feb 07
LPG & Ethane	4.78	4.81	5.24	4.64	4.44	4.93	5.27	5.29	5.37	0.08	-0.13
Naphtha	3.17	3.21	3.38	3.06	3.15	3.24	3.33	3.26	3.26	0.00	-0.17
Motor Gasoline	14.86	14.90	14.44	15.06	15.28	14.81	14.75	14.01	14.24	0.23	-0.28
Jet & Kerosene	4.16	4.11	4.35	3.90	3.96	4.22	4.31	4.36	4.50	0.15	0.05
Gas/Diesel Oil	13.25	13.17	13.50	12.60	12.87	13.69	13.35	13.48	13.79	0.32	-0.08
Residual Fuel Oil	4.04	3.93	4.19	3.87	3.76	3.89	3.88	4.07	3.74	-0.34	-0.64
Other Products	5.08	4.97	4.58	5.03	5.23	5.04	4.81	4.74	4.58	-0.17	0.13
Total Products	**49.34**	**49.09**	**49.68**	**48.16**	**48.69**	**49.82**	**49.70**	**49.22**	**49.48**	**0.27**	**-1.12**

* Latest official OECD submissions (MOS)

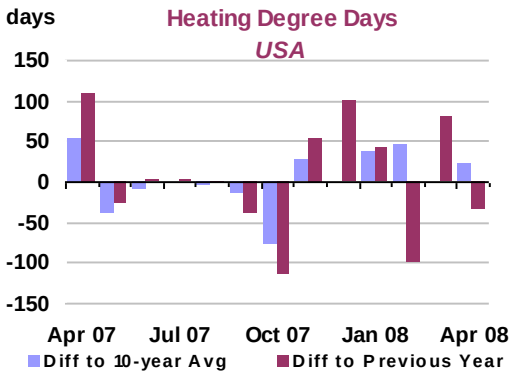
North America

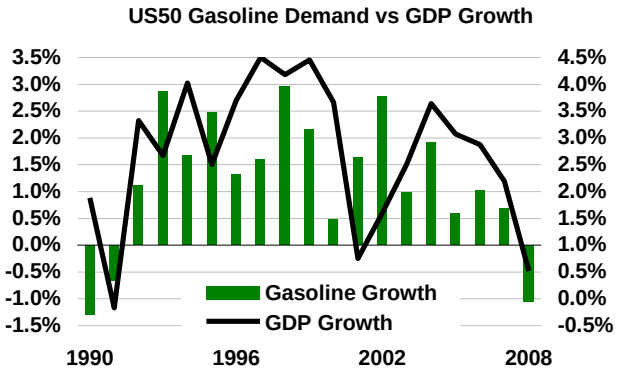
According to preliminary data, oil product demand in North America (including US Territories) contracted by 3.1% year-on-year in March, essentially because of a general weakness in all product categories in the US. The contraction in regional deliveries was particularly large in the case of naphtha (-27.4%), high-sulphur (heating oil) gasoil (-17.4%, although this is related to reclassification issues in the US, since low-sulphur, non-road locomotive and marine gasoil is now counted as diesel) and residual fuel (-17.5%). As such, OECD North America demand is expected to average 25.1 mb/d in 2008 (-1.6% compared with 2007). Notably, given the economic slowdown in the US, growth in transportation fuels demand no longer offsets demand declines prompted by mild weather and interfuel substitution.



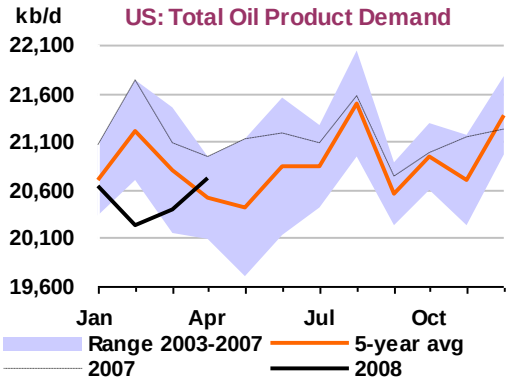


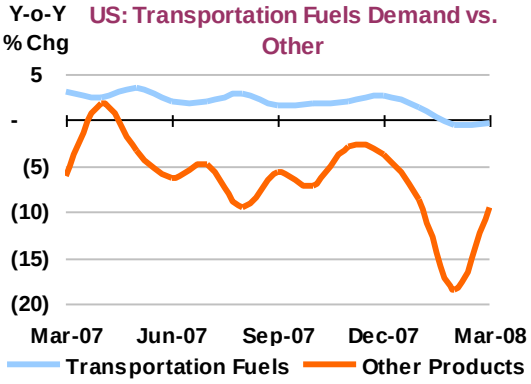
Adjusted preliminary data indicate that inland deliveries in the continental **United States** – a proxy of oil product demand – contracted by 3.3% year-on-year in March. The fall was due to weak demand across all product categories. This provides further evidence that the US economic slowdown, compounded by ever-higher oil prices, is taking a toll on demand, as gasoline and jet fuel/kerosene use, which is highly sensitive to economic conditions, shrank for the fourth consecutive month. (Diesel remains relatively strong, but this is partly related to reclassification issues, as noted above.) However, weather patterns and interfuel substitution also played a role: on the one hand, March was only slightly colder than last year and in line with the historical average; on the other hand, natural gas continued to be cheaper than residual fuel oil.





As if these gloomy data were not enough, for the second month in a row the US Energy Information Administration made a large downward adjustment to preliminary figures, with February demand cut by about 750 kb/d. Our own revision, however, was only 360 kb/d, as this report attempts to pre-empt EIA's changes. Unlike last month (when revisions concerned oil products related to heating and power needs), this time the adjustment can be essentially attributed to worsening economic conditions, since it has been mostly applied to transportation fuels (70% of US demand in February), which are strongly correlated to economic activity. As such, US oil demand is poised to contract by as much as 2.1% to 20.4 mb/d in 2008, with gasoline decreasing by about 1.0%, in line previous economic downturns.





High oil prices have become a key theme in the US political debate. For example, several weeks ago a convoy of some 350 trucks, buses and cars held a honking rally in front of the Capitol in Washington, DC, calling on Congress to cap gasoline, diesel and heating oil prices at $2 per gallon. (Regular unleaded gasoline, currently at about $3.4/gallon, is 20% more expensive than last year, while diesel, at around $4.0/gallon, is 42% higher.) Several representatives have responded with a number of proposals – such as setting up anti-price-gouging legislation, imposing a windfall tax on oil company earnings or preventing the government from filling the Strategic Petroleum Reserve – but without much consensus so far. The White House, meanwhile, has repeatedly expressed concern while warning that there is no easy fix to

high prices and urging Congress to promote domestic oil production and improve energy efficiency. The presidential nomination candidates, for their part, have either urged OPEC to produce more oil, or have endorsed a proposal to remove the federal gasoline tax (¢18.4/gallon) during the forthcoming summer's driving season. Yet as long as international oil prices remain above $120/bbl, lowering domestic retail prices without significant subsidies will be difficult. This conclusion seems to have been reached by some carmakers: Chrysler has just launched its 'Let's Refuel America' campaign, whereby the company will subsidise eligible new vehicles during three years (customers will receive a card entitling them to purchase gasoline at a capped price of $2.99 per gallon).

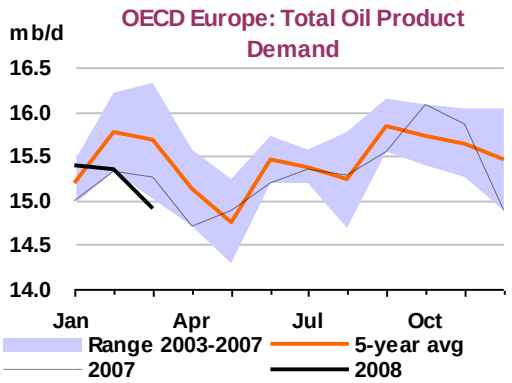
OECD North America Demand by Product
(million barrels per day)

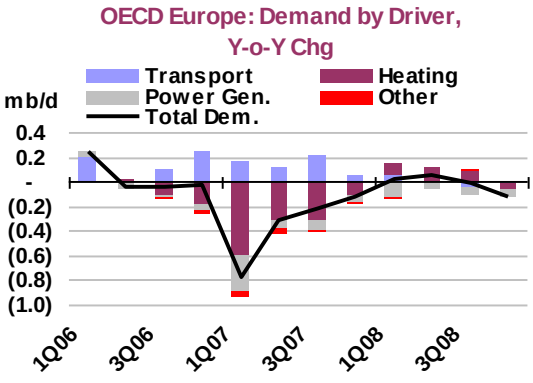
	2006	2007	1Q07	2Q07	3Q07	4Q07	Dec 07	Jan 08	Feb 08*	Latest month vs. Jan 08	Latest month vs. Feb 07
LPG & Ethane	2.87	2.91	3.24	2.75	2.70	2.97	3.22	3.24	3.23	-0.01	-0.23
Naphtha	0.44	0.43	0.42	0.45	0.43	0.43	0.41	0.40	0.38	-0.02	-0.04
Motor Gasoline	10.72	10.85	10.53	10.94	11.07	10.85	10.85	10.35	10.39	0.05	-0.14
Jet & Kerosene	1.91	1.90	1.88	1.89	1.91	1.91	1.88	1.83	1.86	0.03	-0.06
Gas/Diesel Oil	5.17	5.27	5.48	5.13	5.13	5.34	5.36	5.30	5.38	0.09	-0.34
Residual Fuel Oil	1.20	1.24	1.38	1.26	1.18	1.16	1.11	1.20	1.06	-0.13	-0.42
Other Products	2.99	2.94	2.74	3.02	3.07	2.93	2.88	2.78	2.48	-0.30	-0.18
Total Products	**25.31**	**25.54**	**25.66**	**25.43**	**25.49**	**25.58**	**25.72**	**25.09**	**24.79**	**-0.30**	**-1.40**

* Latest official OECD submissions (MOS)

Europe

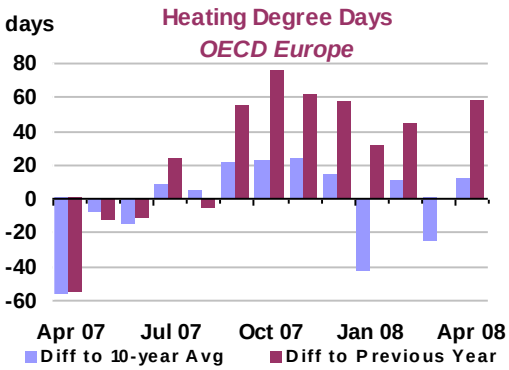
Preliminary inland delivery data for March were much weaker than anticipated, leading to a downward adjustment of 500 kb/d compared with our previous forecast. Total European deliveries contracted by 2.3%, with all product categories, bar jet kerosene, posting losses. Demand in the major continental economies – France, Germany, Italy and Spain – was very weak indeed, contracting by 5.7%, 3.1%, 5.8% and 5.8%, respectively. This was partly related to the fact that the Easter holidays fell in March this year rather than in April, thus reducing the number of working days (by 1 or 2, depending on the country) and shifting business and industrial demand to the following month. The effects of this timing issue will become clearer as official March data and preliminary April figures are released next month (in previous years, when Easter also fell in March, the impact had been less pronounced, suggesting that other factors had influenced demand). The weather arguably also played a role: the number of heating degree days in March was below the 10-year average, but on a par with last year. April, by contrast, was colder than normal in most European countries; as such, heating demand may have rebounded.



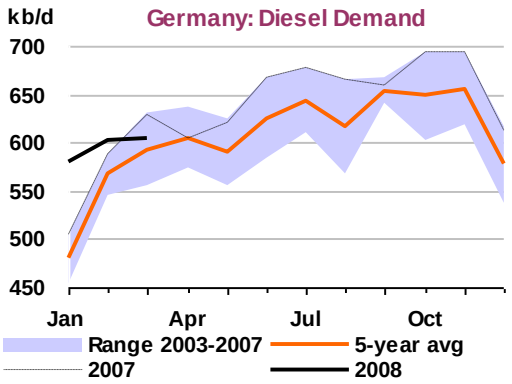


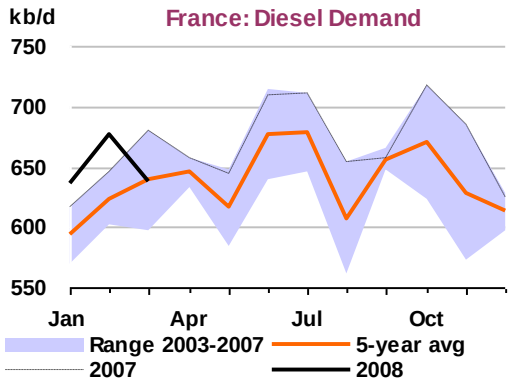
February figures, meanwhile, were revised down by 240 kb/d (largely because of Turkish data: demand plummeted by 17% month-on-month, after soaring by 42% in January). January demand, by contrast, was adjusted upwards by about 100 kb/d following revisions to official French data. Overall, 1Q08 demand is 215 kb/d lower than last month's report, at 15.21 mb/d; for the year as whole, demand is expected to average 15.3 mb/d (-0.1% compared with 2007).

European consumers are to a certain extent shielded from the rise in oil prices due to the weak dollar and high tax rates, but higher prices are nonetheless weighing on demand. In fact, retail prices have increased by 20% on average since we published our original 2008 forecast. In the five largest European markets (France, Germany, Italy, Spain and the UK) retail diesel prices (in national currencies and including taxes) were some 20% higher in both March and April when compared with the previous year. In the case of gasoline, heating oil and low-sulphur industrial fuel oil, end-user prices were respectively some 15%, 35% and 45% higher in March. Moreover, prices further increased in April and in early May. As such, a forthcoming round of end-user refilling of heating oil tanks may be deferred if prices remain high. Instead, consumers will probably continue to minimise purchases as much as possible, as has been the case since 2007.



German demand remained well below its five-year range in March, falling by 3.1% year-on-year. While deliveries for all products were weak, the decline in diesel (-4.0%) is noteworthy: until then diesel demand had been resilient to high prices, growing by 5.3 % on average since the beginning of 2007. Gasoline deliveries, meanwhile, contracted by 8.1% (much higher than the 4.6% average decline observed since January 2007), while 'other products' fell by 8.1%. Only jet kerosene and heating oil posted positive growth, increasing by 3.6% and 12.8%, respectively. Consumer heating oil stocks followed their normal seasonal trend, falling by 195 kb/d to 46% of capacity by end-March. Stocks are now 3% below end-February and 9% below March 2007.

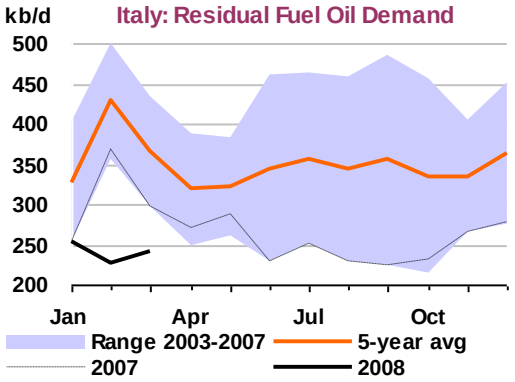


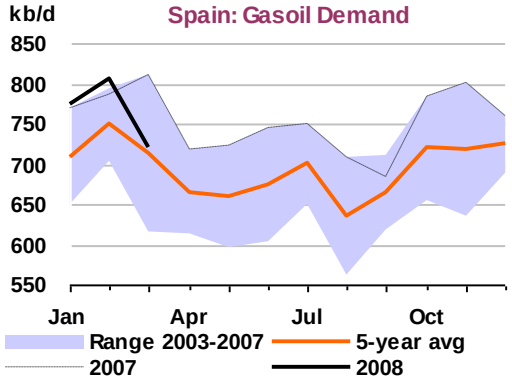


Inland deliveries in **France** fell by 5.7% year-on-year in March, led by a 13.9% decline in gasoline deliveries, a 6.3% decline in diesel and a 9.8% fall in heating oil deliveries. We expect the weakness to be partly reversed in April, due both to the effect of Easter and colder weather. Meanwhile, **Italian** deliveries fell by 5.8% in March as demand for all product categories (bar 'other products') declined. Transportation fuels contracted by 5.9%, the strongest decline since April 2006 (-11.4%). Fuel oil demand, in particular, remains exceptionally weak (-19%, following February's -39%). Although this weakness is partly due to a 2.7% decline in electricity demand, the fact that hydro electric power production fell by 1.1% suggests that interfuel substitution in favour of natural gas continues apace.

According to preliminary figures, oil demand in **Spain** shrank by 5.8% year-on-year in March. This figure, though, is partly explained by the fact that demand was exceptionally strong in the same month of last year. Gasoil and gasoline were particularly weak, falling by 11.1% and 8.7%, respectively. Jet fuel/kerosene, by contrast, was 9.8% higher, possibly due to increased holiday travel in March. Finally, **UK** demand is expected to have remained unchanged in March (preliminary data was not available at the time of writing). February data, however, were revised up by 68 kb/d, largely because of surprisingly

strong growth in diesel demand (+12.1%). We have adjusted down slightly our prognoses of LPG and naphtha demand for April and May as a result of the strike at the Grangemouth refinery and its petrochemical complex (where ethane, propane and some light distillates are used as feedstock to produce ethylene).





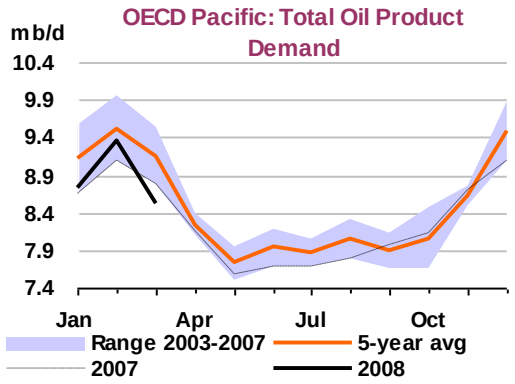
OECD Europe Demand by Product
(million barrels per day)

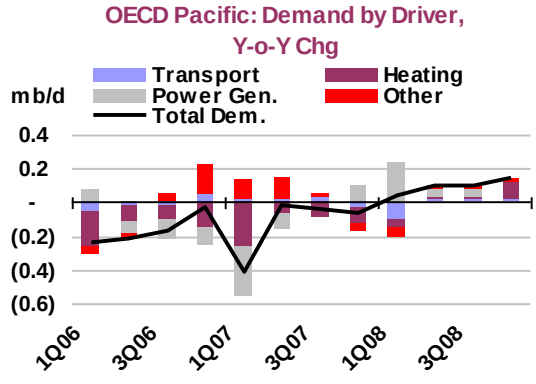
	2006	2007	1Q07	2Q07	3Q07	4Q07	Dec 07	Jan 08	Feb 08*	Latest month vs. Jan 08	Latest month vs. Feb 07
LPG & Ethane	1.00	0.97	1.03	0.97	0.89	1.00	1.03	1.11	1.09	-0.01	0.06
Naphtha	1.12	1.12	1.21	1.05	1.08	1.14	1.16	1.11	1.17	0.07	-0.06
Motor Gasoline	2.57	2.49	2.38	2.58	2.58	2.40	2.32	2.24	2.31	0.07	-0.10
Jet & Kerosene	1.27	1.29	1.22	1.28	1.39	1.28	1.22	1.23	1.23	0.01	0.00
Gas/Diesel Oil	6.25	6.12	6.17	5.73	6.07	6.50	6.16	6.51	6.54	0.02	0.33
Residual Fuel Oil	1.86	1.74	1.83	1.71	1.68	1.74	1.71	1.76	1.65	-0.11	-0.27
Other Products	1.57	1.54	1.35	1.60	1.69	1.54	1.29	1.44	1.35	-0.09	0.05
Total Products	**15.63**	**15.28**	**15.19**	**14.93**	**15.39**	**15.60**	**14.88**	**15.39**	**15.34**	**-0.04**	**0.02**

* Latest official OECD submissions (MOS)

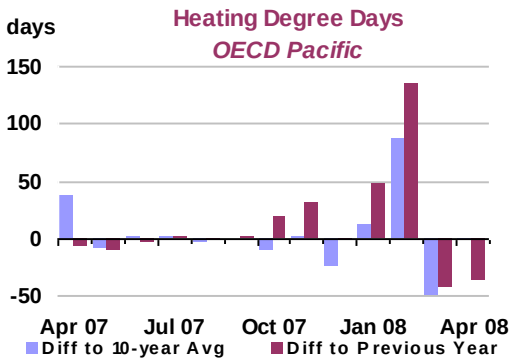
Pacific

Preliminary data show that oil product demand in the Pacific contracted by 2.8% year-on-year in March. Weak transportation fuels demand in all countries bar Australia and shrinking deliveries of kerosene for heating in both Japan and Korea as a result of much warmer temperatures (both compared with last year and with the 10-year average) offset the continued and very strong growth in fuel oil and direct crude use for power generation in Japan. Given these data, OECD Pacific oil demand has been revised down slightly to 8.4 mb/d in 2008 (+1.2% on a yearly basis).



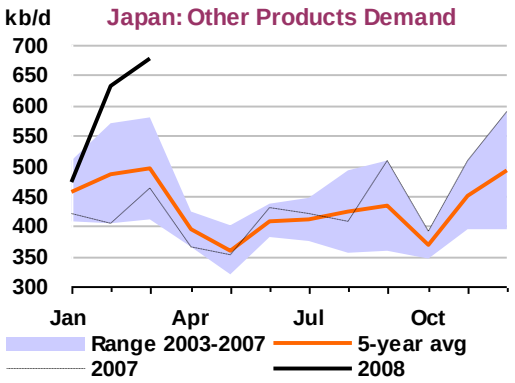


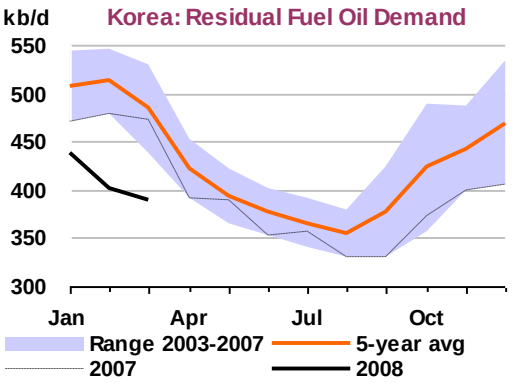
According to preliminary data, oil product demand in **Japan** (two-thirds of OECD Pacific total) fell by 4.0% year-on-year in March. Mild temperatures, which depressed demand for heating (jet fuel/kerosene plummeted by 21.9%), and an unexpected large contraction in gasoline deliveries (-13.9%) offset continued demand for fuel oil (+25.1%) and direct crude for power generation (included in 'other products', which rose by 46.6%). Oil demand is thus expected to reach 5.0 mb/d (+0.9%) in 2008, but the declining trend observed in the past several years should resume in 2009 if the nuclear outages are resolved.



The removal of the transportation fuel tax in April (the Special Taxation Measure, levied on deliveries from Japanese refineries following the oil price shocks of the 1970s in order to fund a road-building programme) was short-lived. The opposition Democratic Party of Japan (DPJ), which holds a majority in parliament's upper house, had refused to renew the tax, which expired on 31 March, on the grounds that its proceeds have been wasted. The government, facing both a significant fiscal shortfall of as much as 1% of Japan's GDP and discontent within the ruling Liberal Democratic Party (LDP) from the construction lobby, used its two-thirds majority in the lower house on 30 April to force through the reinstatement of the tax, effective immediately (this is only the second time in the past 50 years that the government had used its so-called 'super-majority').

Following the reinstatement of the tax, Japan's average retail gasoline price jumped by about 17% to ¥153/litre, thus ending the month-long fuel tax holiday (prices had fallen by 15% on average). Lower prices may have increased gasoline demand slightly (preliminary data for April will not be available until next month) and may explain why gasoline deliveries were so weak in March. Given that the expiry of the bill had been largely anticipated, Japanese retailers possibly delayed purchase. However, the reinstatement of the tax just ahead of the Golden Week holiday is likely to have softened demand – indeed, retail prices have almost reached the all-time high level of ¥155/litre recorded in early December 2007 – and thus resume the structural decline in gasoline consumption.





In **Korea**, preliminary data indicate that total oil product deliveries fell by 1.0% year-on-year in March. The strong performance of LPG (+7.4%) and naphtha deliveries (+6.5%, accounting for over a third of total Korean demand), failed to offset the weather-induced decline in jet fuel/kerosene demand (-6.5%) and the increasing use of LNG instead of residual fuel (-17.5%) for power generation. Still, the 2008 demand outlook remains largely unchanged at 2.2 mb/d in 2008 (+1.5% over 2007).

OECD Pacific Demand by Product
(million barrels per day)

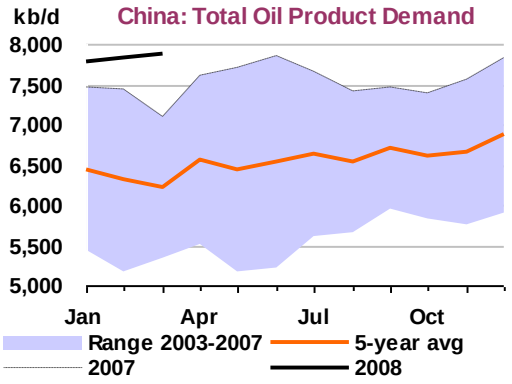
	2006	2007	1Q07	2Q07	3Q07	4Q07	Dec 07	Jan 08	Feb 08*	Latest month vs. Jan 08	Latest month vs. Feb 07
LPG & Ethane	0.92	0.93	0.97	0.92	0.86	0.95	1.02	0.94	1.04	0.11	0.04
Naphtha	1.60	1.65	1.75	1.57	1.63	1.67	1.76	1.76	1.71	-0.05	-0.08
Motor Gasoline	1.57	1.57	1.53	1.54	1.63	1.57	1.57	1.43	1.54	0.11	-0.04
Jet & Kerosene	0.98	0.91	1.25	0.73	0.65	1.03	1.21	1.31	1.41	0.11	0.11
Gas/Diesel Oil	1.83	1.78	1.85	1.75	1.67	1.86	1.83	1.67	1.87	0.20	-0.08
Residual Fuel Oil	0.98	0.94	0.99	0.89	0.90	0.99	1.05	1.12	1.03	-0.09	0.05
Other Products	0.52	0.49	0.49	0.41	0.48	0.58	0.64	0.52	0.74	0.22	0.26
Total Products	**8.40**	**8.27**	**8.83**	**7.80**	**7.81**	**8.64**	**9.10**	**8.74**	**9.35**	**0.61**	**0.26**

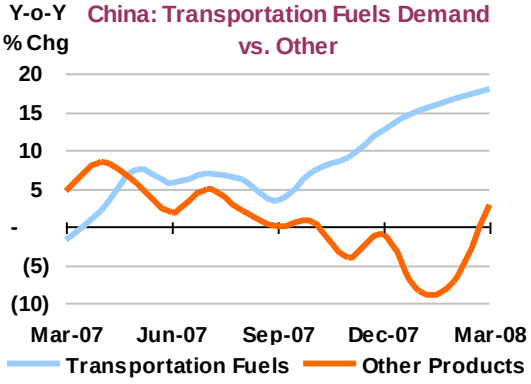
* Latest official OECD submissions (MOS)

Non-OECD

China

Preliminary data indicate that China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil and direct crude burning and stock changes) rose by an estimated 11.0% year-on-year in March. This rise was mostly related to a rebound in transportation fuels demand (suggesting that the issue of product shortages is being gradually addressed): gasoline rose by 23.9%, gasoil by 15.7% and jet fuel/kerosene by 14.5%. In addition, demand has been supported by reconstruction work following the devastating snowstorms of early 2008. Moreover, although residual fuel oil demand – the feedstock of choice for 'teapot' refineries – remains relatively weak (-1.3% versus March 2007), it is in a much better state when compared with the past six months (average year-on-year decline over the previous seven months: -13%). This is not surprising, as the country has begun a new agricultural cycle, which requires significant volumes of low-quality gasoil, normally supplied by independent refiners.





The surge in demand – which matches a stronger-than-expected GDP growth rate for 1Q08 (+10.6%, almost a full percentage point above most expectations) – was essentially met by imports, since overall refinery runs were down by 1.4% from February. (However, runs by 'teapot' refineries – China's swing producers – rose by about +2.6% month-on-month, according to our estimates, thus confirming reports of continued access to subsidised feedstock provided by state-owned PetroChina and Sinopec, notably in eastern China.) Net imports of both crude and products were significantly higher (+382 kb/d and +130 kb/d, respectively, versus the previous month). Half of the increase in net product imports was related to gasoil (+37% over February) and residual fuel oil (+11%).

Given the strong 1Q08 preliminary figures, the 2008 prognosis has been revised up slightly, to 7.9 mb/d (+4.9% over 2007). However, as discussed extensively in last month's report, the forecast is bound to change over the next few months, as a clearer picture emerges regarding economic growth, the effects of the destructive snowstorms of early 2008, the Olympics and oil-fired power generation requirements. The latter point is a key source of uncertainty: some observers argue that the main reason behind the recent

coal supply shortages and ensuing power blackouts is the lack of transportation capacity, especially in railways, which is obliging coal producers to hold larger-than-normal stocks. If so, this issue will only be solved in the medium term (the government intends to construct additional railways in the country's 13 most important coal-producing regions by 2020). Therefore, new shortages could potentially emerge: some officials anticipate a 10 GW shortfall this summer, notably in southern China, which could add some 30-40 kb/d to gasoil and fuel oil demand in order to feed small backup generators. Alternatively, coal trucking could increase – but that would also boost gasoil demand.

Yet China's power sector also faces distorted financial incentives, which mirror developments in its oil industry: capped end-user prices amid rising fuel (coal) prices, which in the end result in lower generation rates. If widespread blackouts (and a spike in gasoil and residual use) are to be averted this summer, the government may need to consider similar measures (see 'No More Shortages?' below) – that is, explicit subsidies to coal and power producers and import tax breaks on coal. The total cost of energy subsidies, though, could then become enormous. Alternatively, it could also suspend its widely proclaimed commitment to 'greener' and 'safer' energy policies by allowing small coalmines and power generators to continue operating, instead of shutting them down.

No More Shortages?

Adamant that the domestic oil product market must be well supplied ahead of the Olympic Games, but reluctant to liberalise end-user prices given the threat of further inflation (currently at almost 9%), China's government has adopted a new series of measures to deal with potential shortages.

First, in late April it decided to make explicit an ad hoc subsidy policy aimed at state-owned PetroChina and Sinopec, which will be reimbursed on a monthly basis for their downstream losses (effective April 1). Indeed, uncertainty over subsidies as the gap between domestic and international prices kept on widening has arguably contributed to the intermittent gasoline and gasoil shortages that have plagued the country since last year. Partial compensation was eventually granted to Sinopec only (by virtue of being the largest refiner) for 2006 and 2007, but only after much speculation on whether that would happen at all. By institutionalising subsidies, the government hopes that the state-owned giants will have enough incentives to adequately supply the market (it is unclear, though, whether the monthly subsidy will fully cover PetroChina and Sinopec's losses).

How costly is this move likely to be? Considering that the spread between domestic and international crude prices is currently about $30/bbl, and that China's oil demand stands at roughly 7.9 mb/d, the gross subsidy would be around $87 billion per year – about 2.2% of GDP and roughly 10% of the government's fiscal revenues. The net subsidy, though, would be much lower: given that roughly 52% of the country's crude requirements come from domestic sources, the total cost would fall to some $45 billion, equivalent to 1.1% of GDP and 5.2% of budgetary income – expensive but still relatively affordable, provided that international prices do not increase much further. However, this rough calculation assumes that all products face similar price caps, which is not the case (naphtha and petrochemical feedstocks, for example, trade at market prices). Therefore, the net cost could be even lower.

Second, the government announced it will refund the value-added tax (17%) levied on gasoline and gasoil imports during 2Q08. This refund will cover up to 3.5 million tonnes of fuel imports by PetroChina and Sinopec over that period. It should also allow both companies to carry out maintenance work in several refineries – scheduled 4Q07 outages had been delayed as a result of government pressure – and rebuild stocks (the lack of inventory data, however, makes it difficult to gauge the extent of such a rebuild). Some observers reckon that a similar VAT exemption regarding crude imports will be announced soon.

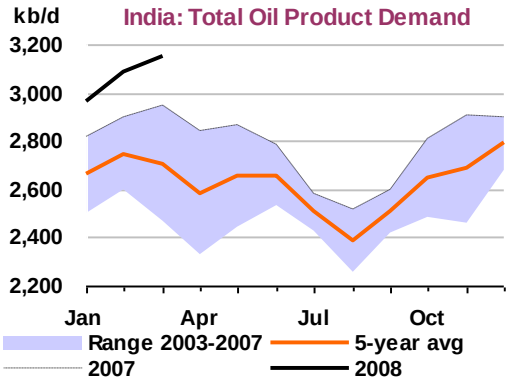
Third, the government has ordered wholesalers to hold stocks equivalent to at least 15 days of sales in the same period of the previous year, starting on 1 May. This measure, though, is more problematic. It presupposes that, contrary to what has happened in recent months, supplies from state-owned refiners will be sufficient to meet the requirements of both their affiliated service stations and of independent wholesalers and retailers. If that were not the case, independents would be the first to be squeezed – again – and forced to run down their stocks. However, it is unclear whether there will be sanctions if the 15-day target is not met – for Chinese independents, a minimum stock holding level only creates expensive extra demand without much additional benefit except in the case of an emergency.

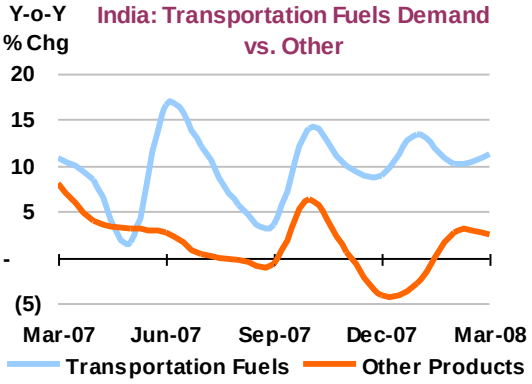
China: Demand by Product
(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2006	2007	2008	2007	2008	2007	2008
LPG & Ethane	701	669	657	-33	-12	-4.6	-1.9
Naphtha	756	812	824	56	12	7.5	1.5
Motor Gasoline	1,221	1,257	1,368	36	111	2.9	8.8
Jet & Kerosene	259	280	303	20	24	7.8	8.5
Gas/Diesel Oil	2,415	2,576	2,833	161	257	6.7	10.0
Residual Fuel Oil	791	744	716	-48	-28	-6.0	-3.8
Other Products	1,068	1,204	1,214	136	10	12.7	0.8
Total Products	**7,213**	**7,542**	**7,914**	**329**	**373**	**4.6**	**4.9**

Other Non-OECD

According to **Indian** preliminary data, oil product sales – a proxy of demand – jumped by 6.9% year-on-year in March. As usual, transportation fuels – gasoline, jet fuel/kerosene and gasoil sales – have been the main contributors to demand growth, rising collectively by roughly 12.0% year-on-year. Although February data were revised down slightly, our 2008 forecast remains largely unchanged at 2.9 mb/d (+4.8% over 2007).

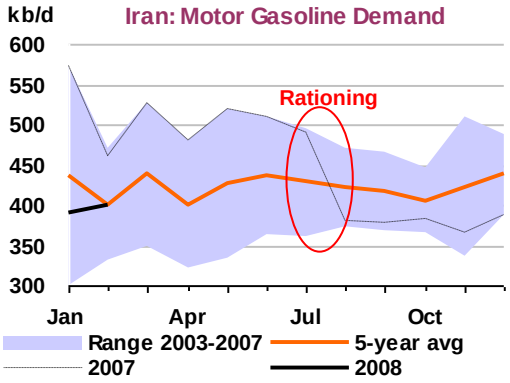


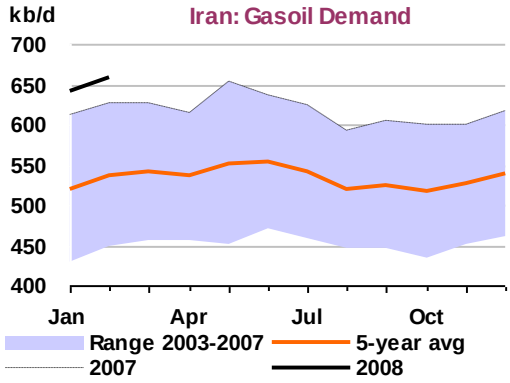


One effect of India's end-user price caps – in addition to runaway oil demand, mounting government expenditures and the heavy financial losses incurred by refiners and retailers – is oil product adulteration. Anecdotal evidence suggests that the practice of diluting gasoline or diesel with kerosene – mostly used by the country's 600 million poor as cooking fuel – is becoming increasingly widespread. That is not surprising given the current spread between administered prices: kerosene is sold at Rs 9 per litre, compared with gasoline (Rs 44 per litre) or diesel (Rs 36 per litre). Profits can thus be significant, even though adulterated fuel (usually sold in small kiosks) is some 10% cheaper than legal supply. Although in 2006 the government decreed that a blue dye should be mixed with kerosene in order to track adulteration, as much as 50% of kerosene production is diverted for illegal blending, according to local estimates.

The subsidy policy is in effect financing a massive transfer of wealth to the growing black market. In the year to 31 March, India spent $19 billion in fuel subsidies – with $4.8 billion devoted to kerosene. Moreover, since kerosene, unlike gasoline or diesel, is not taxed, adulteration also implies a loss of tax revenues (as much as $4 billion per year, according to some observers). Furthermore, the consequences of adulteration are not only financial. The efficiency of vehicles using the 'off-spec' fuel is impaired (eventually, the engine is severely damaged). Perhaps more importantly, it is the source of significant air pollution: Indian kerosene contains as much as 2,000 ppm of sulphur – around six times higher than diesel in major cities (350 ppm).

According to preliminary data, oil product demand in **Iran** rose by 3.7% year-on-year in February. As in most countries in the region, demand is largely underpinned by transportation needs. With the exception of gasoline (demand contracted by 13.4% compared with February 2007), gasoil demand remains buoyant (+5.3% on a yearly basis). The reduction in gasoline consumption was the result of last year's rationing scheme, which also contributed to stem outbound smuggling (by the same token, this means that gasoline demand in neighbouring countries probably increased). Power generation requirements have also played a key role with regards to the country's oil demand strength, in line with the country's natural gas shortages: residual fuel oil demand soared by +23.0% year-on-year – the ninth consecutive month of double-digit growth. Overall, Iranian oil demand is expected to average 1.8 mb/d in 2008 (+2.0% over 2007). It should be noted that this year's relatively subdued growth rate, at least compared with the recent past (demand expanded by +8.9% in 2006 and by +5.9% in 2007), is largely related to the fall in gasoline demand in 2H07. Whereas gasoline accounted for some 27% of total oil product consumption in 2006-2007, its share is expected to diminish to about 22% of the total in 2008, and demand should grow by around 5% per year from 2009 (compared with over 10% in pre-rationing years).



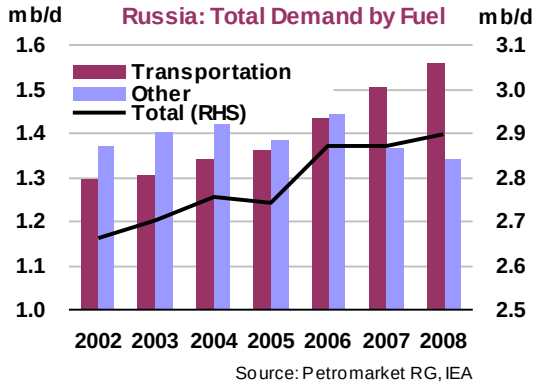


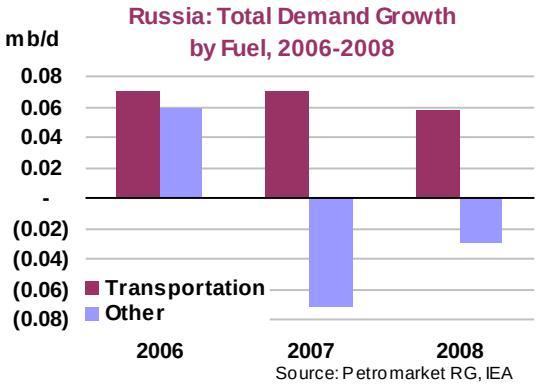
In early March, after several months of dithering and as Iranians prepared to celebrate their New Year holidays, the government finally set a price for gasoline volumes above the rationing quota (120 litres per month). The new price has been set at 4,000 rials (44¢) per litre – about four times higher than subsidised gasoline but largely in line with black market prices. Demand, however, is unlikely to change much; for the vast majority of the population the new price is unaffordable anyway. Moreover, the black market arguably reflected already the equilibrium price: since August 2007, gasoline demand has remained largely stable at roughly 380 kb/d on average (compared with around 500 kb/d in 1H07). Nevertheless, domestic production (250 kb/d) remains insufficient to meet Iran's requirements. As such, the country will need to continue importing gasoline potentially until 2012, when several planned refinery upgrades are completed.

Having more or less tamed runaway gasoline demand, the government is now setting its sights on gasoil, which accounts for the lion's share of demand (35%) and whose consumption has also markedly risen over the past two years (+9.4% in 2006 and +13.7% in 2007). The growth in gasoil demand is related to several factors: capped prices, smuggling out of Iran, and interfuel substitution away from gasoline following the introduction of rationing in mid-2007. The government is reportedly aiming at introducing a diesel rationing scheme by late May, and has begun distributing smart cards. Formal quotas, though, are yet to be announced. Indeed, the government is treading carefully: as opposed to gasoline, which is consumed by a relatively small sector of the population, gasoil permeates most spheres of economic activity. Gasoil is not only widely used in the industrial and agricultural sectors, but it also largely fuels the country's truck fleet; as such, disrupting gasoil supplies could have far-reaching effects in terms of economic growth and inflation.

Last month's introduction of a new methodology for assessing FSU oil demand – from a calculation based on supply and net crude and product exports to the tracking of actual deliveries – is providing new levels of insight. In particular, it allows a better understanding of **Russia**, which is by far the largest contributor to regional demand and the world's fourth largest consumer.

Russian oil product demand has been growing by 1.0% on average over the last decade, reaching 2.9 mb/d in 2007. More recently, however, overall demand has remained relatively flat given diverging trends among the different oil products. On the one hand, growth in transportation fuels demand remains robust, mirroring the country's economic performance (GDP grew by 8.1% in 2007, according to the IMF, and 7.2% on average over the past 5 years). This strong economic expansion has promoted the emergence of a growing middle class eager to purchase cars. Indeed, the Russian automotive market has become one of the fastest growing in the world. Car registrations, dominated by gasoline-fuelled vehicles, increased by 63% in 2007 to around 2.5 million units, according to oil & gas consultancy PFC Energy. The European Bank for Reconstruction and Development (EBRD) expects Russia's car fleet to surpass Germany's (currently the largest in Europe) as early as 2012.





On the other hand, the consumption of other products, particularly high-sulphur fuel oil, has steadily diminished over the last decade. Fuel oil use has structurally declined – from 639 kb/d in 1997 to 335 kb/d in 2007 – due to energy efficiency improvements and natural gas substitution. Cold weather conditions in 2006 and the need to sustain gas exports to Europe (which have consequently reduced domestic gas supplies) briefly interrupted this trend (that year fuel oil demand rebounded by 16.1%). However, the subsequent mild winter of 2007 reversed the picture again, with fuel oil demand declining by 20.8%. In the final analysis, the fuel oil outlook will depend to a large degree on domestic investment, natural gas pricing policies and tax regimes. Indeed, following the recent decision to liberalise domestic natural gas prices by 2011 (which will result in a 30% annual increase in household and industrial-sector prices over the next four years), fuel oil could become once again the fuel of choice for industrial users and power generation needs.

Russia: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2006	2007	2008	2007	2008	2007	2008
LPG & Ethane	265	281	294	16	13	6.0	4.6
Naphtha	105	96	91	-9	-5	-9.0	-4.9
Motor Gasoline	650	682	706	32	25	4.9	3.6
Jet & Kerosene	229	233	241	4	8	1.7	3.4
Gas/Diesel Oil	552	585	610	33	25	6.0	4.2
Residual Fuel Oil	424	335	306	-88	-29	-20.8	-8.7
Other Products	645	654	646	10	-8	1.5	-1.3
Total Products	**2,870**	**2,867**	**2,895**	**-3**	**28**	**-0.1**	**1.0**

Source: Petromarket RG

Dealing with High Prices

As oil prices continue their seemingly unstoppable rise, many non-OECD are scrambling for solutions. High prices are indeed causing severe problems, since most emerging economies have some type of administered price regime and are understandably reluctant, for economic, political and social reasons, to let domestic oil product prices increase sharply. At the same time, maintaining price controls is leading to severe distortions and mounting costs for public purses. The following examples provide an illustration of the challenges faced by key Asian countries.

In **Chinese Taipei**, there is speculation on whether the administration of president-elect Ma Ying-jeou, which will take charge on 20 May, will remove price controls, which were imposed in November 2007. As a result of the price freeze, state-owned CPC Corporation is expected to lose about NT$70 billion ($2.3 billion) this year (it lost $200 million in January alone). According to some observers, the company could go bankrupt in two years if price controls are not lifted.

Diesel subsidies were reintroduced in mid-March in **Thailand**, with a view to reducing retail prices by about 3%, and could be increased if oil prices continue to rise and even be extended to the public transport and industrial sectors. But instead of directly paying oil companies the difference between ex-refinery prices and retail prices (as in a previous subsidy scheme), refiners will be allowed to cut their contributions to the oil fund and to the energy conservation fund. Prior to the move, the government had leaned heavily on state-owned PTT PCL and its Bangchak Petroleum affiliate, which have a combined market share of more than 30%, to delay raising end-user prices. In addition, it is actively encouraging motorists and truckers to switch to compressed natural gas (CNG).

In **Indonesia**, the government is under increasing pressure to reduce its onerous subsidies on gasoline, diesel, and kerosene, which are estimated to reach $12 billion in 2008. The government, however, is reluctant to raise prices as this would have damaging economic effects, both in terms of growth and inflation. Meanwhile, its efforts to reduce consumption and promote the use of alternative fuels have not been particularly successful (largely because conventional fuels are among the cheapest in the region). Nevertheless, the government has become bolder. Following Iran's step, it has begun issuing smart cards and should announce quotas on fuel purchases by next June; volumes above the limit would be sold either at market prices or at a much higher levels. Some rumours suggest that retail prices will indeed be increased by as much as 30% (the last increase was in October 2005). The news of potential hikes is already causing unrest: in early May, students and police clashed in eastern Indonesia during a protest against the government's plan.

Following several weeks of uncertainty, the new **Malaysian** government has finally decided it will maintain existing fuel price caps. It has seemingly concluded that the political costs of lifting subsidies would be too high – actually, the small price increases of the past months were one of the reasons for the ruling party's poor showing in the recent parliamentary elections. However, the government hopes to target subsidies more effectively.

In **Vietnam**, the government has frozen oil product prices until June, in a bid to stem rising inflation. The government will abolish import taxes and help importers of gasoil, kerosene and fuel oil cover their mounting losses. Gasoline importers, by contrast, will not be compensated, since gasoline prices have been nominally deregulated since mid- 2007. In practice, though, gasoline importers still need government approval when setting end-user prices and are *de facto* restrained from changing their prices too often.

SUPPLY

Summary

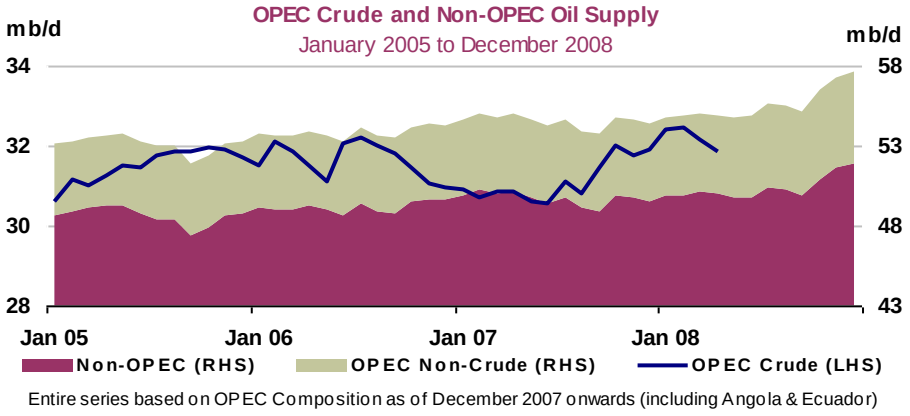
- **Global oil supply** fell by 400 kb/d in April versus March, averaging 86.8 mb/d. Scheduled and unscheduled North Sea outages, lower FSU output and weaker OPEC supply (deriving from Nigerian stoppages) were together responsible for April's reduction. However, annual supply recovery recommenced in 4Q07, after three quarters of weak-to-negative growth and 1Q08 growth of 1.7 mb/d was the strongest since early 2005. This derived from recovering OPEC supply, with non-OPEC production largely static compared with last year.

- **Non-OPEC April production** fell by 135 kb/d from March to 50.0 mb/d, with preliminary data coming in 200-250 kb/d below earlier expectations for February through April. Weaker-than-expected February Australian data were followed in March and April by widespread downward revisions among non-OECD producers, notably the FSU. Non-OPEC supply should remain unchanged, close to 50 mb/d, through 3Q, before a sharp uptick to 51.5 mb/d in 4Q, with new project start-ups and returns from scheduled maintenance. Overall, non-OPEC 2008 supply is revised down by 140 kb/d to 50.4 mb/d.

- **Annual non-OPEC supply growth in 2008** averages 680 kb/d, compared with 550 kb/d in 2007. Increases from OECD and non-OECD Asia, the FSU and Latin America offset declines from Europe, North America and the Middle East. Biofuels contributes 425 kb/d to 2008 non-OPEC growth, compared with 270 kb/d in 2007, taking global biofuels supply past 1.5 mb/d in the process. OPEC condensate and gas liquids supply, not included in non-OPEC totals, reaches 5.2 mb/d this year, up from 4.8 mb/d in 2007.

- **OPEC April crude supply** averaged 31.9 mb/d, 255 kb/d below upwardly revised March. Strike action and pipeline sabotage cut Nigerian April supply by 150 kb/d to 1.9 mb/d from 2.0 mb/d in March. Weaker Iranian April exports saw supply fall 95 kb/d to 3.9 mb/d, while lower Basrah exports cut Iraqi supply by 70 kb/d to 2.3 mb/d. Effective OPEC spare capacity stands at 2.3 mb/d, although refinery outages, crude quality and high prices mean that much of this would currently be difficult to market.

- **The call on OPEC crude and stock change** is trimmed by 100-200 kb/d for 2006 and 2007 after downward non-OECD demand revisions. For 2008 as a whole, weaker demand outstrips lower non-OPEC supply and lowers the 'call' into a 31.3-31.6 mb/d range. Relative to the April report, the 'call' is effectively flattened running through 2008, with demand adjustments outstripping those on the supply side and curbing the call in 1Q, 3Q and 4Q, but supply outages raising the 2Q 'call' to 31.2-31.5 mb/d.



All world oil supply figures for April discussed in this report are IEA estimates. Estimates for OPEC countries, Alaska, Kazakhstan, and Russia are supported by preliminary April supply data.

Note: Random events present downside risk to the non-OPEC production forecast contained in this report. These events can include accidents, unplanned or unannounced maintenance, technical problems, labour strikes, political unrest, guerrilla activity, wars and weather-related supply losses. Specific allowance has been made in the forecast for scheduled maintenance in all regions and for typical seasonal supply outages (including hurricane-related stoppages) in North America. In addition, from July 2007, a nationally allocated (but not field-specific) reliability adjustment has also been applied for the non-OPEC forecast to reflect a historical tendency for unexpected events to reduce actual supply compared with the initial forecast. This totals –410 kb/d for non-OPEC as a whole, with downward adjustments focused in the OECD.

OPEC

OPEC April crude supply averaged 31.9 mb/d, 255 kb/d below an upward-revised March. Strike action and pipeline sabotage cut Nigerian April supply by 150 kb/d to 1.86 mb/d, from an upward-adjusted 2.0 mb/d in March. More limited Nigerian outages have persisted well into early May. Weaker Iranian April exports saw supply fall 95 kb/d to 3.93 mb/d, although actual production may have remained higher with significant volumes reportedly going into floating storage. Lower exports from the southern port of Basrah cut Iraqi supply by 70 kb/d to 2.34 mb/d. Otherwise, production trended modestly downward, except for the UAE, where earlier maintenance-related outages were likely reversed.

Effective OPEC spare capacity on a wellhead basis is believed to be around 2.3 mb/d, with again Saudi Arabia and the UAE holding the bulk of this. Recent OPEC pronouncements suggesting 3 mb/d-plus would appear either to be including disruption-induced Iraqi and Nigerian notional spare capacity or perhaps a more optimistic take on output from Saudi Arabia's recently activated Khursaniyah project than our own information suggests. Even this report's 2.3 mb/d for OPEC spare represents physically producible oil, rather than readily marketable spare capacity, bearing in mind the constraints of crude quality, available refining capacity and, until recently at least, producer pricing policy.

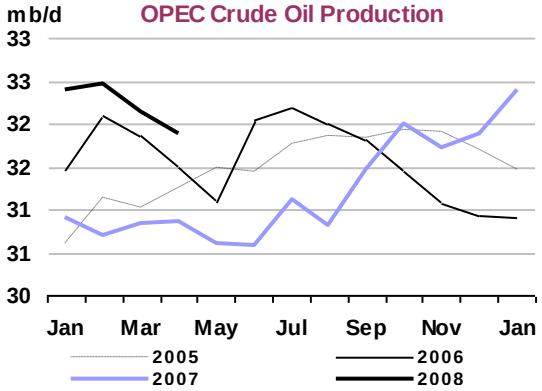
OPEC Crude Production[1]
(million barrels per day)

	Feb 2008 Supply	Mar 2008 Supply	Apr 2008 Supply	Sustainable Production Capacity[2]	Spare Capacity vs Apr 2008 Supply	Capacity end 2008	Current Target
Algeria	1.38	1.39	1.38	1.40	0.02	1.42	1.36
Indonesia	0.87	0.87	0.86	0.88	0.02	0.84	0.87
Iran	3.95	4.02	3.93	4.02	0.09	4.02	3.82
Kuwait[3]	2.58	2.59	2.59	2.62	0.03	2.66	2.53
Libya	1.76	1.76	1.76	1.80	0.04	1.84	1.71
Nigeria[4]	2.10	2.01	1.86	2.47	0.62	2.49	2.16
Qatar	0.85	0.84	0.83	0.90	0.07	0.98	0.83
Saudi Arabia[3]	9.16	9.09	9.05	10.90	1.85	11.25	8.94
UAE	2.66	2.54	2.65	2.88	0.23	2.85	2.57
Venezuela[5]	2.41	2.35	2.32	2.50	0.18	2.40	2.47
OPEC-10	**27.70**	**27.45**	**27.22**	**30.35**	**3.13**	**30.74**	**27.25**
Angola[1]	1.82	1.78	1.82	1.82	0.00	2.12	1.90
Ecuador[1]	0.50	0.50	0.50	0.50	0.00	0.50	0.52
OPEC-12	**30.02**	**29.72**	**29.54**	**32.67**	**3.13**	**33.36**	**29.67**
Iraq	2.45	2.41	2.34	2.45	0.12	2.42	
Total OPEC	**32.47**	**32.13**	**31.87**	**35.12**	**3.25**	**35.78**	
(excluding Indonesia, Iraq, Nigeria, Venezuela					*2.32)*		

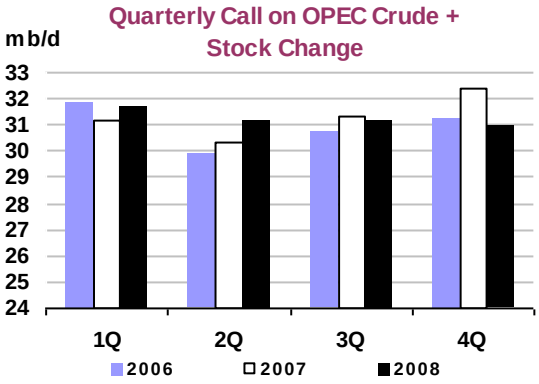
1 Angola joins OPEC effective 1 January 2007, Ecuador from December 2007.
2 Capacity levels can be reached within 30 days and sustained for 90 days.
3 Includes half of Neutral Zone Production.
4 Nigeria excludes some 0.5 mb/d of shut-in capacity.
5 Includes Orinoco extra-heavy oil assumed at 440 kb/d in April.

OPEC representatives appear to have dismissed the idea that releasing more crude to the market would affect runaway crude prices, currently skirting $125/bbl for marker grades. While acknowledging that adjustments to the prevailing 29.7 mb/d target are possible before the next scheduled meeting in September, the cartel has stated that comfortable OECD stocks and refinery downtime render this unnecessary for now. Although current OECD inventory is close to seasonal averages, concerns nonetheless remain over what is in store going forward in 2008 if crude supply disruptions of the type seen in April recur while refinery runs are at higher prevailing levels. Potential future supply and the apparent 'stickiness' of spare capacity are as much a concern as current physical output. Moreover, OPEC's 'adequate oil' thesis may in retrospect be seen to have had shaky foundations if suggestions of higher non-OECD demand and stock requirements are borne out.

OPEC's September meeting may again address issues of membership, this time after recent reports that Indonesia is considering leaving the organisation. Press reports suggest the impetus behind the move may come from the country's President, citing the incompatibility of Indonesia's importer status and desire for lower prices with OPEC membership.



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)



Entire series based on OPEC Composition as of December 2007 onwards (including Angola & Ecuador)

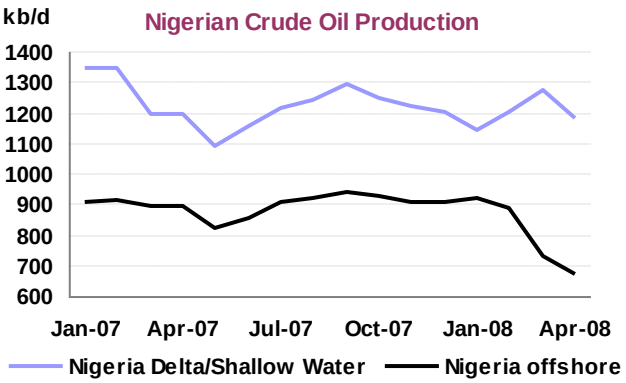
A combination of strike action and further pipeline sabotage cut **Nigerian** April supply by 150 kb/d to 1.86 mb/d, from an upward-adjusted 2.0 mb/d in March. The relatively modest month-on-month decline however disguises the fact that crude output fell by an estimated 1.0 mb/d, to around 1.18 mb/d, between the middle and end of the month. Total capacity shut-in, from a prevailing background level of some 550 kb/d, reached nearly 1.4 mb/d late in April. Firstly, on 21 April Shell declared *force majeure* on all Bonny Light exports for April and May after pipeline attacks forced the shut-in of at least 170 kb/d (unconfirmed reports from Niger Delta rebel group MEND suggested a further 350 kb/d was later closed, although company and government sources strenuously denied this).

Greater impact still derived from separate and widening industrial action at the ExxonMobil-operated Qua Iboe terminal from 24 April. The Pengassan white collar union warned on 10 April of strikes if ExxonMobil did not rescind proposed job cuts at the terminal. There is a long history in the Nigerian hydrocarbon sector of threatened strike action which tends to be resolved before extensive production or export outages materialise. In this case however, contract workers downed tools on 21 April and were joined by Pengassan workers three days later. This escalated to a complete shut-down of ExxonMobil's upstream operations in Nigeria comprising:

- Some 370 kb/d of Qua Iboe output;
- 185 kb/d at the offshore Erha facility;
- 170 kb/d from the Yoho field and;
- Around 60 kb/d of condensate production at the Oso field.

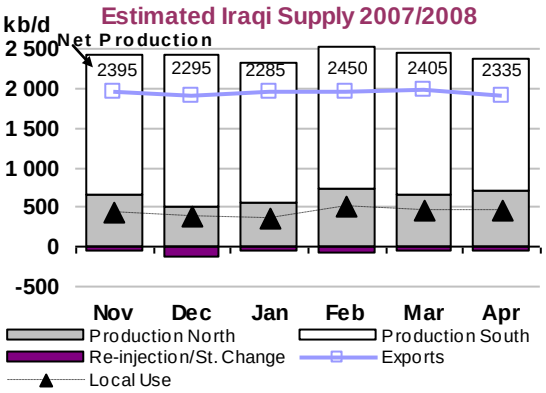
With perhaps unfortunate timing, Total's 125 kb/d Amenam field also went down for maintenance late in the month, although the impact of this on Nigerian monthly supplies was lessened by the return to full operations during late April after earlier maintenance of Shell's 200 kb/d deepwater Bonga field. Just to complete a busy month for barrel counters, Eni also lost between 10-50 kb/d of Brass River production on 12 April after sabotage at the Beniboye flow station.

Fortunately, ExxonMobil and Pengassan reached a deal on 1 May to end the strike, albeit salary negotiations remain ongoing. By 6 May the company announced that production had regained pre-strike levels and the following day *force majeure* on exports was lifted. The restart of Total's Amenam facility also occurred on 8 May. However, despite these output restorations, and reports of rising Forcados crude supplies after shut-ins in place since 2006, an estimated 0.5 mb/d of Nigerian crude production capacity remains off-line. Shell is still grappling with pipeline outages, after a fifth attack in recent weeks on pipeline infrastructure on 3 May shut a further 30 kb/d in southern Bayelsa state. Moreover, Shell is also pursuing restructuring plans which could lead to significant redundancies, raising the prospect of further strike action. Eni's Brass River production is assumed still to be affected and ExxonMobil's salary negotiations could prove protracted. While the situation on the ground remains fluid, with production outages ebbing and flowing, we see little reason for now to change our working assumption that some 0.5 mb/d of Nigerian capacity remains offline for the foreseeable future.



Iranian April supply is estimated at 3.93 mb/d, some 95 kb/d lower than March. This is based in part on lower export sailings during the month. This however does not incorporate reports that Iran has chartered upwards of 10 VLCCs, holding some 20 mb of crude, for floating storage. The implication here is that wellhead output, as distinct from our measure of supply (domestic crude use plus exports), could have been running at higher levels in recent months. These stored volumes, if confirmed, will only show up as 'exports' once vessels leave the vicinity of Kharg Island with specific destinations. All other things being equal, Iranian *supply* could therefore rise accordingly in the months to come. Floating storage requirements have provided strong support for dirty tanker rates, reportedly being prompted by maintenance at Asian and European refineries which has curbed demand for heavy/sour Iranian barrels.

Our estimates for **Iraqi** supply (exports plus domestic refinery use in refineries and power plants) show a 70 kb/d drop in April to 2.34 mb/d. Northern exports are assessed some 70 kb/d higher at 415 kb/d, while southern liftings were down 135 kb/d at 1.46 mb/d. Northbound pipeline flows appeared relatively steady in April, in excess of 400 kb/d. Some 10 kb/d of cross-border deliveries to Syria made up an April export total of 1.89 mb/d, 70 kb/d below March levels. All southern liftings in April came from Basrah, with no liftings from the smaller southern port of Khor al-Amaya. Late-March disruption to southern oil operations seems to have been short-lived, with a ceasefire in force since 30 March apparently well observed. Previously shuttered production at the Bazargan, Majnoon and Bin Umar fields was fully restored by mid-April after pipeline remediation and bypass work was completed.



Meanwhile, Oil Minister Shahristani has set a target for output of 2.9 mb/d by end-2008. This hinges on acceptance by international companies of technical service agreements at selected existing fields to boost capacity by a combined 500 kb/d in the short term. However, there are reports of antipathy towards the deals by the IOCs due to their short-term nature and, for their part, the companies' attention may now be shifting instead towards Iraq's first post-war licence round which the government wants to issue in May.

Mid-April saw reports that Kurdish authorities and those in Baghdad were close to agreement on upstream oil contracts, the status of the disputed northern city of Kirkuk and a national role for Kurdish Peshmerga fighters. However, enthusiasm seemed to dim as the month progressed, leaving uncertainty over Kurdish plans to ship appreciable volumes of crude (up to 275 kb/d were mentioned, albeit with no time frame) via the main northbound export route. Two fields for which deals have been signed by the Kurdish authorities and international companies are Tawke and Taq Taq. The former has capacity of 90 kb/d but is currently producing sub-10 kb/d with exports reportedly limited to trucked supplies to Iran. Taq Taq could begin output near 10 kb/d later in 2008, but may have the potential for around 200 kb/d.

April **Saudi Arabian** supply is estimated marginally lower than March, at 9.05 mb/d, and in line with early-April comments on prevailing production from sources within the Kingdom itself. However, it will be interesting to note whether apparent Saudi supply remains suppressed in the next few months, given:

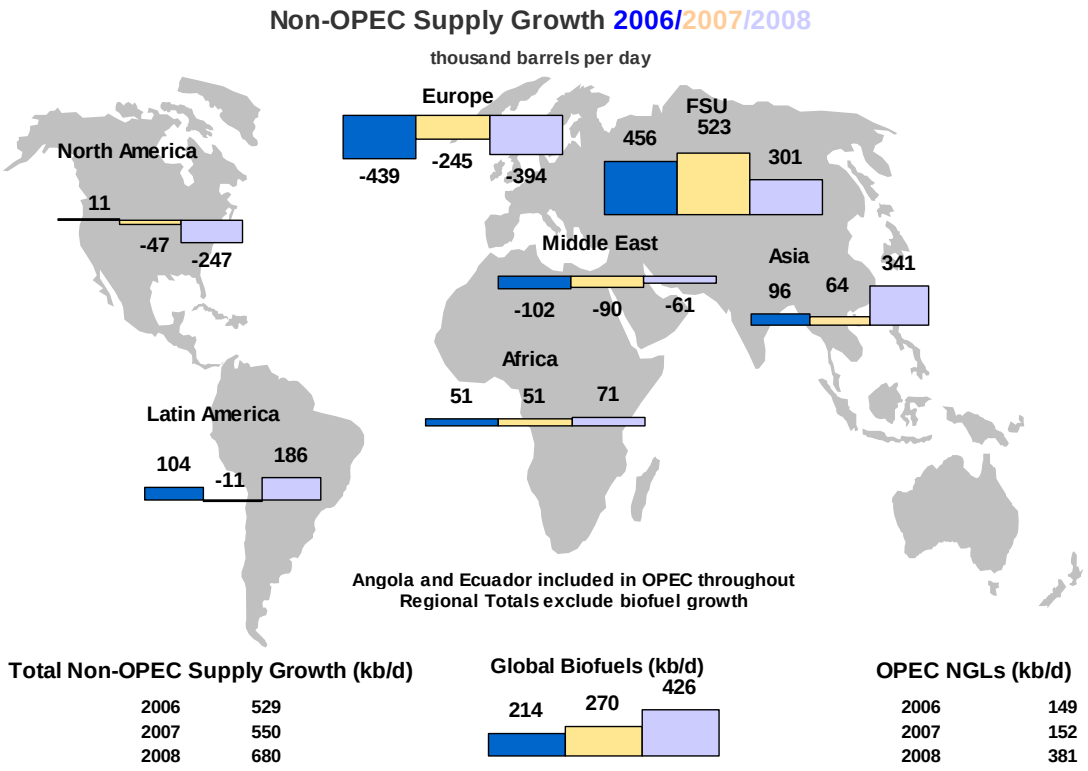
- Start-up in April of initial production from the three-field Khursaniyah project, with eventual capacity of 500 kb/d of Arab Light crude, but which is likely to produce significantly less initially until gas-processing facilities are completed;
- Indications that Asian and European term exports will remain at full contract levels in May;
- Widening price discounts for Arab Heavy to all destinations, and for lighter, sweeter grades into the Atlantic Basin over the past couple of months;
- The traditional seasonal 2Q divergence between weaker oil product demand on the one hand, but stronger refinery throughputs on the other and;
- Not least, record-high - and rising - marker crude prices.

We adjusted up our Saudi capacity estimate last month to 10.9 mb/d, but will wait until unambiguous evidence of higher operating rates becomes available before assuming full 500 kb/d output from Khursaniyah. Meanwhile, much was made during April of some nuanced comments from Oil Minister al-Naimi that he foresaw little need for capacity to be raised in the near future beyond the planned 12.5 mb/d level due in place for 2010. This came after reports that King Abdullah had previously told Aramco to effectively 'sit' on some new oil discoveries, to leave their exploitation for future generations. These comments were read by some as flagging an unwillingness or inability on the part of Saudi Arabia to expand capacity further, or even potentially to reach 12.5 mb/d in the first instance. However, in all fairness, the Kingdom has never explicitly discussed plans to go beyond 12.5 mb/d, so to infer retrenchment on the basis of recent remarks would appear excessive. However, although the 12.5 mb/d limit was discussed in the context of 'demand uncertainty', our view is that, even under weaker US economic assumptions, medium-term demand for OPEC crude is only likely to increase.

We have trimmed the assessment of installed **Libyan** production capacity to 1.8 mb/d from 1.84 mb/d on reports that an outage caused by a drilling-induced pipeline leak at the 40 kb/d offshore al-Jurf field could see production there remain offline for two to three months.

Non-OPEC Overview

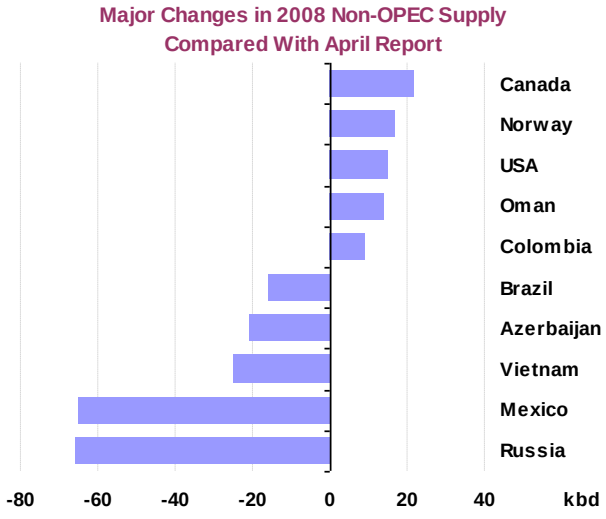
Non-OPEC production in April fell by 135 kb/d from March to 49.96 mb/d. Preliminary data show output running some 200-250 kb/d below earlier expectations for the February through April period. In this month's report, total non-OPEC 2008 supply has been revised down by 140 kb/d to 50.36 mb/d. Weaker-than-expected February Australian data were followed in March and April by widespread downward



revisions among non-OECD producers, notably the FSU, with Russia, Azerbaijan and Kazakhstan all seeing lower than anticipated out-turn production. As mentioned in previous issues, we expect that non-OPEC supply will remain largely unchanged at close to 50 mb/d through 3Q, before a sharp uptick to 51.5 mb/d in 4Q, based on a bunching of new project start-ups in the second half of the year and the return of existing fields from summer/autumn maintenance.

Annual non-OPEC supply growth in 2008 now averages 680 kb/d, compared with 550 kb/d in 2007. Increases from OECD and non-OECD Asia, the FSU and Latin America are expected to offset declines from Europe, North America and the Middle East.

Within the non-OPEC total, biofuels growth reaches 425 kb/d in 2008, compared with 270 kb/d in 2007, in the process taking global biofuels supply through the 1.5 mb/d mark. OPEC condensate and gas liquids supply, not included in non-OPEC totals, reaches 5.2 mb/d this year, up from 4.8 mb/d in 2007.



Whatever Happened to Ceteris Paribus?

Our headline 0.7 mb/d non-OPEC growth for 2008 depends on resurgent supply in the second half of the year, when growth rises in excess of 1.0 mb/d. Weak non-OPEC performance for most of the period since mid-2007 has tended to mask the fact that 1.0 mb/d-plus non-OPEC growth last occurred as recently as the 3Q06 to 2Q07 period. That was fuelled by North America, the FSU, China and biofuels, with these areas also likely to be prominent in 2H08 growth, augmented by Australasia and southeast Asia, plus Congo, the Ivory Coast and Sudan in Africa.

Of course none of these increments can be taken for granted. Resource depletion and decline rates represent an ever-present drag on supply although, perhaps surprisingly, our recent analysis of decline rates in the past decade (see pages 23-24 of report dated 11 March 2008,) did not suggest this was the key risk factor for our forecasts, as adjusted non-OPEC levels for 2000-2007 appeared remarkably stable and since we were already employing rates at or above these observed levels in our forecast. Rather, a bottleneck-strewn investment environment and ageing production infrastructure look the most likely possible impediments to achieving headline expected growth.

Since July 2007 the forecast has included a 410 kb/d field reliability adjustment, based on the historical tendency for mature infrastructure to suffer unscheduled operational outages. It is too early to say whether this adjustment is sufficiently robust, although recent months' data from the USA and Norway have actually come in close to our estimates with the downward adjustment removed. Notwithstanding, facility break-downs are often overlooked by analysts examining non-OPEC underperformance, although others such as Matt Simmons have highlighted the need for a comprehensive audit of existing upstream infrastructure, suggesting that between $50 trillion and $100 trillion might need to be spent industry-wide remedying 20 years of maintenance underinvestment.

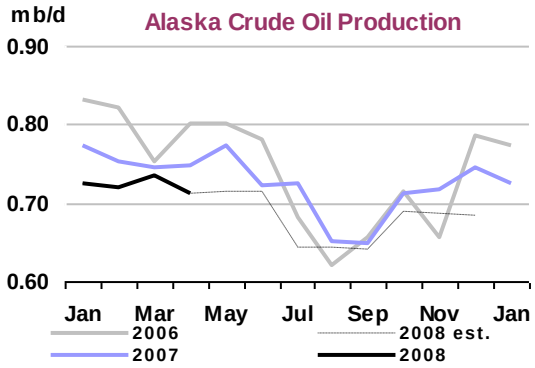
Further outages which we cannot hope to capture in advance in our forecasts have been highlighted in the March-May period. Some 900 kb/d of production capacity has recently suffered downtime in the UK Forties system (600 kb/d), Canada (130 kb/d), Colombia (95 kb/d), Argentina (65 kb/d), Peru (15 kb/d) and Australia (5-10 kb/d) due to a combination of strikes, weather and rebel attacks. By definition, the unexpected is not included in normalised supply forecasts, leaving them prone to downward adjustment when *force majeure*-type events materialise.

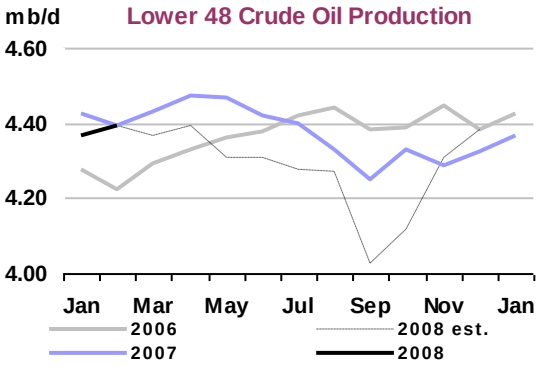
Finally, as noted previously, new project deferrals remain a key downside risk. We estimated last month that, were we to employ an extreme, blanket, six month delay assumption for all new 2H08 projects, this would remove 0.3 mb/d from the 2008 non-OPEC forecast. As if to echo that analysis, this month we have had to adjust timings by anywhere between several weeks to six months-plus for some 700 kb/d of new non-OPEC capacity, albeit the net impact on 2008 supply is only a very small fraction of this volume. Projects affected include Neptune and Blind Faith (US GOM), Ettrick (UK), Sakhalin-2 and Khylchuyuskoye (Russia), Bunga Pakma (Vietnam and Malaysia) and slower-than-expected production build from the P-52 and P-54 FPSOs in Brazil. Forecasting on a bottom-up basis requires an 'all other things being equal' proviso, but does beg the question when that state of affairs last prevailed.

OECD

North America

US – April Alaska actual, others estimated: Another upward revision accrues to the US 2008 forecast this month, with 15 kb/d added for 2008 as a whole, taking total output to 7.5 mb/d (5.0 mb/d crude oil), representing growth of 45 kb/d versus 2007. Aggregate data through February, and weekly indications for March and April, tended to over-turn our assumed field reliability adjustment for those months (which nets some 125 kb/d off forecast output based on observed historical unplanned outages). However, it would be premature to alter this adjustment on the basis of only one full month's, and two partial months', worth of data and we retain this level of contingency for May-December 2008 until consolidated 2007 data become available. February NGL and petroleum additives production also came in a collective 85 kb/d above expectation. However, weaker preliminary March and April NGL production numbers lead us to retain our 2008 forecast at 1.81 mb/d, 35 kb/d above 2007. Similarly, we resist an upgrade of forecast additives volumes on the strength of a single month's data, particularly as the revision this month does not accrue to ethanol. Ethanol production nonetheless rises by 125 kb/d to 545 kb/d in 2008, after 105 kb/d growth in 2007.

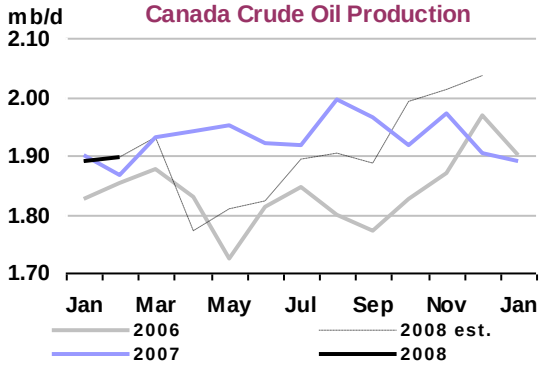


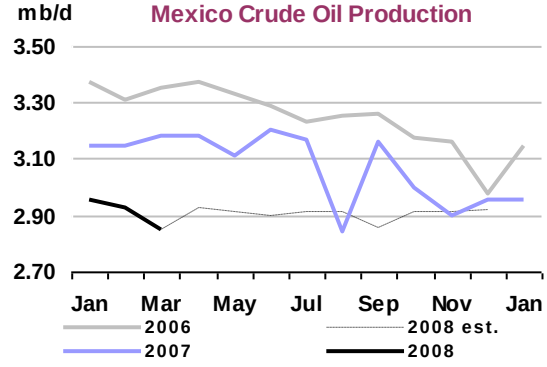


Gulf of Mexico (GOM) production is seen gaining 50 kb/d in 2008 to 1.39 mb/d, a level not seen since 2004. However, delays continue to plague new field start-ups in the deepwater GOM, with Blind Faith again pushed back, this time to autumn 2008 from May. However, there are suggestions that production ramp-up towards 45 kb/d capacity could be quicker than we had originally anticipated. Our removal of the 50 kb/d Neptune project from 2008 projections now appears premature. Structural anomalies on the project's tension leg platform just prior to commissioning had led to reports of an indefinite delay, but operator BHP now says it expects start-up in late June. We include initial Neptune volumes in our forecast from July. Project costs on Neptune are now $1.2 billion, 40% higher than at approval in 2005.

Canada – Newfoundland March, others February: Total Canadian oil production in 2008 is seen rising by 20 kb/d to 3.34 mb/d, having gained some 130 kb/d in both 2006 and 2007. Continued Alberta bitumen and synthetic crude growth offsets declining conventional crude output and gas liquids. Notably, supplies from offshore east coast Hibernia, Terra Nova and White Rose fields are seen levelling off at a collective 375 kb/d. The 140 kb/d White Rose field suffered occasional April outages because of ice floes.

The Canadian forecast for 2008 has been revised up by 20 kb/d overall, again due to oil sands developments. Reports from CNRL now suggest the 110 kb/d Horizon synthetic crude project, due online late in 3Q, could attain some 85% of target capacity by end-year, markedly higher than our preliminary estimates, leading to a modest upgrade there. Otherwise, the main shift in the Canadian forecast derives from adjustments in maintenance schedules for the Suncor and Terra Nova projects, which now appear both less protracted and concentrated earlier in the year. All told, 1H08 supply is trimmed by 50 kb/d, while second-half estimates are raised 95 kb/d.





Mexico – March actual: Mexico matches Russia as source of the main downward supply adjustments in this month's report. A total of 65 kb/d (48 kb/d of crude and 17 kb/d of NGL) is trimmed from 2008 forecast supply. March crude production came in a sizeable 113 kb/d below forecast at 2.85 mb/d, and NGL 23 kb/d lower at 367 kb/d. Output from the ageing Cantarell field stood a full 25% lower in 1Q08 than in 1Q07, a level of decline we now sustain in our 2008 forecast. It is unclear whether 1Q production

levels may have been artificially low because of remedial work at the field, but we would prefer to err on the side of caution until this becomes clear from actual 2Q production. The story for Mexican crude in 2008 therefore remains one of sustained Cantarell decline, partly offset by rising output from the deepwater Ku-Maloob-Zaap complex. National crude production is seen matching last year's 175 kb/d decline, to average 2.9 mb/d.

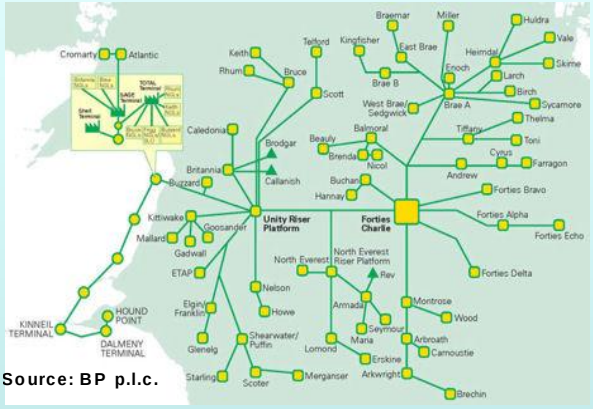
The modest energy sector reforms proposed by President Calderon, widely seen as necessary to reverse production decline, already appear stalled, with no vote now scheduled in parliament before late summer. However, separate proposals may be forthcoming that could lessen state oil company Pemex's fiscal obligations, potentially providing at least some scope for incremental E&P investment.

North Sea

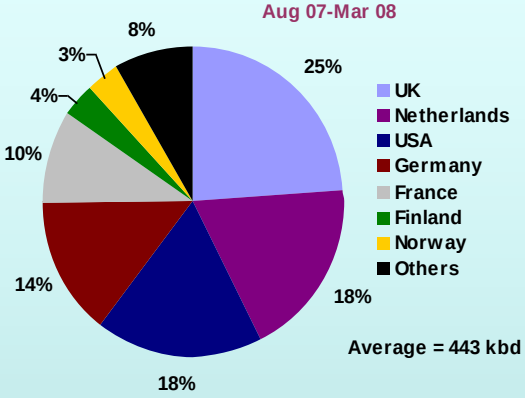
Brief UK Forties System Shutdown in April

Market nerves were further frayed in April by a combination of outages affecting both Nigerian and UK crude supplies. At their peak, these incidents removed some 1.7 mb/d of motor fuel-rich crude and condensate supplies from the world market. Fortunately, industrial action underpinning outages in both countries proved short-lived, lasting only a matter of days. However, the incidents illustrated the vulnerability of a system operating with such thin margins of spare capacity and indeed with spare capacity overwhelmingly concentrated in heavier, sourer barrels.

Forties Pipeline System



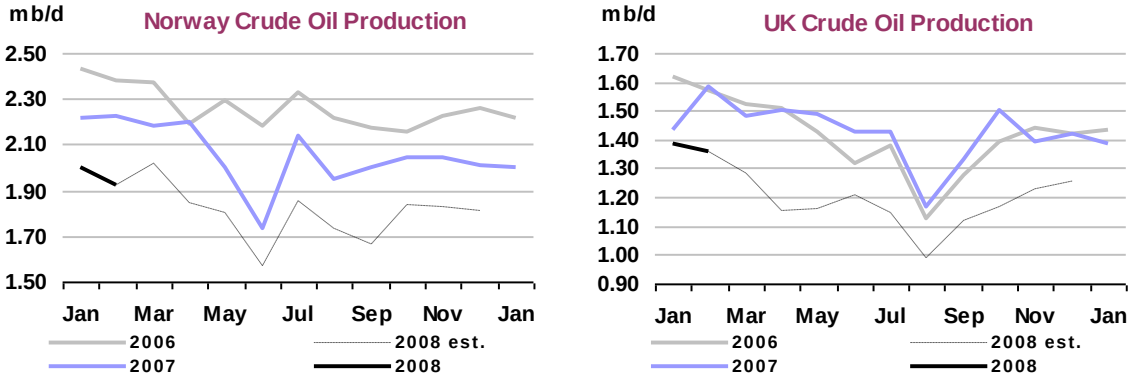
Tanker Liftings from Hound Point, UK, Aug 07-Mar 08



The shut-down of the UK's Forties Pipeline System (FPS), which normally handles 600-700 kb/d of crude and gas liquids, derived from strike action (centred on a dispute over pension contributions) on 27-28 April at the 195 kb/d Grangemouth refinery on the Firth of Forth in eastern Scotland. Despite having been sold to the Ineos petrochemical group in 2005, Grangemouth remains integrated with the BP-operated FPS to the extent that the refinery provides steam and power to the nearby Kinneil crude-processing facility. Kinneil takes unstabilised crude from FPS, generating stabilised crude and NGLs which are then destined either for the Grangemouth refinery, or in the case of crude, to the nearby 4 mb Dalmeny tank farm and onward for export via the Hound Point marine terminal. Forties crude (42°API, 0.25% sulphur) trades on a spot basis, commonly in 600 kb cargoes, with exports in the past six months orientated towards the UK, the Netherlands, USA and Germany. In the event, Kinneil operations and Forties supplies began to be scaled back on 26 April, being entirely shut-in for the duration of the Grangemouth outage, before being restored on a gradual basis from early morning 29th April. The impact of any further strike action at Grangemouth on Forties crude supplies will depend on the continued availability of utilities for Kinneil.

Norway – February actual, March provisional: February field-specific production data came in some 65 kb/d below preliminary estimates, with crude oil at 1.92 mb/d and gas liquids at 563 kb/d (this report reclassifies as condensate some crude volumes reported in headline Norwegian official data). Preliminary

March numbers however stand 155 kb/d above our earlier forecast, which included a field-reliability adjustment of similar magnitude. While the adjustment is retained for forecast months, the 2008 Norwegian forecast is nonetheless revised up by 15 kb/d, to 1.82 mb/d of crude and 560 kb/d of gas liquids. However the components show divergent trends, with crude declining in excess of 200 kb/d versus 2007, as in the past three years, but NGL and condensate rising by 65 kb/d – the strongest growth since 2003. Condensates from the Snohvit and Ormen Lange gas projects underpin this NGL growth.



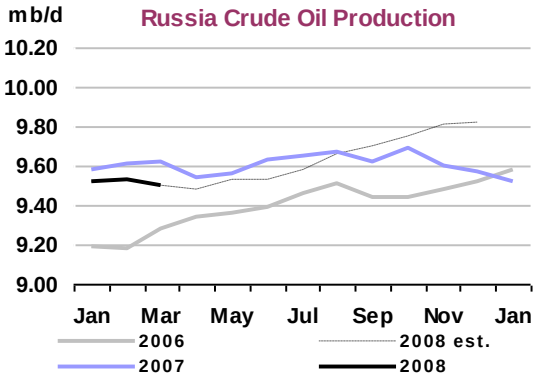
Several small field and satellite developments have started up in recent weeks, including those at the Vigdis, Gullfaks and Oseberg fields. After last month's announcement of planned reactivation for the 35 kb/d Froy field, StatoilHydro has now received government approval for development of the Morvin field's 63 mb of recoverable oil, with initial production in 2010 tied back to existing Åsgard facilities.

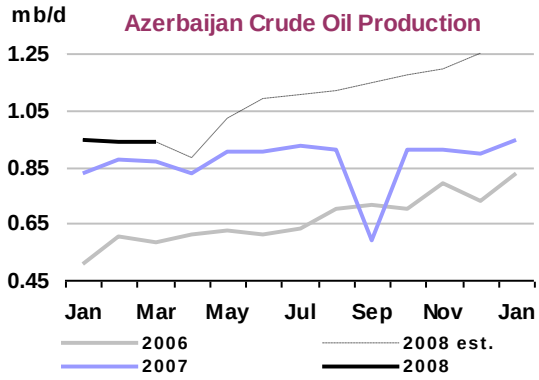
Former Soviet Union (FSU)

Russia – March actual, April provisional: A fourth consecutive month of weak Russian output in April leads to a 65 kb/d downward revision to our 2008 forecast. First-quarter weakness was potentially explainable with colder winter weather in early 2008 versus 2007, but continuing decline in April leads us to scale back our forecast for the year as a whole. We now see total oil production remaining flat in 2008 at 10.1 mb/d, after increases in excess of 200 kb/d in the past three years and near-double-digit growth earlier in the decade.

In addition to a lower baseline (April data were some 90 kb/d below our expectation), last month also saw reports of further new project delays. The start of the 2008 production season at the Sakhalin-2 project offshore Russia's Far East has reportedly been deferred, with export cargoes of Vityaz crude not available until late July. Moreover, questions have arisen over the pace at which expanded, year-round production (due to commence later in 2008) will ramp up to target 150-170 kb/d levels from normal summer levels closer to 80 kb/d. Furthermore, press reports suggest that start-up at Lukoil's 150 kb/d project at South Khylchuskoye in Timan Pechora may be deferred to the autumn from an earlier June target.

The production slow-down is however beginning to attract growing government attention, with suggestions from the Energy Ministry and most recently from former President, and now Prime Minister, Putin that fiscal reforms are urgently needed. Favoured state producers Gazprom and Rosneft have also been lobbying for an easing of the combined mineral extraction and export tax burden. Finance Ministry proposals for 2009 envisage raising the tax floor from $9/bbl to $15/bbl but would make scant inroads into a combined production and export tax level that stands at some 75% at $100/bbl crude prices. However, the investment environment comprises more than tax rates, and issues like tightening access to offshore and 'strategic' reserves and reports of state-sponsored moves to buy up Russian partners in the TNK-BP joint venture may continue to deter foreign oil company involvement until greater clarity emerges.

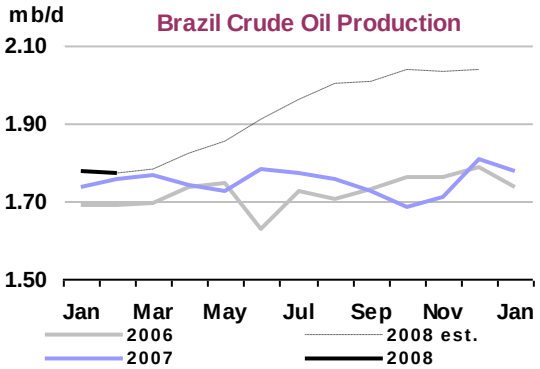


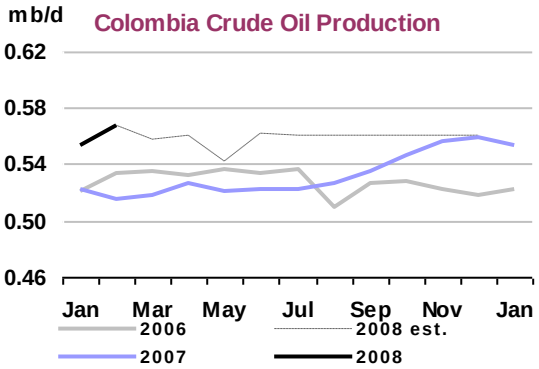


Azerbaijan – March actual: April saw start-up at the latest phase of the Azeri-Chirag-Guneshli complex of offshore fields, with initial volumes coming from the 320 kb/d Guneshli deep project. Although 1Q08 Azeri production has been trimmed by 50 kb/d to 945 kb/d, build-up at ACG should allow total Azeri production to average 1.07 mb/d in 2008, a gain of 205 kb/d versus 2007. May ACG volumes are expected to rebound after April maintenance, with flows through the Baku-Tbilisi-Ceyhan pipeline likely to exceed 800 kb/d. The BTC pipeline is likely to see a 20% capacity expansion to 1.2 mb/d by end 2008, to accommodate not only rising ACG output, but also extra output from Kazakhstan's Tengiz field, which had originally been destined for transit via the long-delayed expansion of the CPC pipeline to Russia's port of Novorossiysk. Other expanding Azeri export options include the imminent reopening of the 100 kb/d link between Baku and Supsa on Georgia's Black Sea coast and the new port nearby at Kulevi, which will be operated by Azeri state company Socar, designed to handle up to 200 kb/d of crude.

Other Non-OPEC

Brazil – February actual: Forecast 2008 Brazilian crude output is trimmed by 15 kb/d to 1.95 mb/d, nonetheless increasing by an impressive 195 kb/d from 2007. Output from the deepwater Campos Basin appears to have levelled off at some 1.44 mb/d in recent months, in part because of slower-than-expected build-up from new facilities such as P-52 and P-54 in the Roncador field. However rising supplies from these two 150 kb/d fields, plus increments at Marlim Leste, Golfino and Polvo could take Campos output to some 1.74 mb/d by end-year. Brazilian ethanol supply is also seen rising by 50 kb/d in 2008 to 360 kb/d.





The authorities in Brazil have reiterated the immense potential of the Santos Basin pre-salt carbonate formation. This was the site of the earlier Tupi discovery, now deemed to have a production potential of some 0.5-1.0 mb/d from the middle of the next decade. A representative from state regulator ANP appeared to suggest that the neighbouring Carioca block could contain up to 33 billion barrels, although it seems more likely that this highly preliminary number could refer to the entire Santos pre-salt area. In addition, operator Petrobras has stressed that no reliable reserve estimates will be forthcoming for Carioca until drilling is completed in a couple of months. Despite ambiguity between resource/reserve

classification and the geographical extent of the recent pronouncements, there is little doubt that the Santos Basin should prove a hugely significant source of incremental supply for Brazil in the next decade.

Colombia – February actual: Despite a spate of bomb attacks on the Cano Limon pipeline in March and again in May (the latest having temporarily shuttered 95 kb/d of output), Colombia appears to have turned around five years of production decline, with output having stabilised at around 530 kb/d in 2006 and 2007. There is the potential for modest growth to some 560 kb/d in 2008, with production having already attained this level in 4Q07 and so far in 1Q08. Unlike several other South American producers, Colombia has been actively seeking foreign direct upstream investment, although an influx of foreign capital might be jeopardised were the security situation to worsen.

Revisions to Other Non-OPEC Estimates

Total non-OPEC 2008 supply is revised down by 140 kb/d, with reductions focussed on five key producers namely Russia, Mexico, Vietnam, Azerbaijan and Brazil. Significant upward adjustments, which nonetheless lag those on the down-side, are restricted to Canada, Norway, the USA, Oman and Colombia. Among those not already discussed above, **Vietnamese** production for 2008 is trimmed by 25 kb/d to 355 kb/d, in part due to lower baseline supply early in 2008, and partly by pushing back Bunga Pakma condensate start-up (shared with Malaysia) into late 2008. On the positive side, **Oman's** production is revised higher for 2H07 and early 2008 by some 20 kb/d, albeit total output still expected to decline by some 15 kb/d this year to 705 kb/d.

Revisions to Non-OPEC Oil Supply
(million barrels per day)

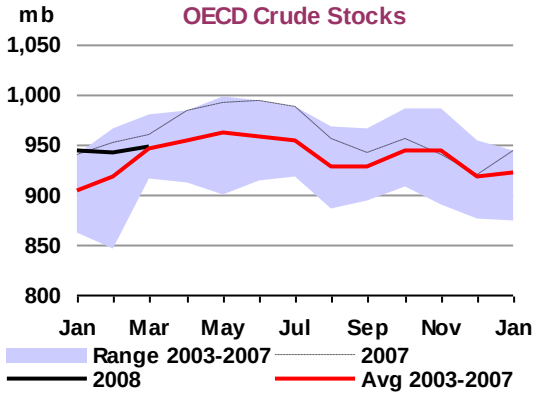
	Last Month's OMR				This Month's OMR				This Month vs. Last Month			
	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07	2007	2008	07 v 06	08 v 07
North America	14.27	14.17	0.06	-0.09	14.27	14.14	0.06	-0.12	0.00	-0.03	0.00	-0.03
Europe	4.95	4.56	-0.23	-0.39	4.95	4.57	-0.23	-0.38	0.00	0.01	0.00	0.01
Pacific	0.62	0.78	0.04	0.16	0.62	0.78	0.04	0.16	0.00	0.00	0.00	0.00
Total OECD	**19.84**	**19.52**	**-0.14**	**-0.32**	**19.84**	**19.50**	**-0.13**	**-0.34**	**0.00**	**-0.02**	**0.00**	**-0.02**
Former USSR	12.77	13.16	0.52	0.40	12.77	13.07	0.52	0.30	0.00	-0.09	0.00	-0.10
Europe	0.13	0.12	-0.01	-0.01	0.13	0.12	-0.01	-0.01	0.00	0.00	0.00	0.00
China	3.73	3.85	0.05	0.12	3.73	3.84	0.05	0.11	0.00	0.00	0.00	0.00
Other Asia	2.68	2.77	-0.03	0.09	2.68	2.74	-0.03	0.07	0.00	-0.02	0.00	-0.02
Latin America	3.87	4.10	0.02	0.24	3.85	4.09	0.01	0.24	-0.01	-0.01	-0.01	0.00
Middle East	1.64	1.58	-0.10	-0.07	1.65	1.59	-0.09	-0.06	0.01	0.01	0.01	0.01
Africa*	2.55	2.62	0.05	0.07	2.55	2.62	0.05	0.07	0.00	0.00	0.00	0.00
Total Non-OECD*	**27.37**	**28.20**	**0.50**	**0.83**	**27.37**	**28.08**	**0.50**	**0.72**	**0.00**	**-0.12**	**0.00**	**-0.11**
Processing Gains	2.07	2.13	0.04	0.06	2.07	2.13	0.04	0.06	0.00	0.00	0.00	0.00
Other Biofuels	0.40	0.65	0.15	0.25	0.40	0.65	0.15	0.25	0.00	0.00	0.00	0.00
Total Non-OPEC*	**49.69**	**50.50**	**0.55**	**0.82**	**49.68**	**50.36**	**0.55**	**0.68**	**0.00**	**-0.14**	**0.00**	**-0.14**

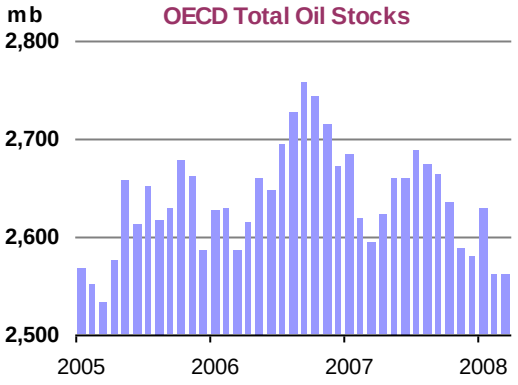
OMR = Oil Market Report
* adjusted to exclude Angola and Ecuador throughout

OECD STOCKS

Summary

- **End-March OECD industry stocks** of 2,561 mb were little changed from February (1.3 mb lower). However, closing February stocks were revised down by a significant 16.6 mb, primarily due to a 19.0 mb downward correction in distillate inventories. Although this revision leaves end-March stocks 68.5 mb below January, the overall OECD first quarter stock draw is a modest 18.7 mb or 0.2 mb/d - slightly below the five-year average 1Q draw of 0.4 mb/d. Still, preliminary data for April show only a marginal 1.9 mb build in US and Japanese stocks while anecdotal evidence suggests stocks may have recently drawn in non-OECD regions.
- **OECD total products stocks** fell by 8.1 mb in March. Product builds of 4.0 mb in Europe and 5.7 mb in the Pacific are consistent with reports of milder weather and weaker demand, but only partly countered a 17.8 mb gasoline- and distillate-led decrease in North American product inventories prompted by refinery maintenance.
- A 6.8 mb build in **OECD crude and 'other oils' inventories** almost offset the draw in product stocks. This slim March increase was limited by a 4.5 mb drop in crude inventories in Mexico, where production was weaker than expected, and a 4.9 mb fall in Korea as crude imports failed to rise in line with refinery runs.
- **End-March OECD stock cover** is now equal to 53.3 days of forward demand. This marks a drop of 0.1 days from end-February levels instead of the usual March increase, although it is 0.9 days above the five-year seasonal average. OECD crude cover (in terms of forward throughputs) was 1.6 days above the five-year average in January but is now only 0.6 days above the March average of 24.4 days. OECD North American distillate forward demand cover slipped below average in February and March.





OECD Inventory Position at End-March and Revisions to Preliminary Data

The 16.6 mb downward revision to end-February OECD stocks was more significant than the marginal 1.3 mb March stock draw reported this month. February's corrections centred on a 19.0 mb downward adjustment to distillate stocks, of which 11.6 mb occurred in France as better data were received. Suspicions that distillate markets, especially in Europe, were tighter than last month's stock numbers implied were initially raised following low throughputs, high distillate cracks and falling ARA middle distillates inventories. Indeed, downward distillate stock revisions of 1-3 mb were also seen for each of USA, Canada, Germany, Italy, the Netherlands and the UK alongside newly reported February distillate draws of at least 0.5 mb in each of Denmark, Finland, Ireland, Poland, Sweden and Turkey. Preliminary data show OECD distillate forward demand cover improving in Europe and the Pacific in March, apparently due to weaker demand, but sliding in North America. Middle distillates remain the major market concern in terms of OECD product stock cover.

Another major revision to February's closing stocks was an upward correction of 7.6 mb to Japanese crude inventories. Although this kept OECD Pacific within five-year seasonal ranges for February, preliminary March data show an 8.0 mb regional drop to another historical low. This time, however, the draw includes 4.9 mb in Korea which is supported by reports of higher crude runs coinciding with flat crude imports by Korean refiners. Elsewhere, a 4.5 mb March draw in Mexican crude stocks was probably the result of weaker domestic production. For the OECD as a whole, crude inventory builds were below seasonal norms in March and excess crude cover fell noticeably. Absolute OECD crude stocks have now fallen back to the five-year average.

Revisions versus 11 April 2008 Oil Market Report

(million barrels)

	North America		*Europe*		*Pacific*		*OECD*	
	Jan 08	Feb 08	Jan 08	Feb 08	Jan 08	Feb 08	Jan 08	Feb 08
Crude Oil	**-0.4**	**-1.8**	**-1.9**	**-0.5**	**0.9**	**7.4**	**-1.4**	**5.1**
Gasoline	-0.3	-5.2	3.8	5.1	0.0	0.4	3.5	0.3
Distillates	-0.3	-4.3	-2.8	-15.6	0.0	0.8	-3.0	-19.0
Residual Fuel Oil	0.3	0.1	3.5	5.2	0.0	-0.1	3.8	5.2
Other Products	0.2	2.6	0.7	-1.4	0.0	0.3	0.8	1.4
Total Products	**-0.1**	**-6.8**	**5.2**	**-6.8**	**0.0**	**1.5**	**5.1**	**-12.1**
Other Oils[1]	-1.2	-9.5	-0.8	0.3	0.0	-0.5	-2.1	-9.7
Total Oil	**-1.8**	**-18.1**	**2.5**	**-7.0**	**1.0**	**8.4**	**1.6**	**-16.6**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

Looking forward, March is generally the seasonal low in OECD stocks. For markets clearly concerned about the adequacy of supplies, the preliminary 1.9 mb stock build for April for the US and Japan is not enough to convince the market that a significant improvement in cover is underway. This report's balances imply a surplus in March and April, but it would appear that for this to be the case, restocking must have taken place in non-OECD regions (see 'Tightness Elsewhere'). Clearly, a lack of weekly data in Europe and the paucity of stock information for non-OECD countries limit market transparency and contributes to market overshoots.

Preliminary Industry Stock Change in March 2008 and First Quarter 2008

	March (preliminary) *(million barrels)*				March (preliminary) *(million barrels per day)*				First Quarter 2008 *(million barrels per day)*			
	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total	N. Am	Europe	Pacific	Total
Crude Oil	**6.5**	**8.1**	**-8.0**	**6.6**	**0.21**	**0.26**	**-0.26**	**0.21**	**0.34**	**0.03**	**-0.06**	**0.31**
Gasoline	-11.3	-1.5	3.5	-9.3	-0.36	-0.05	0.11	-0.30	0.08	0.06	0.05	0.18
Distillates	-9.4	5.2	-0.6	-4.9	-0.30	0.17	-0.02	-0.16	-0.32	0.01	-0.14	-0.46
Fuel Oil	3.9	1.2	0.8	5.9	0.13	0.04	0.03	0.19	0.04	0.04	-0.02	0.07
Other Products	-1.0	-0.9	2.1	0.2	-0.03	-0.03	0.07	0.01	-0.20	-0.03	0.01	-0.22
Total Products	**-17.8**	**4.0**	**5.7**	**-8.1**	**-0.58**	**0.13**	**0.18**	**-0.26**	**-0.41**	**0.08**	**-0.11**	**-0.43**
Other Oils[1]	1.5	-0.9	-0.4	0.2	0.05	-0.03	-0.01	0.01	-0.05	-0.04	0.02	-0.08
Total Oil	**-9.9**	**11.3**	**-2.7**	**-1.3**	**-0.32**	**0.36**	**-0.09**	**-0.04**	**-0.12**	**0.07**	**-0.15**	**-0.21**

1 Other oils includes NGLs, feedstocks and other hydrocarbons.

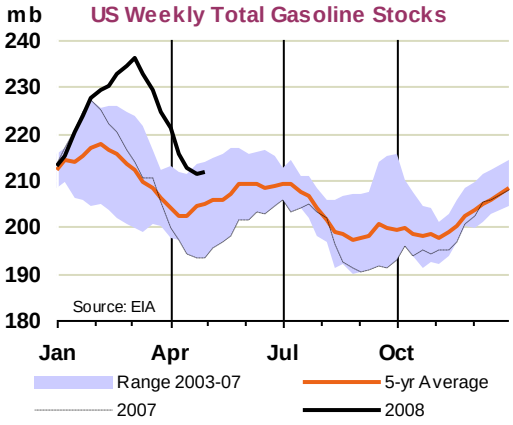
OECD Industry Stock Changes in March 2008

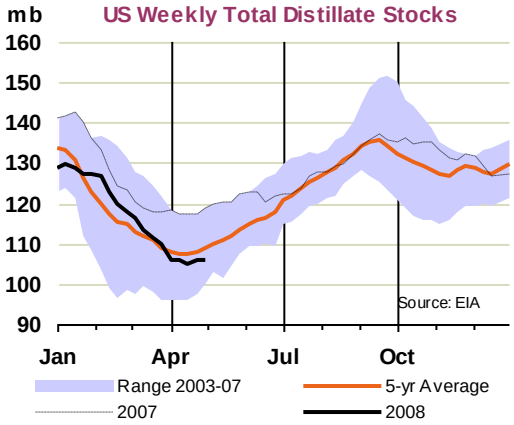
OECD North America

Total oil stocks in OECD North America declined by 9.9 mb in March as a 17.8 mb decrease in products overshadowed an 8 mb build in crude and 'other oils'. Of the total product draw, 19.8 mb occurred in the US, as very low refinery activity (due to maintenance and unplanned outages) outweighed the effects of anaemic demand growth reported in the transport sector due to high pump prices and lower economic prospects. Preliminary data show a sharp draw of 11.8 mb in March US gasoline stocks, centred in the North East, followed by a further draw in April, taking stocks back from abnormally inflated levels to within the five-year seasonal range. A 10.8 mb decline in US middle distillate inventories in March was also caused by low refinery throughputs, although weekly data indicate that levels should stabilise in

April. In Mexico, product stocks increased by 2.0 mb, including 1.4 mb in middle distillates and 0.5 mb in gasoline, as refinery throughputs recovered by 90 kb/d, presumably after maintenance.

US crude stocks increased by 11.0 mb in March following a drop in refinery runs to below 14.2 mb/d, according to EIA weekly data. Mexican crude stocks fell by 4.5 mb in March as domestic production came in lower than expected.

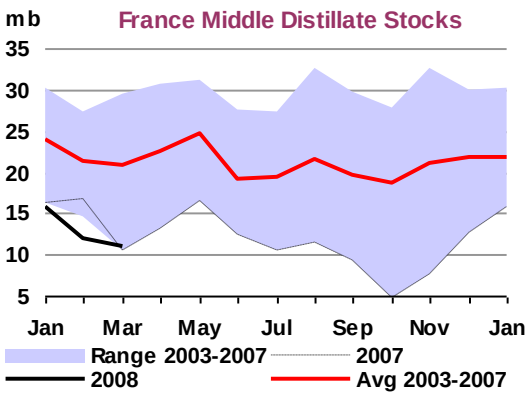


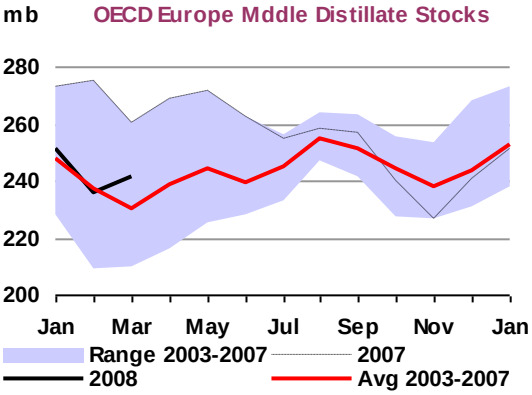


OECD Europe

Total OECD Europe inventories rose by 11.3 mb in March following increases of 8.1 mb and 4.0 mb in crude and product stocks respectively. 'Other oils' stocks made up the difference, falling by 0.9 mb on the month.

The unusual March European product build was led by distillates and motor gasoline. European distillate inventories rebounded by 5.2 mb in March, after revisions to preliminary data now reveal the February draw to have totalled 15.6 mb. The tight European distillate market had already cast some doubt on the original report of rising French distillate stocks in February and it comes as little surprise to see they are now observed to have fallen by 3.8 mb and 1.1 mb in February and March respectively. However, while the European distillate market remains tight, the counter-seasonal rebound in regional March distillate stocks, which included unusual builds of 2.3 mb in the Netherlands (if confirmed), 1.5 mb in the UK and 0.4 mb in Italy, was related to lower heating demand and higher refinery throughputs. European Heating Degree Days were 25 days below the 10-year average in March (although equal to last year's warm spring levels). At the same time, European throughputs increased by 90 kb/d. ARA independent gasoil stocks also rose in mid-March, suggesting that there may have been extra volumes of distillate imports arriving either from FSU or the Atlantic basin.





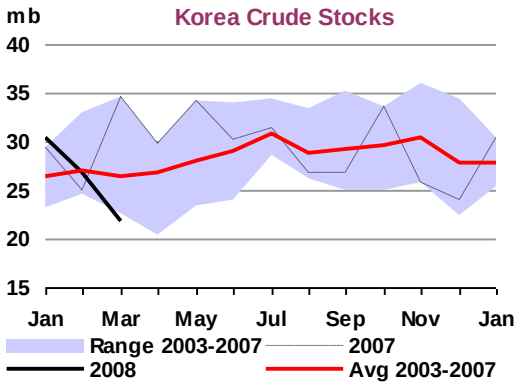
Motor gasoline stocks in Europe decreased by 1.5 mb in March, much less than the usual seasonal draw. Unfavourable economics limited arbitrage exports to other regions (especially the US) allowing higher refinery runs to sustain inflated European inventories. Netherlands' gasoline stocks apparently rose by 0.4 mb, to reach historic highs. OECD Europe gasoline stocks were revised 5.1 mb higher for end-February and, along with total product stocks for the region, are well above seasonal norms.

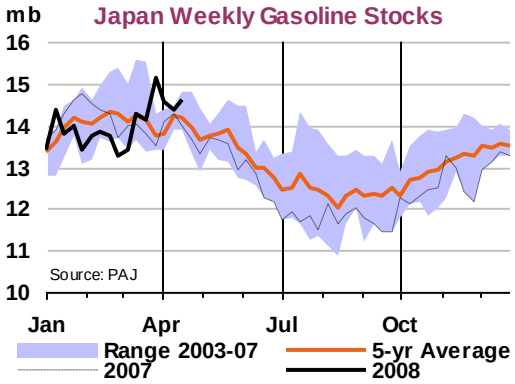
Crude stock builds of 6.7 mb in the Netherlands, 2.3 mb in France and 1.5 mb in Germany boosted OECD Europe regional inventories in March, if confirmed. End-March OECD Europe crude inventory levels of 330 mb lag the five-year average in absolute terms, although they remain higher than levels of a year ago.

OECD Pacific

OECD Pacific crude stocks dropped by 8 mb in March, led by a 4.9 mb decrease in Korean crude inventories as crude imports were flat on the month while refinery throughputs rose. Japanese and Australian crude stocks both drifted lower by 1.6 mb on higher refinery activity.

Mild March temperatures in Asia allowed regional product stocks to build earlier than usual, as heating demand drifted below seasonal norms. With 50 fewer Japanese heating degrees days than the 10-year average in March, a distillate stock build of 0.7 mb suggested that the seasonal winter trough in distillate stocks may have occurred in February, rather than the usual March. At the same time, OECD Pacific refinery throughputs rebounded by 70 kb/d. Weak demand prompted Japanese gasoline stocks to increase by 2.3 mb in March ahead of the (temporary) suspension of a special road fuel tax which may have prompted demand-led April draws. Korean distillates stocks fell by 1.5 mb, not helped by the unplanned closure of S-Oil's 520 kb/d Onsan refinery in late March. A reduction in March gasoil and jet export volumes by Korea's top five refiners limited the stock draw to near-seasonal levels.





Australia and New Zealand product stocks also look extremely tight so far this year, possibly related to refinery problems (as observed in Australia) or higher demand to mitigate extreme drought conditions. In both countries, motor gasoline and middle distillate stocks were at the bottom or below five-year seasonal ranges at end-February, although Australian product stocks did recover from alarmingly low January levels.

Recent Developments in Singapore Stocks

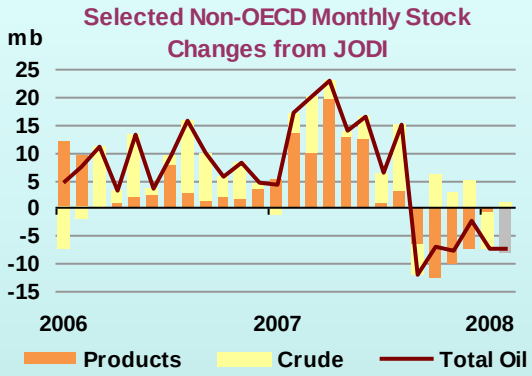
Independent stocks held in Singapore fell in April, led by a 1.1 mb draw in light products. Light product stocks fell from a historically high level of 11.0 mb in the first week of April to 8.0 mb three weeks later before recovering to 9.5 mb at end-month. Firm Asian product import demand, especially from China, may have eroded stocks in the first part of the month. However, reports of physical traders such as Glencore and Vitol sending European naphtha cargoes to Asia, plus news of an Italian gasoline cargo arriving in Singapore, underlined the decidedly eastbound direction of product arbitrages in recent weeks. The arrival of a batch of such cargoes may have led to the sharp uptick in light product stocks

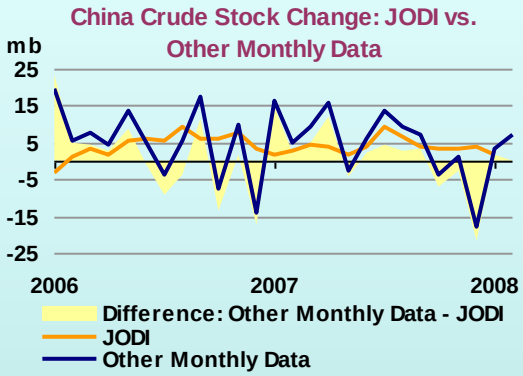
near the end of the month. Meanwhile, independent middle distillate stocks in the area rose by 0.5 mb in April, possibly boosted by higher regional product exports following a recovery in refinery throughputs in Japan and Korea. Fuel oil stocks fell over 3.0 mb on the month amid sustained high demand especially for power generation, but remain well above average.

Tightness Elsewhere

The rise in oil prices by over $40 since 1 August 2007 can only be partly explained by trends in OECD industry stocks in the second half of last year. While there is tightness in certain products and in certain regions, total OECD stocks remain above five-year averages in absolute and forward demand terms. Demand data suggest that much of the market strength was due to the pull of crude and products towards key non-OECD countries. It is therefore worth exploring outside the OECD for any indications that markets have tightened significantly beyond seasonal norms.

While data from the Joint Oil Data Initiative (JODI) has clear limitations, it is one of the only sources we have for non-OECD stock changes. Of the top 11 non-OECD consumers (excluding major producers), we have recent (Jan/Feb) JODI stock change data for China, Chinese Taipei, Thailand, Philippines and South Africa. Plotting these data in the left-hand graph below shows clear signs of stock draws in these countries, on aggregate, in 2H07 and, tentatively, in early 2008 as well. Less-recent data (and therefore not plotted) for important consumers Argentina and Brazil also reflect stocks draws in 2H07, on aggregate.





Selected Consumers: China, Chinese Taipei, Thailand, Philippines and South Africa.
February total preliminary as China data not yet available

Of course, this omits key non-OECD consumer stocks elsewhere, such as in India. Furthermore, we have doubts about the validity of stock changes reported by China. Firstly, detailed monthly data from other sources suggest that JODI may be understating stock changes. Using official sources for China's refinery runs, crude production and net crude imports we can derive an implied Chinese crude stock change which sometimes differs considerably from JODI data (see right-hand graph above).

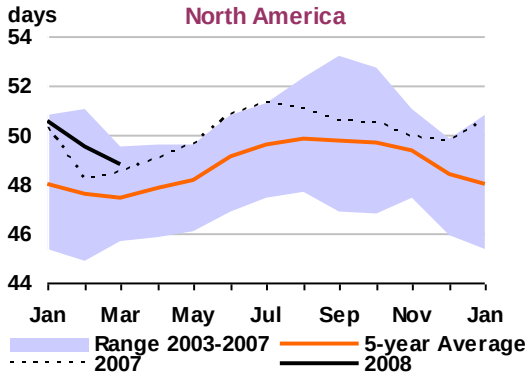
Also, a large cumulative Chinese product stockbuild was apparent from reported stock changes in the first half of 2007, yet, in the second half of that year widespread regional product shortages were reported after only a modest reported downtrend in stocks. This once more leads to the suspicion that demand is understated by official numbers and that the country is running on lean stocks

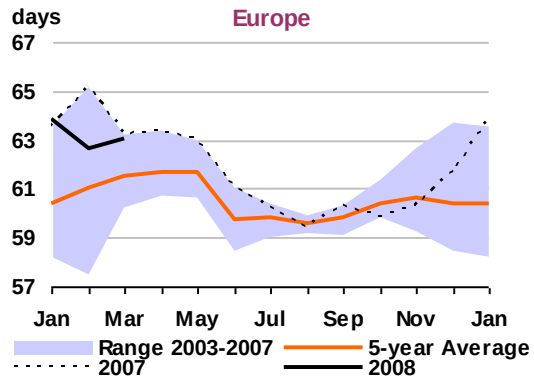
However sketchy, the data that we do have suggest that non-OECD stocks drew in key consumer countries in the second half of last year. Further, we suspect that the desire to 'rebuild inventories at any cost' over the past few months, due to the fear of even higher prices and for supply security reasons, may have increased competition for oil (and therefore bolstered demand and increased price pressures) this year.

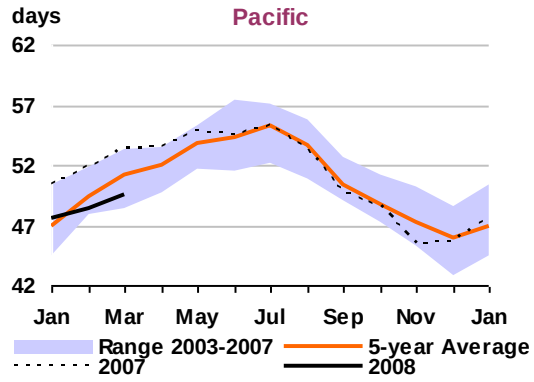
Regional OECD End-of-Month Industry Stocks

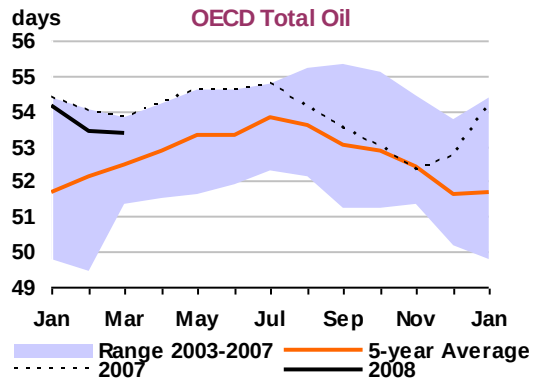
(in days of forward demand and millions barrels of total oil)

Days[1]

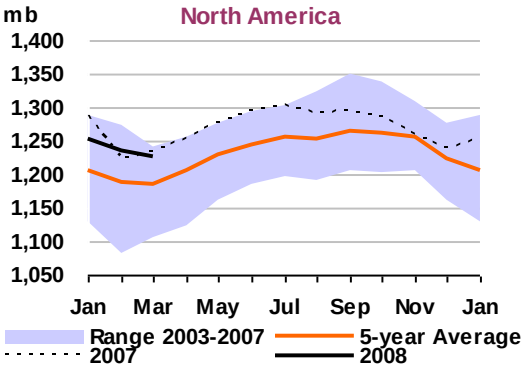


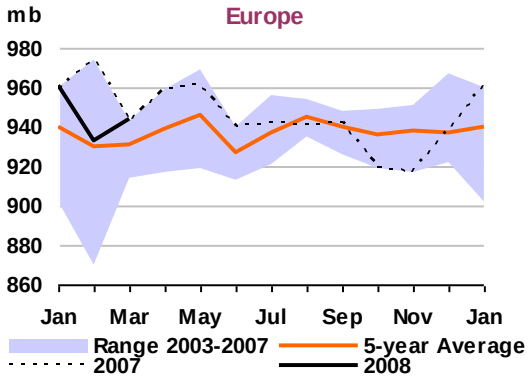


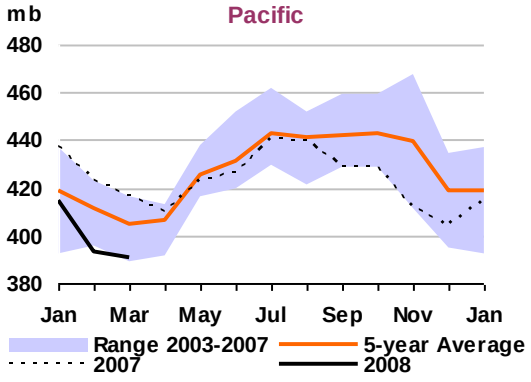


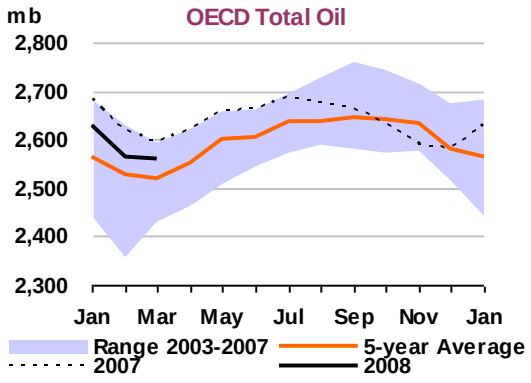


Million Barrels









1 Days of forward demand are based on average demand over the next three months

PRICES

Summary

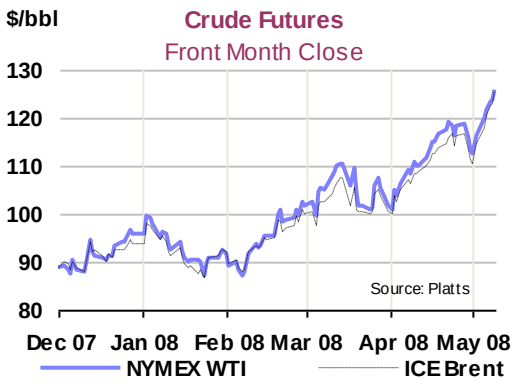
- **Oil prices reached new record highs** around $126/bbl in early May, double levels of a year ago, following robust demand from Asia, together with ongoing global diesel tightness and little sign that the normal second quarter stock build is underway. Crude outages in Nigeria and the North Sea and geopolitical headlines served as a reminder of the limited flexibility in the *system.*

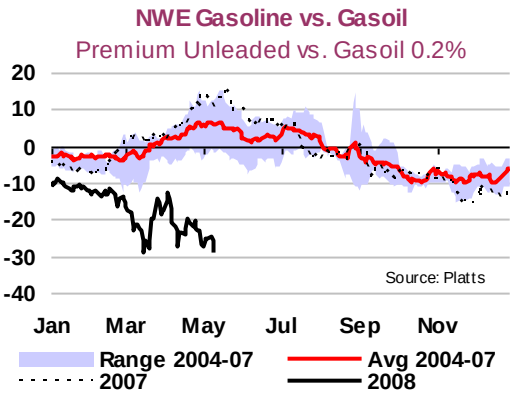
- **Light sweet crudes surged** on the Atlantic Basin outages and strong Chinese buying, with Nigerian grades achieving record premia to Dated Brent. North Sea crude prices themselves got a boost, surging as Forties production was shut in. In contrast, heavier, sourer crudes are being pressured by weak fuel oil differentials and upgrading unit maintenance.

- **Refining margins gained in April** as distillate crack spreads strengthened and gasoline recovered somewhat. Record-wide fuel oil discounts to crude are however keeping a lid on margins, which dipped again in early May as crude prices shot up.

- **Refined product markets were dominated by distillates**, which are maintaining a counter-seasonal premium to gasoline on global tightness. Continued road transport growth and gasoil use to cover regional power shortages were competing with constrained global supply caused by below-average refinery runs. Gasoline prices remain muted due to weakness in the predominant US market, while fuel oil weakened further.

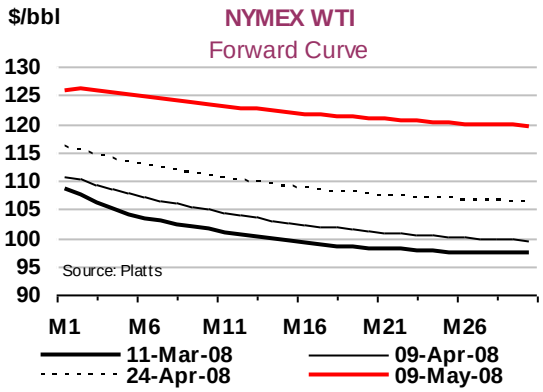
- **Firm long-haul tanker demand boosted VLCC rates** to unseasonable highs in the Atlantic basin and Middle East Gulf. Reports emerged that Iranian floating storage also dented vessel availability. Suezmax and Aframax rates experienced more short-lived surges, with Mediterranean traffic complicated by a strike at Marseille port. Higher transatlantic gasoline flows to the US pushed Atlantic basin clean rates to six-month highs by end-April.

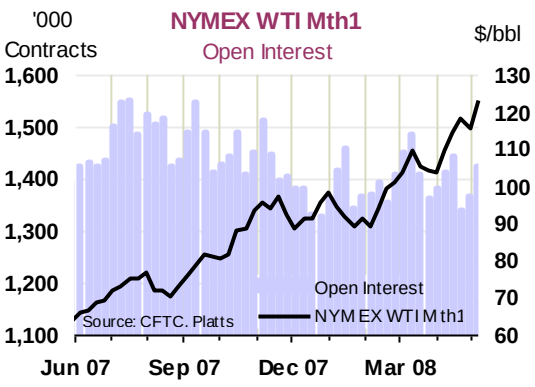




Overview

Yet again, oil prices set new records in April and early May, with benchmark crude futures crossing $126/bbl, double levels of a year ago. Crude supply constraints were highlighted by strikes shutting in output in the North Sea and Nigeria, while geopolitical headlines reminded markets that key producing areas remain potentially unstable. Meanwhile, product demand was sustained by growth in key non-OECD countries (offsetting US weakness), while unbalanced refined product markets are restraining OECD refinery throughputs. Middle distillate prices remain a key market driver, supported by road diesel use and regional power shortages.





Atlantic Basin crude supply was curtailed by around 300 kb/d in April, after strikes briefly shut in around 800 kb/d of ExxonMobil's Nigerian output, and the closure of Scotland's Grangemouth refinery forced the concurrent suspension of North Sea Forties production. Both were well-flagged and short-lived, lessening the impact on oil markets. But nonetheless they were a worrisome reminder of the potential for unplanned shut-ins. Insurgent attacks in Nigeria also forced the shut-in of a further 170 kb/d of Shell's Bonny Light production, after a pipeline was ruptured. Elsewhere, a bombing cut the flow through Colombia's Caño Limon pipeline, and a strike halted some Argentinean crude output. Some 45 kb/d of Libyan production was shut in for technical reasons.

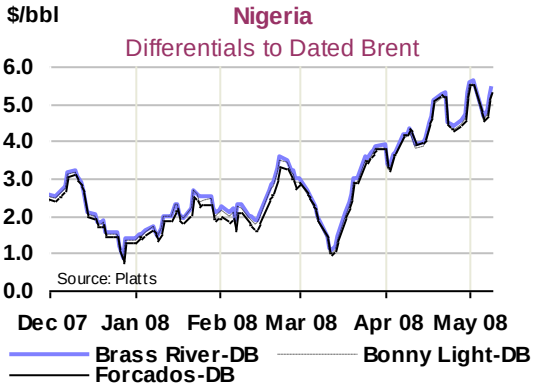
Despite refiners' insistence that they have no difficulty sourcing crude *per se*, these shut-ins add to the perception that markets will continue to remain constrained in the short, medium and long term. OPEC's apparent unwillingness to seriously consider a production hike in the face of ever-higher oil prices and Saudi statements about reluctance to increase production capacity beyond the flagged 12.5 mb/d to be reached in 2010 tend to support this view. Besides the run-up in spot prices, futures prices even at the far end of the curve recently topped $110/bbl. Contributing to bullish market sentiment, although only reflecting a few analysts' views, investment bank Goldman Sachs noted the potential for a 'super-spike' in oil prices, which could see them reach $150-200/bbl by the end of this year.

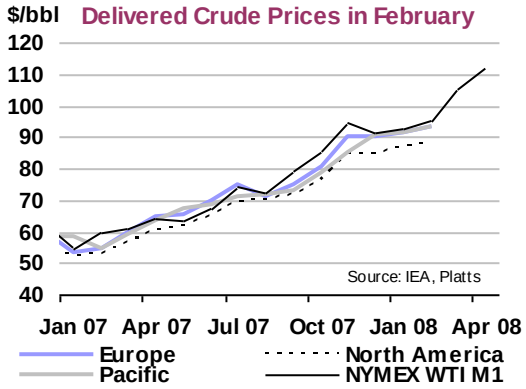
Spot Crude Oil Prices and Differentials

Table Unavailable

Product markets also supported the rise in oil prices. Distillate crack spreads remain several times as strong as those of gasoline, contributing to an April rise in refining margins. Despite weakening oil demand in the OECD, diesel demand remains strong for agricultural, transport and regional power

generation needs (a number of non-OECD countries such as China, South Africa and Chile were hit with unexpected emergency power needs). April temperatures were below normal in Europe, perhaps contributing to some late-season heating oil demand. European distillate supplies were also hit by the shut-ins at the UK's Grangemouth and Pembroke refineries. Despite a recent modest recovery, gasoline's premium remains contra-seasonally weak relative to crude which, coupled with the widening discount of fuel oil to crude, is crimping refinery runs, especially in the gasoline-oriented US market.





Petroleum markets also picked up on some indications of an improvement in the US economy. Despite a downward revision to oil demand related to high prices and general economic malaise, expectations are that the effects of the financial stimulus package will soon be felt by consumers. The dollar has rallied relative to the euro and other currencies, and the lack of a proportionate response in the oil price suggests that the recent period of strong apparent inverse correlation between the two may be near an end. Other commodities also remain high, with copper and corn, to name but two, reaching new heights. Lastly, despite anecdotal evidence of a general increase in commodity index funds since the beginning of the year, CFTC data show little growth in open interest in WTI, while non-commercials' net position remained steady over the past month. Recent reports have suggested that a large part of the increase in commodity money under management has derived from capital gains due to high commodity returns, rather than an influx of new money.

Spot Crude Oil Prices

Crude prices increased, taking strength from the Atlantic Basin outages, geopolitical headlines and refiner buying ahead of the return from global peak maintenance in April. Nigerian **light sweet crudes** reached record premia over $5/bbl to Dated Brent on production shut-ins. US refiners are perhaps slightly less keen than usual to source West African crudes, given lower gasoline needs, though this could change as the summer driving season starts at the end of May. But any slack from US buyers appears to have been taken up by Asian refiners, with record volumes again heading east. Anticipation of the Forties shut-in briefly narrowed Dated Brent's discount to US WTI, and Forties itself strengthened versus neighbouring North Sea grades, but neither shift lasted long. Brent and WTI are now close to parity, despite the end to the Forties problem.

Medium and heavy sour crudes in contrast are suffering from fuel oil's continued downward slide and unseasonably strong US refinery maintenance. Given persistently weak gasoline cracks, US cracking refineries in particular are keeping some of their units offline or throttled back. Further, Iran's reported chartering of as many as ten VLCCs for offshore crude storage suggests regional difficulties in marketing heavy grades of crude. This is not uncommon during peak refinery maintenance but does suggest a reluctance to price the crude at a level which would clear production. In the US, popular West Coast heavy crudes such as Kern River or Mexican Maya have seen their discounts to WTI widen.

Refining Margins

Refining margins mostly improved in April on the back of a partial recovery in gasoline and continued strength in distillates. However, we remain in a two-tier market: full conversion refineries and those with a bias to producing distillates are seeing strong profits, while those with a gasoline bias, or of a simple configuration, are being pressured by the ongoing weakening in fuel oil and naphtha cracks. Furthermore, running gasoline reforming units at lower levels can trim hydrogen output, which is generally used for distillate desulphurisation, thus exacerbating the distillate dilemma.

Selected Refining Margins in Major Refining Centres

($/bbl)

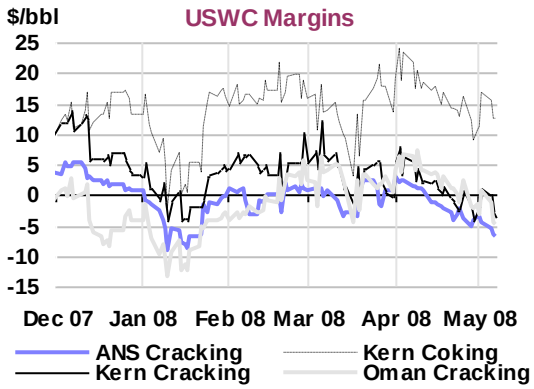
		Monthly Average			Change	Average for week ending:				
		Feb 08	Mar 08	Apr 08	Apr 08-Mar 08	09 Apr	16 Apr	23 Apr	30 Apr	07 May
NW Europe	Brent (Cracking)	3.55	4.33	6.59	2.27	7.55	6.03	5.88	6.44	4.26
	Urals (Cracking)	4.32	5.93	7.04	1.11	7.54	6.85	6.22	6.98	4.63
	Brent (Hydroskimming)	-2.95	-2.68	-0.75	1.93	0.47	-0.82	-1.78	-1.27	-2.90
	Urals (Hydroskimming)	-4.82	-3.77	-3.78	-0.02	-2.67	-3.33	-5.21	-4.66	-6.57
Mediterranean	Es Sider (Cracking)	4.94	5.55	6.68	1.13	7.84	5.38	5.26	7.65	4.83
	Urals (Cracking)	4.60	6.34	6.92	0.58	7.80	6.43	5.85	7.32	4.96
	Es Sider (Hydroskimming)	-1.75	-1.84	-1.11	0.74	0.40	-1.70	-2.96	-0.97	-3.01
	Urals (Hydroskimming)	-5.22	-3.97	-4.97	-1.00	-3.17	-5.27	-6.74	-5.57	-7.37
US Gulf Coast	Bonny (Cracking)	-1.52	-0.12	1.71	1.82	2.75	2.83	1.26	-1.24	-0.51
	Brent (Cracking)	-2.10	-2.12	1.33	3.46	2.21	2.21	1.05	-1.12	0.15
	LLS (Cracking)	0.47	2.04	3.51	1.46	4.73	4.14	2.48	1.75	1.58
	Mars (Cracking)	-1.43	-2.53	-0.91	1.62	0.03	0.11	-2.21	-2.27	-3.36
	Mars (Coking)	6.97	8.43	11.43	3.00	12.08	12.49	10.56	10.13	8.73
	Maya (Coking)	10.85	11.82	15.42	3.61	14.56	15.35	16.43	15.27	14.34
US West Coast	ANS (Cracking)	-0.10	-0.32	-1.03	-0.71	1.63	-0.50	-2.89	-3.85	-5.32
	Kern (Cracking)	5.16	3.94	1.48	-2.47	4.45	2.03	-0.60	-2.07	-1.43
	Oman (Cracking)	-0.29	2.10	2.64	0.53	5.61	3.59	1.21	-0.86	-2.65
	Kern (Coking)	17.07	13.92	16.69	2.77	20.39	17.49	14.75	12.15	13.73
Singapore	Dubai (Hydroskimming)	-3.71	-2.33	-1.40	0.93	0.51	-0.15	-2.58	-3.56	-5.68
	Tapis (Hydroskimming)	-5.67	-4.55	-2.73	1.82	-2.54	-2.01	-2.66	-3.33	-3.37
	Dubai (Hydrocracking)	2.55	5.06	7.11	2.04	8.55	8.28	6.53	5.36	2.81
	Tapis (Hydrocracking)	-2.07	-0.74	1.13	1.87	1.29	1.90	1.40	0.45	-0.10
China	Cabinda (Hydroskimming)	-4.84	-4.20	-1.24	2.97	-0.59	-0.31	-2.09	-2.19	-2.90
	Daqing (Hydroskimming)	-6.95	-5.74	-1.02	4.72	-0.68	-0.70	-1.35	-1.23	-2.62
	Dubai (Hydroskimming)	-4.59	-3.16	-2.25	0.91	-0.08	-0.81	-3.52	-4.72	-6.98
	Daqing (Hydrocracking)	-1.40	-1.07	3.37	4.44	4.09	3.70	3.05	2.84	0.77
	Dubai (Hydrocracking)	1.66	4.21	6.27	2.06	7.97	7.63	5.61	4.22	1.52

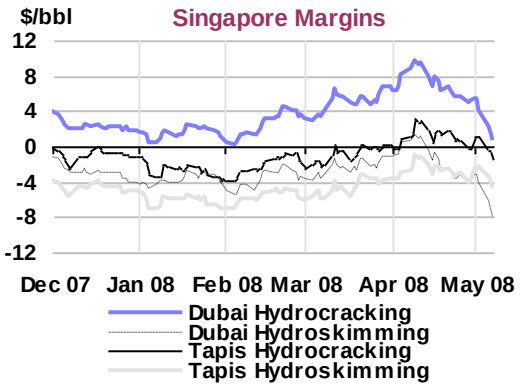
For the purposes of this report, refining margins are calculated for various complexity configurations, each optimized for processing the specific crude in a specific refining centre on a 'full-cost' basis. Consequently, reported margins should be taken as an indication, or proxy, of changes in profitability for a given refining centre. No attempt is made to model or otherwise comment upon the relative economics of specific refineries running individual crude slates and producing custom product sales, nor are these calculations intended to infer the marginal values of crudes for pricing purposes.

*The China refinery margin calculation represents a model based on spot product import/export parity, and does not reflect internal pricing regulations.

Sources: IEA, Purvin & Gertz Inc.

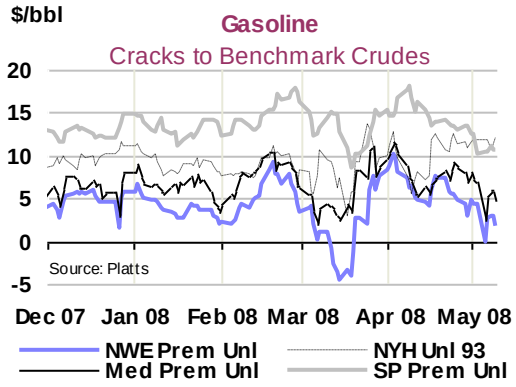
European cracking margins remain among the strongest in the three regions surveyed. In Northwest Europe and the Mediterranean, both Brent and Urals/Es Sider cracking margins rose to nearly $7/bbl in April, but trended down in early May on crude's strong rise. Hydroskimming margins improved slightly, but remain negative. US margins saw the greatest gains in April, as gasoline cracks finally improved somewhat, but this was tempered by exceptionally wide high-sulphur fuel oil discounts to crude. Nevertheless, cracking margins on the Gulf Coast remain relatively low and actually weakened on the West Coast. Singapore margins improved, again helped by stronger distillates, here due to jet/kerosene. In addition, LSWR's strength due to its popularity with utilities is adding support.

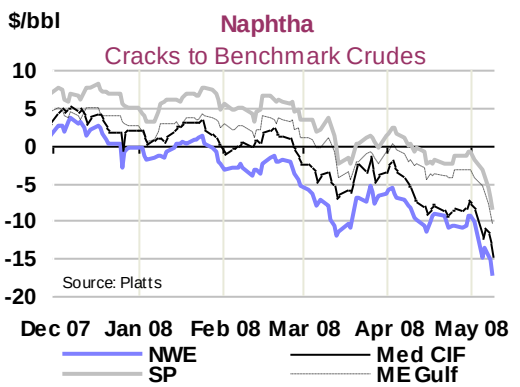




Spot Product Prices

On average, **gasoline** crack spreads increased in April, but remain far below usual levels for this time of the year and were trending downwards in early May. US gasoline demand is weaker than usual on indications of lower discretionary driving and higher sales of smaller, more fuel-efficient cars – both direct effects of higher prices. Furthermore, higher volumes of ethanol blended into the gasoline pool continue to reduce the need for oil-based gasoline blending components. The onset of the driving season – traditionally at the end of May – could however change this situation. Meanwhile, Japanese gasoline (and diesel) consumption saw a brief spurt in April due to the temporary suspension of fuel taxes, though this should prove a one-off. Relatively speaking, European gasoline crack spreads remain among the lowest, reflecting the need to clear the regional surplus across the Atlantic. Naphtha cracks declined further, as strong Asian petrochemical plant maintenance coincided with higher Indian exports.

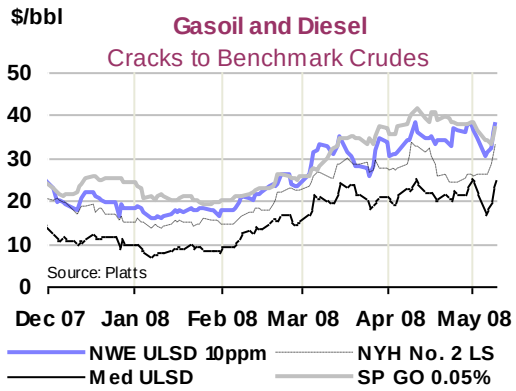


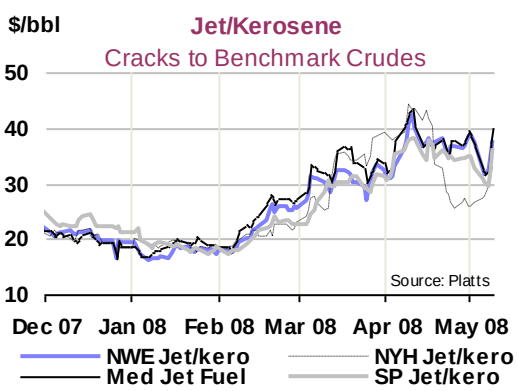


Distillates also rose in April, with crack spreads unusually high for all products. Globally and regionally, markets remain tight. Structurally-short Europe was hit by the impact of the Grangemouth and Pembroke refinery shut-ins, as well as continued work on Porvoo's hydrocracker. Some US cargoes are crossing the Atlantic to make up for the shortfall, but with US refineries running at below-average throughputs, not much can be spared. In addition, disrupted coal and gas supplies have seen additional gasoil use for power generation in Chile, China and South Africa, competing for distillate cargoes from the US and Asia-Pacific. China alone is expected to import around 150 kb/d in May, and given localised refined product and power shortages, sustained strong purchases can be expected ahead of the Olympic Games in August.

Fuel oil weakened further, again showing record discounts to crude except for LSWR, which has narrowed to near parity with Dubai. The need to discount to compete with alternative fuels is becoming increasingly apparent, despite low refinery runs. Lower Chinese imports and increased storage capacity have kept Singapore stocks high, while the lack of opportunity to send volumes eastward has also seen

inventory pile up in independent ARA storage. Meanwhile, in the US and Europe, both high and low-sulphur fuel oil reached record-wide discounts to benchmark crudes.



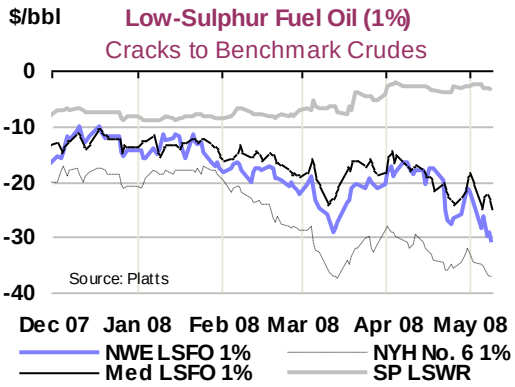


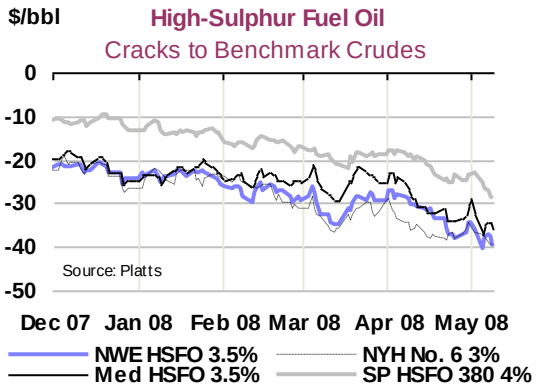
Spot Product Prices

Table Unavailable

End-User Product Prices in April

End-user product prices in surveyed IEA countries on average rose 3.6% in US dollars, ex-tax, in April, excepting Japan. There, the suspension of road transport fuel taxes at the end of March caused a sharp **total price drop of 15.8% in gasoline and 12.1% for diesel respectively (tax included)**. However the government reinstituted taxes to their previous levels starting from 1 May 2008. Compared with March 2008 gasoline and diesel prices in other IEA countries rose by 3.2% and 4.1%, respectively, while heating oil and low-sulphur fuel oil retail prices gained 3.5% each, all in US dollars, ex-tax.

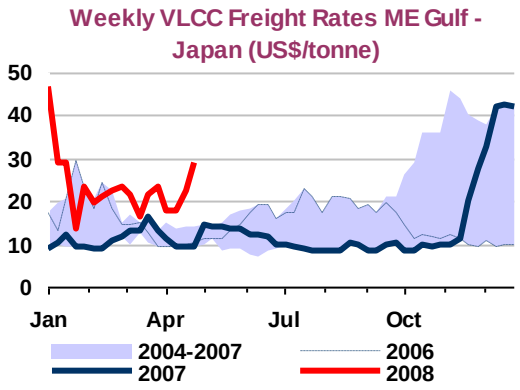


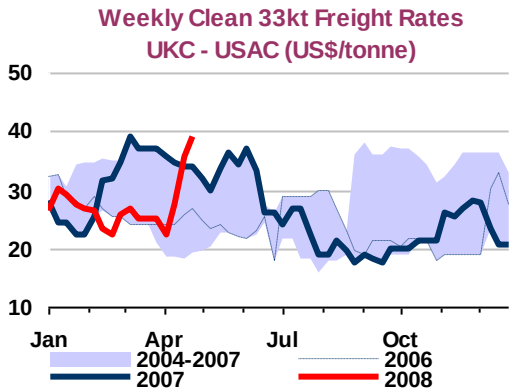


Freight

Charter rates rose across most of the tanker sector in April and are now unseasonably high. VLCC rates finished the month at their highest levels since early January, with the largest increases seen in the Atlantic basin. However, tight vessel fundamentals pushed up Middle East Gulf rates as well amid increased long-haul demand and reports of Iranian booking of VLCCs as floating storage. Suezmax and Aframax rates experienced more short-lived surges, with Mediterranean traffic complicated by a strike at the port of Marseille. Separate strike action in Grangemouth temporarily boosted clean tanker demand in Northwest Europe, while reported higher transatlantic gasoline flows to the US pushed Atlantic basin clean rates to six-month highs by end-April.

Trade data recently confirmed Angola as China's largest crude supplier in 1Q08 and reports suggest that purchasing of West Africa crude by Chinese refiners was also strong for April loading. The passing of US and European peak spring refinery maintenance supported westbound crude purchasing from the Middle East Gulf in recent weeks and US-bound VLCC charters have reportedly been much higher in April than March. Higher long-haul tanker demand tightened VLCC fundamentals acutely in the Atlantic basin, but also in the Middle East Gulf. In addition, the National Iranian Tanker Company (NITC) has reportedly chartered up to ten VLCCs for use as floating storage, as it did two summers ago, further eroding regional vessel supply. Benchmark 250 kmt rates from the latter region to Japan rose from under $18/tonne early in April to almost $29/tonne at end-month. Slow-steaming to minimise ever-spiralling bunker costs is probably still acting as a drag on tanker supply.





Suezmax freight rates may have also found support from post-maintenance buying of distillate-rich West African crude by US refiners. One million-barrel rates from West Africa to the US Gulf topped $42/tonne in late April, up from below $30/tonne three weeks earlier, before easing to $35/tonne as the month ended. Aframax rates were also firm in late April, with intra-Mediterranean rates rising from under $7/tonne at the start of April to a mid-month peak of over $16/tonne. A strike by dock workers at Marseille port in

France dented regional tanker availability as many vessels were left stranded offshore in the Mediterranean, unable to unload. Rates eased at the end of April, although problems at Marseille have not yet been resolved.

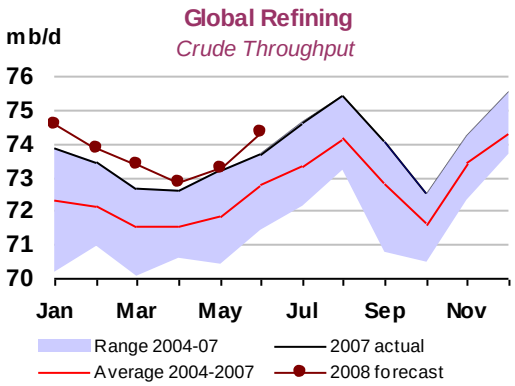
Clean tanker rates in the Atlantic basin were boosted by a growing economic incentive to export out of Europe plus a strike-related demand surge for clean tankers around the UK. A rising premium of NYH gasoline to Rotterdam, amid falling US gasoline stocks, suggested more economic transatlantic gasoline flows to the US (and possibly Mexico, given its soaring import demand). This coincided with some prolific clean tanker chartering by West African refiners to bring in gasoline. A strike at the Grangemouth refinery added a short-term boost to demand for clean tankers in the North Sea as efforts were made to redistribute clean product supplies around the UK. Meanwhile, reported increases in west-to-east arbitrage flows of naphtha may have also reduced clean vessel availability in 'West of Suez' markets. Intra-regional 25 kmt clean rates in Northwest Europe rose above $16/tonne by the end of April, from around $11/tonne mid-month. By contrast, Asian clean tanker rates drifted slightly lower over the month, with incoming clean tonnage maintaining plentiful vessel supply in the region over recent weeks.

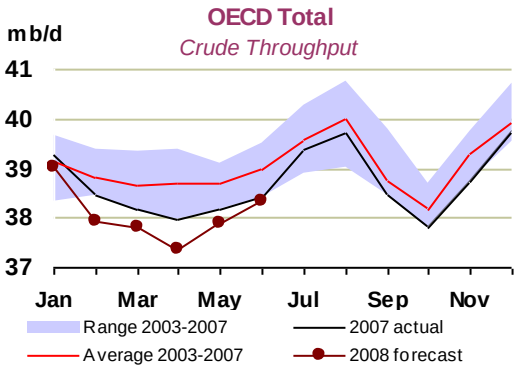
REFINING

Summary

- **Global refinery throughput reached its seasonal trough in April at 72.8 mb/d.** Weak OECD runs and a slowdown in some non-OECD regions contributed to the normal seasonal inflexion point. 2Q08 crude throughputs are forecast to average 73.5 mb/d, 0.2 mb/d lower than last month's report, on weaker estimated runs in the OECD Pacific.

- **OECD crude throughput averaged 38.2 mb/d in 1Q08, 0.1 mb/d lower than estimated last month.** Downward revision to European February provisional data more than offset stronger-than-forecast March Korean runs. OECD throughput in 2Q08 is pegged at 37.9 mb/d, 0.2 mb/d lower than last month's projection on the back of a lower demand forecast and weaker OECD Pacific April crude runs.





- **2Q08 non-OECD crude runs remain 0.7 mb/d above levels of a year ago.** Growth is now seen as more biased towards the FSU, Africa and the Middle East. Chinese throughput growth will be reduced by heavy scheduled maintenance in May, but the start of Sinopec's 200 kb/d Qingdao refinery in June should help restore growth in crude runs in the third quarter.

- **Recent weakness in gasoline cracks reflects the expected move towards a gasoline surplus in the Atlantic Basin.** Weak demand growth in the US, the increase in ethanol production and rising volumes available for export from Europe are testing refiners' ability to reallocate displaced blending components to other production streams. Ultimately investment in raising middle distillate yields may prove to be the answer. However, the impact of maintenance and unplanned shutdowns on US gasoline stocks suggests, at least in the short term, they will reach a seasonal low point in June at just above 200 mb.

Global Refinery Throughput

Global refining activity levels should rise in May to 73.3 mb/d, from the seasonal low-point of 72.8 mb/d reached in April. OECD crude runs for May remain below the five-year range, while non–OECD regions continue to post year-on-year growth of around 0.3 mb/d. Low US refinery utilisation rate remains a primary driver of the year-on-year decline in the OECD. Activity levels in the US should pick up over the course of May, but a recovery remains dependent on margin levels and the strength in gasoline cracks.

Non-OECD crude throughput of 35.5 mb/d in April is about 0.9 mb/d above April 2007 levels. However, growth drops to 0.4 mb/d in May, as a result of heavy maintenance in China, much of it delayed from late last year. Chinese product imports are expected to remain high, with poor utilisation rates in the independent refining sector and among teapot refineries, despite renewed offers by the state oil companies of subsidised crude for some independent refiners.

Arguably the lack of demand from Chinese teapots for straight-run fuel oil over the past six months has contributed to the weakness in sour crude differentials as some refiners, most notably Japanese, utilise excess fuel oil supplies as an alternative to buying heavy sour crudes to optimise the selection of feedstock. This in part may explain why some heavy Middle East crudes are moving into floating storage, rather than being exported to refiners.

2Q08 OECD crude throughput is forecast to remain below the five-year range; although the rehabilitation of several US refineries suffering from long-term outages and the dip in planned maintenance should propel US crude runs to year-on-year growth during the third quarter. OECD Europe crude runs are forecast to recover from the April trough, although some uncertainty remains over the exact timing of planned maintenance, particularly in the Mediterranean, which could lead us to revise forecasts in coming months.

1Q08 global crude throughputs are unchanged from last month at 74.0 mb/d, with higher OECD Pacific and FSU throughputs in March offsetting the downward revision to February OECD Europe and March Asian crude runs. **2Q08** global crude throughput forecasts are 0.2 mb/d weaker, with upward revisions to FSU and African forecasts, offset more than offset by lower OECD estimates. The changes reflect a mix of short-term and structural changes to our estimates. Year-on-year growth for the second quarter is forecast to average 0.3 mb/d, with growth in non-OECD regions of +0.7 mb/d partly offset by the -0.3 mb/d decline in the OECD.

Global Refinery Crude Throughput[1]

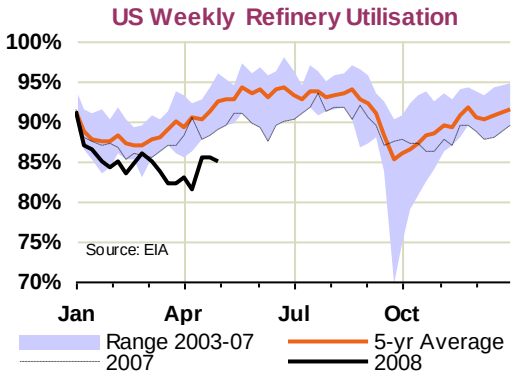
million barrels per day

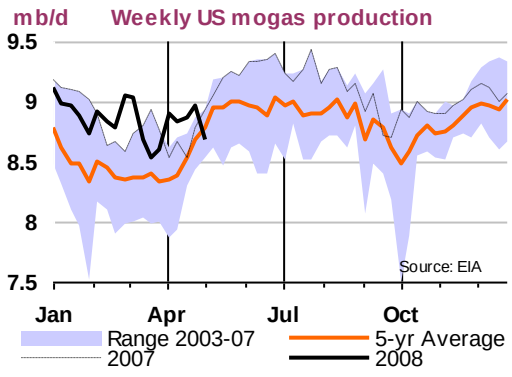
	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08	Apr 08	May 08	Jun 08
OECD Crude Runs									
North America	17.8	18.1	18.3	17.9	17.6	*17.4*	*17.5*	*18.0*	*18.2*
Europe	13.3	13.3	13.9	13.7	13.1	*13.2*	*13.1*	*13.2*	*13.6*
Pacific	6.7	7.3	7.5	7.4	7.1	*7.2*	*6.7*	*6.7*	*6.6*
Total OECD	37.8	38.7	39.7	39.0	*37.9*	*37.8*	*37.4*	*37.9*	*38.3*
NON-OECD Crude Runs									
FSU	5.4	5.9	*5.9*	*5.7*	*6.0*	*6.0*	*5.9*	*5.9*	*6.1*
Europe	0.8	0.8	*0.8*	*0.8*	*0.7*	*0.8*	*0.8*	*0.8*	*0.8*
China	6.5	6.7	*6.9*	*6.7*	*6.9*	*6.8*	*6.6*	*6.3*	*6.7*
Other Asia	8.1	8.3	*8.2*	*8.4*	*8.4*	*8.0*	*8.1*	*8.2*	*8.1*
Latin America	5.3	5.4	*5.5*	*5.5*	*5.3*	*5.3*	*5.4*	*5.6*	*5.6*
Middle East	6.1	6.0	*6.1*	*5.9*	*6.2*	*6.1*	*6.1*	*6.0*	*6.2*
Africa	2.4	2.4	*2.4*	*2.5*	*2.5*	*2.5*	*2.6*	*2.6*	*2.6*
Total Non-OECD	34.7	35.5	*35.8*	*35.6*	*36.0*	*35.6*	*35.5*	*35.4*	*36.0*
Total Crude Runs	72.5	74.2	*75.5*	*74.6*	*73.9*	*73.4*	*72.8*	*73.3*	*74.4*

1 Crude runs in Italics are estimates. Forecast crude throughput is based on current IEA demand forecasts.

OECD North American crude throughput forecasts are broadly unchanged from last month. The return to service of Canadian refineries following operational problems and the approaching peak in gasoline demand, albeit against a backdrop of weak overall growth, should underpin the region's forecast increase in runs over the course of the second quarter.

US refinery utilisation rates continue to lag the five-year range, as maintenance, and to some extent weak margins, undermine activity levels. Crude runs, currently around 14.6 mb/d, are forecast to increase by nearly 0.5 mb/d during May and increase further during June and July, but this is subject to an improvement in gasoline cracks, which remain poor by historical standards. The completion of work at West Coast refineries operated by ConocoPhillips, Tesoro and BP should raise regional runs back to levels consistent with the five-year range, from the recent 12-month low seen in late April.





Similarly, on the Gulf Coast runs are expected to continue to recover from the two-year low seen in early April, as work is completed at Shell, Chevron, ExxonMobil, Valero and BP refineries. East Coast crude runs remain well below the five-year range, driven by the usual array of planned and unplanned maintenance, but also the relative lack of coking capacity and higher reliance on relatively expensive light, sweet crudes, which have seen differentials widen on the back of supply disruptions. Comments by Valero suggest some ongoing economic run cuts remain in place, but if so, to a much lesser extent than was the case late in the first quarter. Moreover, discretionary cuts could be further reduced, pending the anticipated seasonal strengthening in the gasoline crack.

Refinery Crude Throughput and Utilisation in OECD Countries

	million barrels per day						*Change from*		Utilisation rate[1]	
	Oct 07	Nov 07	Dec 07	Jan 08	Feb 08	Mar 08	*Feb 08*	*Mar 07*	Mar 08	Mar 07
OECD North America										
US[2]	14.93	15.14	15.19	14.80	14.63	14.34	-0.29	-0.50	82.18	85.31
Canada	1.62	1.72	1.83	1.89	1.83	1.76	-0.08	-0.05	87.06	89.77
Mexico	1.26	1.24	1.23	1.25	1.18	1.27	0.09	0.04	82.77	71.96
Total	17.81	18.10	18.26	17.94	17.64	17.37	-0.27	-0.52	82.69	85.36
OECD Europe										
France	1.54	1.75	1.73	1.78	1.62	1.47	-0.15	-0.03	75.13	76.83
Germany	2.24	2.21	2.31	2.26	2.20	2.34	0.14	0.14	96.98	91.26
Italy	1.82	1.73	1.95	1.87	1.78	1.80	0.03	-0.10	77.21	81.66
Netherlands	1.02	0.94	1.08	1.00	1.01	1.03	0.01	0.14	84.59	72.93
Spain	1.08	1.07	1.14	1.20	1.14	1.15	0.01	-0.02	90.59	92.23
UK	1.62	1.55	1.52	1.48	1.40	1.50	0.10	0.00	79.23	79.21
Other OECD Europe	4.00	4.09	4.23	4.07	3.98	3.93	-0.05	0.09	83.68	81.76
Total	13.32	13.33	13.94	13.65	13.13	13.22	0.09	0.21	83.79	82.45
OECD Pacific										
Japan	3.69	4.03	4.27	4.13	4.15	4.10	-0.05	0.06	87.67	86.40
Korea	2.30	2.58	2.57	2.53	2.37	2.40	0.04	-0.08	87.85	90.69
Other OECD Pacific	0.67	0.70	0.71	0.77	0.63	0.71	0.08	-0.04	88.29	92.72
Total	6.66	7.31	7.54	7.43	7.15	7.21	0.07	-0.05	87.79	88.45
OECD Total	37.80	38.74	39.74	39.02	37.92	37.80	-0.11	-0.36	84.01	84.90

1 Expressed as a percentage, based on crude throughput and current operable refining capacity
2 US50

1Q08 OECD Pacific crude runs have been revised up by 0.1 mb/d, following higher-than-expected Korean and Australian crude throughput in March. Korean crude runs were 0.2 mb/d ahead of forecast at 2.4 mb/d, despite reports of economic run cuts and operational outages during the month. Australian February crude throughput has been revised down by 0.1 mb/d to 0.5 mb/d, in line with our original forecast, following provisional data suggesting runs averaged 0.6 mb/d, despite several operational problems being reported during the month.

US Gasoline Supply: Don't Blame it on the Moonshine

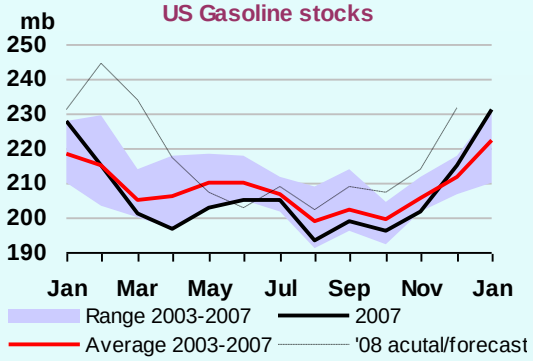
US refineries have emerged from a traumatic first quarter. The bedrock of US refining profitability, the gasoline crack, has weakened in recent months to levels not seen since 1999, when crude oil was $12/bbl. What has caused the collapse in gasoline cracks from $30/bbl 12 months ago to $3/bbl now? Looking at the factors that have pressured gasoline margins three aspects are apparent.

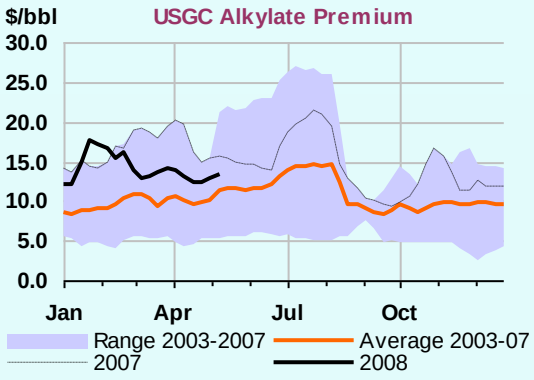
- Firstly, weakness has emerged within US demand, currently estimated at around 1% down against last year, which is perhaps not overly surprising, given the average US retail price is in excess of $3.60/gallon in early May.
- Secondly, ethanol blending is offering refiners and blenders a cheap source of additional volumes to incorporate into the gasoline pool, despite the constraints it places on the use of other blending components. Typically, refiners can find alternative uses for any displaced components, e.g. sending light naphtha to petrochemical feedstock streams, and heavy components to the kerosene pool, etc.. However, the incremental 130 kb/d of ethanol production in the US achieved over the last 12 months may have strained refiners' ability to react that quickly. In the year to date, there appears to be no strong premium attached to low volatility blending components such as alkylate, as evident in previous summers, despite the widespread reports of FCC downtime, suggesting refiners are adapting.
- Lastly, European crude runs, although weak compared with 2007 levels, have not compensated for the 4% decline seen in European gasoline demand so far this year, suggesting there is the potential for European refineries to have increased exports to the US.

This last point was highlighted in last year's *Medium-Term Oil Market Report*. The Atlantic basin is expected to undergo an easing of gasoline supply tightness, starting in 2007/2008. While arbitrage dynamics are never easy to forecast, it seems reasonable that European refiners will continue to export barrels to the US (subject to any quality constraints) for as long as the US provides the highest netback vis-à-vis other destinations. When the saturation point is reached the marginal European refinery will continue to offer barrels into the US until such time as the netback is sufficiently degraded to make the alternative export destinations more attractive. Economics are further improved by the ability of US refiners to backhaul diesel to Europe. Once this new equilibrium is reached the downward pressure on gasoline cracks will fluctuate based on a number of factors including; voluntary run cuts, unplanned refinery outages and the emergence of other markets, e.g. China, as net gasoline importers.

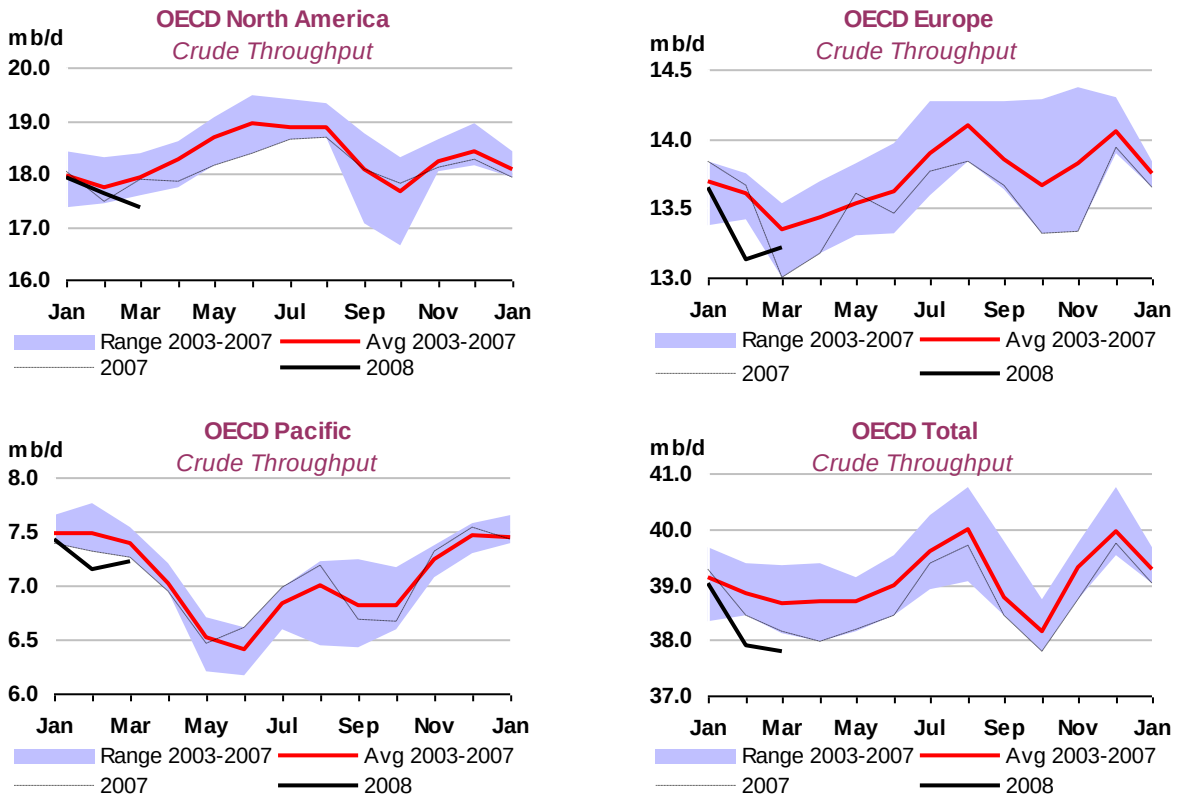
Consequently, the weakness in gasoline cracks that has emerged over the past six months may be part of a structural shift in gasoline markets, as European refiners adjust to a saturated market. Additionally, the alternative demand centres for lower quality European gasoline in recent years, namely Nigeria and Iran, have both taken steps to reduce their import needs – with varying success. However, both countries are likely to be less dependent on gasoline imports from European refineries, than they were 6-12 months ago.

Looking forward to the summer, we expect to see US gasoline inventories trough in June at just over 200 mb, before rebuilding to above the five-year range by the start of the fourth quarter. However, this assumes that margins recover sufficiently to avoid further voluntary run cuts, particularly of FCC capacity, given its high yield of gasoline. This is by no means certain within an Atlantic Basin refining system which appears to be moving structurally long of gasoline. US refineries are responding to the structural shifts underway by raising gasoil/diesel yields. Comments by Valero suggest that steps such as changing catalyst composition and further investment in hardware could raise distillate yields for its own network of refineries towards 30%, and possibly beyond, from the current level of around 25%.





2Q08 OECD Pacific throughputs are forecast to average 6.7 mb/d, 0.2 mb/d lower than last month's report, following the greater-than-forecast impact of problems at Korean refineries and lower-than-forecast Japanese crude runs during April. May Korean runs are estimated to rebound to an average of 2.3 mb/d, with a corresponding boost to product exports following the cancellations of exports seen in April. However, overall crude runs will continue to decline during the course of the second quarter, as planned maintenance work at Japanese and Korean refineries intensifies. Australian refineries continue to report operational issues, which have tightened diesel supplies and forced additional imports to meet demand requirements. Consequently, 2Q08 Australian runs may be subject to further downward revision in the coming months.



European crude throughput in March averaged 13.2 mb/d, slightly below last month's estimate. Furthermore, February's provisional data were revised downward by 0.4 mb/d to 13.1 mb/d, largely as a result of lower runs in the UK, Turkey and Italy. Consequently, 1Q08 crude runs are revised down by 0.2 mb/d to an average of 13.3 mb/d, which is in line with the average for 2Q08. Crude runs are forecast to increase over the course of the quarter as refinery maintenance in the UK, Germany, the Netherlands and Italy is completed. The strike action at Ineos's Grangemouth refinery, plus problems at Chevron's Pembroke refinery have cut April and May UK estimates by around 0.1 mb/d, and lowered forecast runs in May to possibly their lowest level since 2001.

Chinese crude runs in March were 6.8 mb/d, in line with our estimate. Crude runs are estimated to have fallen to 6.6 mb/d in April and to 6.3 mb/d in May following a fire at Sinopec's 200 kb/d Maoming refinery and the start of planned maintenance, some of which was deferred from late 2007 following the onset of product shortages in some regions. The maintenance works will reduce annual growth to almost zero in April and push it negative in May, which would be the first time in five years that runs have declined year-on-year. June runs are forecast to rebound to 6.7 mb/d with the reported start of commercial operations at Sinopec's 200 kb/d Qingdao refinery, where trial runs are understood to have been ongoing since April.

1Q08 and 2Q08 Other Asian crude throughput forecasts are revised down by 0.1 mb/d on the back of weaker-than-estimated crude runs in Indonesia and Chinese Taipei in February, which we now expect to continue through March and April. The restart in April of a 100 kb/d crude unit at CPC's Kaohsiung refinery, following a fire last October, was reported to be initially only at 60% utilisation because of poor margins. However, the recent strengthening of distillate cracks may allow for higher rates during the second quarter. **Indian** crude runs in March of 3.2 mb/d were in line with our forecast and are projected to decline to an average of 3.0 mb/d during the second quarter, due to maintenance at several refineries. Crude throughput should recover in July if reports of the start of trial crude runs at Reliance's 580 kb/d Jamnagar refinery are accurate, possibly ahead of a commercial start date of as early as September.

Russian crude runs were 0.3 mb/d ahead of our forecasts in March, despite widely reported maintenance at several refineries. Consequently, we have revised up our April forecast by 0.2 mb/d to reflect the month-on-month change in estimated offline capacity. Elsewhere, we have adjusted our forecast for crude throughput in Colombia (+50 kb/d) and Peru (-40 kb/d) following a review of historical trends. Similarly Libyan and Algerian crude runs have been revised up by 36 kb/d and 30 kb/d respectively following a reappraisal of sustained crude throughput levels.

Table 1
WORLD OIL SUPPLY AND DEMAND
(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	25.4	25.5	25.2	25.1	25.5	25.4	25.3	25.7	25.4	25.5	25.6	25.5	24.9	25.1	25.3	25.3	25.1
Europe	15.5	15.6	16.0	15.2	15.6	15.7	15.6	15.2	14.9	15.4	15.6	15.3	15.2	15.0	15.4	15.5	15.3
Pacific	8.5	8.6	9.2	7.8	7.9	8.7	8.4	8.8	7.8	7.8	8.6	8.3	8.9	7.9	7.9	8.8	8.4
Total OECD	49.4	49.7	50.4	48.1	49.0	49.8	49.3	49.7	48.2	48.7	49.8	49.1	48.9	48.0	48.5	49.6	48.8
NON-OECD DEMAND																	
FSU	3.9	3.9	4.0	3.9	4.2	4.2	4.1	4.1	3.9	4.2	4.3	4.1	4.1	4.0	4.3	4.4	4.2
Europe	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.8
China	6.4	6.7	7.0	7.3	7.2	7.3	7.2	7.3	7.7	7.5	7.6	7.5	7.8	8.1	7.8	7.9	7.9
Other Asia	8.7	8.8	8.9	9.0	8.6	8.9	8.9	9.2	9.3	9.0	9.3	9.2	9.5	9.5	9.2	9.6	9.4
Latin America	5.0	5.1	5.2	5.3	5.4	5.4	5.3	5.4	5.6	5.7	5.7	5.6	5.7	5.8	6.0	6.0	5.9
Middle East	5.7	6.0	6.1	6.1	6.4	6.2	6.2	6.4	6.5	6.7	6.4	6.5	6.7	6.8	7.1	6.8	6.8
Africa	2.8	2.9	2.9	2.9	2.8	2.9	2.9	3.0	3.0	2.9	3.1	3.0	3.1	3.1	3.0	3.2	3.1
Total Non-OECD	33.1	34.1	35.0	35.3	35.4	35.7	35.3	36.2	36.8	36.7	37.2	36.7	37.7	38.0	38.1	38.5	38.1
Total Demand[1]	82.5	83.8	85.4	83.4	84.4	85.5	84.7	85.9	84.9	85.4	87.0	85.8	86.6	86.0	86.6	88.1	86.8
OECD SUPPLY																	
North America	14.6	14.1	14.2	14.2	14.2	14.2	14.2	14.4	14.4	14.2	14.1	14.3	14.2	14.0	14.0	14.4	14.1
Europe	6.1	5.6	5.5	5.1	4.9	5.2	5.2	5.2	4.9	4.7	5.0	5.0	4.9	4.5	4.3	4.6	4.6
Pacific	0.6	0.6	0.5	0.5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.9	0.8
Total OECD	21.2	20.3	20.2	19.9	19.8	20.0	20.0	20.2	19.9	19.5	19.8	19.8	19.7	19.2	19.2	19.9	19.5
NON-OECD SUPPLY																	
FSU	11.4	11.8	11.9	12.2	12.4	12.5	12.2	12.8	12.7	12.8	12.8	12.8	12.8	12.9	13.1	13.5	13.1
Europe	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
China	3.5	3.6	3.7	3.7	3.7	3.6	3.7	3.7	3.8	3.7	3.7	3.7	3.8	3.9	3.9	3.9	3.8
Other Asia	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.7	2.7	2.7	2.7	2.7	2.8	2.7
Latin America	4.1	4.3	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.3	4.2	4.3	4.0	4.0	4.2	4.2	4.1
Middle East	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.6
Africa[2]	3.4	3.7	3.9	3.8	3.9	4.1	3.9	2.6	2.5	2.5	2.6	2.5	2.6	2.6	2.6	2.6	2.6
Total Non-OECD	27.1	28.0	28.5	28.7	28.9	29.2	28.8	28.0	27.9	27.7	27.7	27.8	27.6	27.9	28.2	28.7	28.1
Processing Gains[3]	1.9	1.9	2.0	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1
Other Biofuels[4]	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.6	0.7	0.7	0.7	0.7
Total Non-OPEC[5]	50.3	50.4	51.0	50.8	51.0	51.5	51.1	50.5	50.3	49.8	50.1	50.1	50.0	49.8	50.2	51.5	50.4
Non-OPEC excl. Angola & Ecuador[2]	48.8	48.6	49.0	48.9	49.0	49.6	49.1	50.0	49.8	49.2	49.7	49.7	50.0	49.8	50.2	51.5	50.4
OPEC																	
Crude[6]	28.9	29.7	29.9	29.7	30.0	29.2	29.7	30.3	30.2	30.6	31.5	30.7	32.3				
NGLs	4.2	4.5	4.6	4.6	4.6	4.7	4.6	4.8	4.8	4.8	4.9	4.8	4.9	5.0	5.2	5.6	5.2
Total OPEC	33.1	34.2	34.5	34.3	34.7	33.9	34.3	35.1	35.0	35.4	36.4	35.5	37.3				
OPEC incl. Angola & Ecuador[2]	34.6	36.0	36.4	36.2	36.7	35.9	36.3	35.6	35.5	36.0	36.8	35.9	37.3				
Total Supply[7]	83.4	84.6	85.4	85.1	85.7	85.4	85.4	85.6	85.2	85.2	86.5	85.6	87.2				
STOCK CHANGES AND MISCELLANEOUS																	
Reported OECD																	
Industry	0.1	0.1	0.0	0.7	1.2	-0.9	0.2	-0.9	0.7	0.0	-0.9	-0.3	-0.2				
Government	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0				
Total	0.2	0.2	0.0	0.8	1.2	-0.9	0.3	-0.8	0.7	0.2	-0.9	-0.2	-0.2				
Floating Storage/Oil in Transit	0.0	-0.1	0.1	-0.1	0.3	-0.6	-0.1	0.2	-0.2	-0.2	0.2	0.0	0.3				
Miscellaneous to balance[8]	0.7	0.7	-0.1	1.0	-0.2	1.5	0.5	0.2	-0.2	-0.2	0.2	0.0	0.4				
Total Stock Ch. & Misc	0.9	0.8	0.0	1.7	1.3	-0.1	0.7	-0.3	0.3	-0.2	-0.5	-0.2	0.6				
Memo items:																	
Call on OPEC crude + Stock ch.[9]	28.0	28.9	29.9	28.0	28.8	29.3	29.0	30.7	29.8	30.8	32.0	30.8	31.7	31.2	31.2	31.0	31.3
Adjusted Call on OPEC + Stock ch.[10]	28.7	29.6	29.7	29.0	28.5	30.8	29.5	30.9	29.6	30.6	32.2	30.8	32.2	31.5	31.5	31.3	31.6
"Call" incl. Angola & Ecuador[2]	29.5	30.7	31.8	29.9	30.7	31.3	30.9	31.2	30.4	31.4	32.4	31.3	31.7	31.2	31.2	31.0	31.3
"Adjusted Call" incl. Angola & Ecuador[2]	30.2	31.4	31.7	30.9	30.5	32.7	31.5	31.4	30.1	31.1	32.5	31.3	32.2	31.5	31.5	31.3	31.6

1 Measured as deliveries from refineries and primary stocks, comprises inland deliveries, international marine bunkers, refinery fuel, crude for direct burning, oil from non-conventional sources and other sources of supply.
2 With effect from OMR of 16 January 2008, Ecuadorean production will be reclassified within OPEC and excluded from the Non-OPEC and Latin America totals, for the period December 2007 onwards. Angolan production is classified within OPEC and excluded from the Non-OPEC and Africa totals, for the period January 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively.
3 Net volumetric gains and losses in the refining process (excludes net gain/loss in former USSR, China and non-OECD Europe) and marine transportation losses.
4 Biofuels from sources outside Brazil and US.
5 Non-OPEC supplies include crude oil, condensates, NGL and non-conventional sources of supply such as synthetic crude, ethanol and MTBE.
6 As of the March 2006 OMR, Venezuelan Orinoco heavy crude production is included within Venezuelan crude estimates. Orimulsion fuel remains within the OPEC NGL & non-conventional category, but Orimulsion production reportedly ceased from January 2007.
7 Comprises crude oil, condensates, NGLs, oil from non-conventional sources and other sources of supply.
8 Includes changes in non-reported stocks in OECD and non-OECD areas.
9 Equals the arithmetic difference between total demand minus total non-OPEC supply minus OPEC NGLs.
10 Equals the "Call on OPEC + Stock Ch." with "Miscellaneous to balance" added for historical periods and with an average of "Miscellaneous to balance" for the most recent 8 quarters added for forecast periods.

Table 1A
WORLD OIL SUPPLY AND DEMAND: CHANGES FROM LAST MONTH'S TABLE 1

(million barrels per day)

	2004	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
OECD DEMAND																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-	-	-0.1	-0.1
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-	-	-	-0.1
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	-0.6	-	-0.1	-0.1	-0.2
NON-OECD DEMAND																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-
Other Asia	-	-	-0.1	-0.1	-0.1	-	-0.1	-0.1	-0.1	-0.1	-	-0.1	-	-0.1	-0.1	-0.1	-0.1
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Middle East	-	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-	-0.1
Total Non-OECD	-	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
Total Demand	-	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.2	-0.1	-0.2	-0.1	-0.2	-0.7	-0.3	-0.3	-0.3	-0.4
OECD SUPPLY																	
North America	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OECD	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-	0.1	-
NON-OECD SUPPLY																	
FSU	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1
Europe	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	0.1	-
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.2	-0.1	-	-0.1
Processing Gains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Biofuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-0.4	-0.1	0.1	-0.1
Non-OPEC excl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-	-	-	-0.2	-0.4	-0.1	0.1	-0.1
OPEC																	
Crude	-	-	-	-	-	-	-	-	-	-	-	-	0.1				
NGLs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total OPEC	-	-	-	-	-	-	-	-	-	-	-	-	0.1				
OPEC incl. Angola & Ecuador	-	-	-	-	-	-	-	-	-	-	-	-	0.1				
Total Supply	-	-	-	-	-	-	-	-	-	-	-	-	-0.1				
STOCK CHANGES AND MISCELLANEOUS REPORTED OECD																	
Industry	-	-	-	-	-	-	-	-	-	-	0.1	-					
Government	-	-	-	-	-	-	-	-	-	-	-	-					
Total	-	-	-	-	-	-	-	-	-	-	0.1	-					
Floating Storage/Oil in Transit	-	-	-	-	-	-	-	0.1	-	-	-	-					
Miscellaneous to balance	-	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	-	0.1					
Total Stock Ch. & Misc	-	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.6				
Memo items:																	
Call on OPEC crude + Stock ch.	-	-0.1	-0.2	-0.2	-0.2	-0.1	-0.2	-0.1	-0.1	-0.1	-0.2	-0.1	-0.5	0.1	-0.2	-0.4	-0.2
Adjusted Call on OPEC + Stock ch.	-	-	-	-	-	-	-	-0.1	0.1	-	-0.1	-	-0.2	0.3	0.1	-0.2	-

When submitting their monthly oil statistics, OECD Member countries periodically update data for prior periods. Similar updates to non-OECD data can occur.

Table 2

Summary of Global Oil Demand

	2005	1Q06	2Q06	3Q06	4Q06	2006	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008
Demand (mb/d)																
North America	25.49	25.22	25.06	25.53	25.40	25.31	25.66	25.43	25.49	25.58	25.54	24.86	25.13	25.26	25.29	25.13
Europe	15.61	15.97	15.24	15.60	15.73	15.63	15.19	14.93	15.39	15.60	15.28	15.21	14.97	15.37	15.47	15.26
Pacific	8.57	9.24	7.82	7.85	8.71	8.40	8.83	7.80	7.81	8.64	8.27	8.86	7.90	7.91	8.79	8.37
Total OECD	49.67	50.43	48.12	48.99	49.84	49.34	49.68	48.16	48.69	49.82	49.09	48.93	48.00	48.55	49.55	48.76
FSU	3.91	4.05	3.87	4.16	4.24	4.08	4.09	3.91	4.18	4.27	4.11	4.11	3.98	4.25	4.35	4.17
Europe	0.73	0.79	0.74	0.69	0.74	0.74	0.81	0.75	0.70	0.75	0.75	0.82	0.77	0.71	0.77	0.77
China	6.69	7.02	7.35	7.22	7.26	7.21	7.33	7.73	7.52	7.59	7.54	7.83	8.05	7.84	7.94	7.91
Other Asia	8.76	8.95	8.96	8.65	8.92	8.87	9.17	9.28	8.97	9.32	9.19	9.50	9.51	9.21	9.56	9.45
Latin America	5.10	5.17	5.31	5.43	5.40	5.33	5.40	5.57	5.72	5.71	5.60	5.67	5.82	5.98	5.96	5.86
Middle East	5.99	6.08	6.14	6.45	6.20	6.22	6.39	6.49	6.72	6.43	6.51	6.66	6.76	7.08	6.79	6.82
Africa	2.94	2.93	2.93	2.82	2.89	2.89	3.04	3.03	2.94	3.07	3.02	3.11	3.11	3.02	3.16	3.10
Total Non-OECD	34.12	34.99	35.30	35.42	35.66	35.34	36.23	36.76	36.74	37.16	36.72	37.71	38.00	38.09	38.54	38.09
World	83.78	85.43	83.42	84.41	85.50	84.69	85.92	84.92	85.43	86.98	85.81	86.64	86.00	86.64	88.09	86.84
of which:																
US50	*20.80*	*20.54*	*20.55*	*20.91*	*20.75*	*20.69*	*20.90*	*20.74*	*20.78*	*20.75*	*20.79*	*20.04*	*20.40*	*20.51*	*20.45*	*20.35*
Euro4	*8.22*	*8.49*	*7.94*	*8.15*	*8.18*	*8.19*	*7.84*	*7.68*	*7.86*	*8.00*	*7.85*	*7.80*	*7.65*	*7.84*	*7.88*	*7.80*
Japan	*5.31*	*5.89*	*4.72*	*4.75*	*5.29*	*5.16*	*5.39*	*4.61*	*4.67*	*5.22*	*4.97*	*5.45*	*4.64*	*4.70*	*5.27*	*5.02*
Korea	*2.19*	*2.29*	*2.04*	*2.04*	*2.32*	*2.17*	*2.35*	*2.12*	*2.06*	*2.31*	*2.21*	*2.32*	*2.16*	*2.10*	*2.38*	*2.24*
Mexico	*2.05*	*2.05*	*1.98*	*1.96*	*2.00*	*2.00*	*2.05*	*2.07*	*1.98*	*2.08*	*2.05*	*2.02*	*2.09*	*2.01*	*2.10*	*2.05*
Canada	*2.30*	*2.26*	*2.20*	*2.31*	*2.29*	*2.26*	*2.33*	*2.28*	*2.38*	*2.37*	*2.34*	*2.41*	*2.29*	*2.38*	*2.36*	*2.36*
Brazil	*2.17*	*2.13*	*2.15*	*2.23*	*2.24*	*2.19*	*2.22*	*2.26*	*2.34*	*2.41*	*2.31*	*2.35*	*2.36*	*2.44*	*2.51*	*2.42*
India	*2.58*	*2.71*	*2.67*	*2.48*	*2.71*	*2.64*	*2.89*	*2.83*	*2.57*	*2.87*	*2.79*	*3.07*	*2.94*	*2.69*	*2.99*	*2.92*
Annual Change (% per annum)																
North America	0.5	-1.4	-0.9	-0.2	-0.6	-0.7	1.7	1.5	-0.1	0.7	0.9	-3.1	-1.2	-0.9	-1.1	-1.6
Europe	0.8	1.5	-0.3	-0.3	-0.2	0.2	-4.9	-2.1	-1.4	-0.8	-2.3	0.1	0.3	-0.1	-0.8	-0.1
Pacific	0.8	-2.5	-2.7	-2.1	-0.3	-1.9	-4.5	-0.2	-0.5	-0.8	-1.6	0.4	1.2	1.3	1.7	1.2
Total OECD	0.6	-0.7	-1.0	-0.5	-0.4	-0.7	-1.5	0.1	-0.6	0.0	-0.5	-1.5	-0.3	-0.3	-0.5	-0.7
FSU	0.5	5.5	2.1	4.2	5.8	4.4	1.1	0.9	0.3	0.8	0.8	0.5	1.8	1.8	1.8	1.5
Europe	4.5	1.5	1.5	1.5	1.5	1.5	2.2	2.1	2.1	1.6	2.0	1.7	2.1	2.1	2.0	2.0
China	4.2	5.0	13.0	7.9	5.4	7.8	4.5	5.1	4.1	4.6	4.6	6.8	4.2	4.3	4.6	4.9
Other Asia	1.1	0.3	-0.2	1.7	3.3	1.3	2.4	3.6	3.8	4.5	3.6	3.6	2.5	2.7	2.6	2.8
Latin America	2.8	4.6	4.1	3.8	5.3	4.4	4.5	4.9	5.4	5.8	5.2	4.9	4.4	4.5	4.4	4.5
Middle East	5.2	4.5	4.3	3.6	2.9	3.8	5.1	5.8	4.1	3.7	4.7	4.2	4.1	5.4	5.7	4.9
Africa	5.7	-2.4	-1.9	-1.2	0.0	-1.4	3.7	3.3	3.9	6.2	4.3	2.3	2.8	2.8	2.9	2.7
Total Non-OECD	3.0	2.9	3.9	3.6	3.9	3.6	3.5	4.1	3.7	4.2	3.9	4.1	3.4	3.7	3.7	3.7
World	1.6	0.8	1.0	1.2	1.4	1.1	0.6	1.8	1.2	1.7	1.3	0.8	1.3	1.4	1.3	1.2
Annual Change (mb/d)																
North America	0.12	-0.35	-0.23	-0.04	-0.14	-0.19	0.44	0.37	-0.04	0.17	0.24	-0.81	-0.30	-0.23	-0.29	-0.41
Europe	0.12	0.24	-0.04	-0.05	-0.03	0.03	-0.77	-0.32	-0.21	-0.13	-0.36	0.02	0.05	-0.01	-0.13	-0.02
Pacific	0.07	-0.24	-0.22	-0.17	-0.03	-0.16	-0.42	-0.02	-0.04	-0.07	-0.13	0.04	0.10	0.10	0.14	0.10
Total OECD	0.31	-0.35	-0.49	-0.27	-0.19	-0.32	-0.75	0.04	-0.29	-0.02	-0.25	-0.75	-0.16	-0.15	-0.27	-0.33
FSU	0.02	0.21	0.08	0.17	0.23	0.17	0.05	0.03	0.01	0.03	0.03	0.02	0.07	0.08	0.08	0.06
Europe	0.03	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.01
China	0.27	0.34	0.85	0.53	0.37	0.52	0.31	0.38	0.29	0.33	0.33	0.50	0.32	0.32	0.35	0.37
Other Asia	0.10	0.03	-0.02	0.14	0.29	0.11	0.22	0.32	0.33	0.40	0.32	0.33	0.23	0.24	0.24	0.26
Latin America	0.14	0.23	0.21	0.20	0.27	0.23	0.23	0.26	0.29	0.31	0.28	0.27	0.24	0.26	0.25	0.25
Middle East	0.30	0.26	0.25	0.23	0.17	0.23	0.31	0.35	0.27	0.23	0.29	0.27	0.27	0.36	0.36	0.32
Africa	0.16	-0.07	-0.06	-0.03	0.00	-0.04	0.11	0.10	0.11	0.18	0.12	0.07	0.08	0.08	0.09	0.08
Total Non-OECD	1.01	1.00	1.32	1.24	1.35	1.23	1.24	1.46	1.31	1.50	1.38	1.48	1.24	1.36	1.38	1.36
World	1.32	0.65	0.83	0.97	1.15	0.90	0.49	1.50	1.02	1.48	1.13	0.72	1.08	1.21	1.11	1.03
Revisions to Oil Demand from Last Month's Report (mb/d)																
North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.03	-0.01	-0.15	0.00	-0.01	-0.02	-0.04
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.00	0.00	-0.21	-0.05	-0.04	-0.06	-0.09
Pacific	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.21	0.00	0.00	0.00	-0.05
Total OECD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	-0.03	-0.01	-0.57	-0.05	-0.05	-0.08	-0.19
FSU	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.02	0.01	0.01	0.01
Europe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.02
Other Asia	-0.04	-0.06	-0.06	-0.07	-0.03	-0.06	-0.06	-0.06	-0.06	-0.05	-0.06	-0.05	-0.07	-0.07	-0.07	-0.06
Latin America	-0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.03	0.02	0.04	0.04	0.05	0.04	0.04
Middle East	-0.05	-0.12	-0.12	-0.12	-0.12	-0.12	-0.08	-0.08	-0.08	-0.08	-0.08	-0.13	-0.13	-0.15	-0.16	-0.14
Africa	-0.01	-0.04	-0.04	-0.03	-0.04	-0.04	-0.05	-0.05	-0.05	-0.03	-0.04	-0.09	-0.07	-0.07	-0.05	-0.07
Total Non-OECD	-0.10	-0.17	-0.17	-0.19	-0.14	-0.17	-0.15	-0.15	-0.15	-0.12	-0.14	-0.13	-0.22	-0.22	-0.23	-0.20
World	-0.10	-0.17	-0.17	-0.19	-0.14	-0.17	-0.15	-0.15	-0.16	-0.15	-0.15	-0.70	-0.27	-0.27	-0.30	-0.39
Revisions to Oil Demand Growth from Last Month's Report (mb/d)																
World	-0.08	-0.07	-0.07	-0.09	-0.04	-0.07	0.02	0.02	0.03	-0.01	0.02	-0.55	-0.12	-0.12	-0.16	-0.23

Table 3
WORLD OIL PRODUCTION
(million barrels per day)

	2006	2007	2008	4Q07	1Q08	2Q08	3Q08	4Q08	Feb 08	Mar 08	Apr 08
OPEC											
Crude Oil											
Saudi Arabia	8.93	8.48		8.78	8.84				8.87	8.80	8.77
Iran	3.91	3.98		4.04	4.02				3.95	4.02	3.93
Iraq	1.90	2.09		2.33	2.38				2.45	2.41	2.34
UAE	2.62	2.52		2.40	2.62				2.66	2.54	2.65
Kuwait	2.21	2.16		2.24	2.29				2.29	2.31	2.31
Neutral Zone	0.58	0.56		0.57	0.58				0.58	0.58	0.57
Qatar	0.82	0.80		0.80	0.85				0.85	0.84	0.83
Angola[6]		1.61		1.71	1.80				1.82	1.77	1.82
Nigeria	2.24	2.13		2.14	2.05				2.10	2.01	1.86
Libya	1.71	1.71		1.74	1.76				1.76	1.76	1.76
Algeria	1.35	1.36		1.38	1.39				1.38	1.39	1.38
Ecuador[6]					0.50				0.50	0.50	0.50
Venezuela	2.56	2.39		2.42	2.40				2.41	2.35	2.32
Indonesia	0.89	0.84		0.83	0.85				0.87	0.87	0.86
Total Crude Oil[6]	29.71	30.66		31.55	32.33				32.47	32.13	31.87
Total NGLs[1,6]	4.63	4.82	5.20	4.88	4.94	4.98	5.23	5.63	4.95	4.94	4.92
Total OPEC[6]	34.34	35.48		36.43	37.27				37.42	37.06	36.80
OPEC incl. Angola & Ecuador[6]	36.29	35.94		36.76	37.27				37.42	37.06	36.80
NON-OPEC[2]											
OECD											
North America	14.21	14.27	14.14	14.13	14.18	13.96	14.03	14.42	14.21	14.20	14.20
United States	7.34	7.48	7.52	7.52	7.60	7.54	7.40	7.54	7.66	7.59	7.60
Mexico	3.68	3.48	3.29	3.32	3.28	3.29	3.28	3.31	3.30	3.21	3.31
Canada	3.19	3.32	3.34	3.29	3.30	3.12	3.35	3.57	3.26	3.39	3.29
Europe	5.18	4.95	4.57	5.00	4.88	4.46	4.35	4.59	4.82	4.89	4.55
UK	1.66	1.66	1.46	1.70	1.61	1.43	1.33	1.48	1.61	1.57	1.41
Norway	2.78	2.56	2.38	2.58	2.54	2.30	2.30	2.40	2.48	2.59	2.41
Others	0.74	0.73	0.72	0.72	0.73	0.73	0.72	0.71	0.72	0.72	0.73
Pacific	0.58	0.62	0.78	0.63	0.66	0.79	0.80	0.89	0.60	0.76	0.80
Australia	0.53	0.54	0.66	0.52	0.55	0.67	0.68	0.74	0.49	0.65	0.69
Others	0.05	0.08	0.12	0.10	0.11	0.11	0.12	0.14	0.11	0.12	0.12
Total OECD	19.97	19.84	19.50	19.75	19.72	19.20	19.17	19.89	19.64	19.85	19.56
NON-OECD											
Former USSR	12.25	12.77	13.07	12.82	12.81	12.91	13.10	13.45	12.83	12.84	12.71
Russia	9.84	10.08	10.09	10.08	10.00	9.98	10.12	10.26	10.01	9.98	9.93
Others	2.40	2.69	2.98	2.74	2.81	2.92	2.98	3.19	2.81	2.86	2.78
Asia	6.39	6.41	6.59	6.40	6.45	6.59	6.61	6.70	6.47	6.44	6.59
China	3.67	3.73	3.84	3.68	3.76	3.87	3.86	3.88	3.75	3.77	3.88
Malaysia	0.75	0.76	0.80	0.79	0.78	0.80	0.82	0.83	0.77	0.78	0.80
India	0.79	0.81	0.81	0.81	0.81	0.81	0.81	0.80	0.81	0.81	0.81
Others	1.17	1.11	1.13	1.12	1.10	1.11	1.12	1.20	1.14	1.08	1.11
Europe	0.15	0.13	0.12	0.13	0.13	0.12	0.12	0.12	0.13	0.13	0.12
Latin America	4.38	4.32	4.09	4.19	3.96	4.02	4.17	4.21	3.97	3.96	4.01
Brazil	2.10	2.14	2.37	2.13	2.23	2.31	2.44	2.49	2.22	2.23	2.27
Argentina	0.77	0.75	0.75	0.74	0.75	0.73	0.75	0.75	0.76	0.76	0.75
Colombia	0.53	0.54	0.56	0.56	0.56	0.56	0.56	0.56	0.57	0.56	0.56
Ecuador[6]	0.54	0.50		0.50							
Others	0.45	0.39	0.42	0.26	0.42	0.42	0.42	0.41	0.42	0.41	0.42
Middle East[3]	1.74	1.65	1.59	1.63	1.63	1.60	1.58	1.56	1.62	1.65	1.60
Oman	0.75	0.72	0.71	0.72	0.73	0.71	0.70	0.68	0.72	0.76	0.71
Syria	0.42	0.40	0.38	0.39	0.39	0.38	0.38	0.37	0.39	0.39	0.38
Yemen	0.38	0.34	0.31	0.32	0.32	0.32	0.32	0.31	0.32	0.31	0.32
Africa	3.91	2.55	2.62	2.58	2.60	2.61	2.64	2.63	2.61	2.57	2.60
Egypt	0.67	0.63	0.62	0.63	0.63	0.63	0.62	0.62	0.63	0.63	0.63
Angola[6]	1.37										
Gabon	0.23	0.23	0.23	0.23	0.22	0.23	0.24	0.24	0.24	0.21	0.22
Others	1.63	1.68	1.76	1.72	1.74	1.75	1.78	1.77	1.74	1.74	1.75
Total Non-OECD	28.81	27.83	28.08	27.75	27.57	27.85	28.22	28.68	27.62	27.59	27.64
Processing Gains[4]	2.04	2.07	2.13	2.11	2.11	2.10	2.14	2.17	2.11	2.11	2.10
Other Biofuels[5]	0.26	0.40	0.65	0.46	0.55	0.66	0.66	0.75	0.55	0.55	0.66
TOTAL NON-OPEC	51.08	50.15	50.36	50.06	49.96	49.82	50.19	51.48	49.91	50.09	49.96
Non-OPEC excl. Angola & Ecuador[6]	49.13	49.68	50.36	49.73	49.96	49.82	50.19	51.48	49.91	50.09	49.96
TOTAL SUPPLY	85.42	85.63		86.49	87.23				87.33	87.16	86.76

1 Includes condensates reported by OPEC countries, oil from non-conventional sources, e.g. Venezuelan Orimulsion (but not Orinoco extra-heavy oil), and non-oil inputs to Saudi Arabian MTBE. Orimulsion production reportedly ceased from January 2007.
2 Comprises crude oil, condensates, NGLs and oil from non-conventional sources
3 Includes small amounts of production from Israel, Jordan and Bahrain.
4 Net volumetric gains and losses in refining (excludes net gain/loss in FSU, China and non-OECD Europe) and marine transportation losses.
5 Comprises Fuel Ethanol and Biodiesel supply from outside Brazil and US.
6 Primary OPEC totals include contributions from Angola from January 2007 onwards and Ecuador from December 2007 onwards. Secondary aggregates allow comparison with previous year totals by including Angola and Ecuador within OPEC retroactively

Table 4

OECD INDUSTRY STOCKS[1] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Nov2007	Dec2007	Jan2008	Feb2008	Mar2008*	Mar2005	Mar2006	Mar2007	2Q2007	3Q2007	4Q2007	1Q2008
North America												
Crude	446.8	432.7	448.4	456.8	463.2	433.7	463.7	462.5	0.31	-0.34	-0.30	0.34
Motor Gasoline	231.1	244.3	261.8	263.0	251.7	246.7	241.4	230.0	0.04	-0.07	0.18	0.08
Middle Distillate	206.1	208.3	205.5	188.5	179.0	176.1	195.1	190.7	0.05	0.11	0.02	-0.32
Residual Fuel Oil	46.4	47.3	47.6	47.0	50.9	49.0	49.7	47.2	-0.03	0.00	0.03	0.04
Total Products[3]	656.5	663.3	668.4	644.2	626.3	629.0	635.3	630.7	0.28	0.15	-0.07	-0.41
Total[4]	1259.4	1236.8	1254.2	1235.6	1225.7	1201.5	1240.2	1233.3	0.67	-0.01	-0.61	-0.12
Europe												
Crude	331.9	327.5	329.6	322.0	330.2	343.5	344.7	325.3	0.09	-0.13	0.07	0.03
Motor Gasoline	105.7	114.3	120.8	120.9	119.4	119.6	110.3	109.1	-0.10	0.05	0.11	0.06
Middle Distillate	226.7	240.6	251.6	236.1	241.2	233.9	235.2	260.5	0.02	-0.06	-0.18	0.01
Residual Fuel Oil	73.1	75.1	79.2	77.7	79.0	68.5	69.3	72.4	-0.04	0.11	-0.04	0.04
Total Products[3]	510.1	537.2	561.0	540.5	544.5	527.2	516.4	544.5	-0.15	0.16	-0.10	0.08
Total[4]	917.1	938.5	960.9	933.1	944.4	942.3	936.8	943.2	-0.04	0.02	-0.03	0.07
Pacific												
Crude	160.5	159.9	165.9	162.6	154.5	169.0	170.7	172.4	-0.02	-0.10	-0.01	-0.06
Motor Gasoline	21.1	22.3	22.8	23.0	26.5	25.2	24.6	24.5	0.00	-0.03	0.01	0.05
Middle Distillate	71.3	70.4	69.2	57.9	57.3	48.8	60.6	60.9	0.08	0.10	-0.08	-0.14
Residual Fuel Oil	19.7	21.4	20.0	19.2	20.0	21.2	19.2	22.1	0.00	0.04	-0.05	-0.02
Total Products[3]	177.6	174.8	174.5	159.3	165.0	154.9	168.3	171.1	0.12	0.15	-0.23	-0.11
Total[4]	411.0	404.3	414.3	393.5	390.8	389.5	408.5	416.5	0.10	0.03	-0.27	-0.15
Total OECD												
Crude	939.2	920.1	944.0	941.3	947.9	946.2	979.1	960.1	0.38	-0.57	-0.24	0.31
Motor Gasoline	357.8	380.8	405.4	406.9	397.6	391.5	376.2	363.5	-0.06	-0.05	0.30	0.18
Middle Distillate	504.0	519.4	526.4	482.5	477.6	458.8	490.9	512.1	0.15	0.16	-0.23	-0.46
Residual Fuel Oil	139.3	143.8	146.8	143.9	149.8	138.7	138.2	141.7	-0.07	0.15	-0.06	0.07
Total Products[3]	1344.2	1375.3	1403.9	1344.0	1335.8	1311.1	1320.0	1346.4	0.25	0.46	-0.39	-0.43
Total[4]	2587.4	2579.6	2629.4	2562.2	2560.9	2533.2	2585.4	2593.0	0.74	0.04	-0.91	-0.21

OECD GOVERNMENT-CONTROLLED STOCKS[5] AND QUARTERLY STOCK CHANGES

	RECENT MONTHLY STOCKS[2] in Million Barrels					PRIOR YEARS' STOCKS[2] in Million Barrels			STOCK CHANGES in mb/d			
	Nov2007	Dec2007	Jan2008	Feb2008	Mar2008*	Mar2005	Mar2006	Mar2007	2Q2007	3Q2007	4Q2007	1Q2008
North America												
Crude	695.5	696.9	698.4	698.8	700.2	688.2	686.1	688.6	0.02	0.03	0.05	0.04
Products	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.00	0.00	0.00	0.00
Europe												
Crude	182.3	184.6	184.2	184.9	184.9	163.8	170.2	174.3	0.01	0.02	0.08	0.00
Products	232.4	235.6	236.3	236.5	236.5	211.7	236.0	239.9	-0.04	0.08	-0.09	0.01
Pacific												
Crude	385.1	385.1	385.1	385.0	385.0	384.5	380.4	385.1	0.00	0.00	0.00	0.00
Products	18.9	18.9	18.9	18.9	18.9	11.0	11.4	16.4	0.00	0.02	0.01	0.00
Total OECD												
Crude	1262.9	1266.6	1267.6	1268.7	1270.1	1236.5	1236.7	1248.0	0.03	0.05	0.12	0.04
Products	253.3	256.5	257.2	257.4	257.4	224.8	249.4	258.3	-0.04	0.10	-0.08	0.01
Total[4]	1517.1	1524.1	1526.5	1527.1	1528.5	1462.2	1487.1	1507.2	-0.01	0.15	0.04	0.05

* estimated

1 Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) and include stocks held by industry to meet IEA, EU and national emergency reserve commitments and are subject to government control in emergencies.

2 Closing stock levels.

3 Total products includes gasoline, middle distillates, fuel oil and other products.

4 Total includes NGLs, refinery feedstocks, additives/oxygenates and other hydrocarbons.

5 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.

Table 5

TOTAL STOCKS ON LAND IN OECD COUNTRIES[1]

('millions of barrels' and 'days')

	End March 2007		End June 2007		End September 2007		End December 2007		End March 2008 [3]	
	Stock Level	Days Fwd[2] Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand	Stock Level	Days Fwd Demand
North America										
Canada	182.5	80	189.7	80	201.4	85	205.1	-	-	-
Mexico	40.5	20	43.8	22	43.5	21	45.0	-	-	-
United States[4]	1678.8	81	1731.0	84	1720.9	83	1663.6	-	-	-
Total[4]	1923.9	76	1986.6	78	1987.9	78	1935.8	78	1927.9	77
Pacific										
Australia	34.3	37	38.9	42	36.8	38	35.6	-	-	-
Japan	619.9	134	622.4	133	629.6	121	621.0	-	-	-
Korea	156.1	74	158.3	77	157.4	68	143.5	-	-	-
New Zealand	7.7	49	7.7	50	8.1	52	8.2	-	-	-
Total	818.0	105	827.3	106	831.9	96	808.3	91	794.7	101
Europe[5]										
Austria	24.0	81	21.1	74	22.1	76	22.1	-	-	-
Belgium	28.2	51	28.7	51	27.8	45	26.1	-	-	-
Czech Republic	20.2	92	20.5	95	19.5	98	20.2	-	-	-
Denmark	18.3	96	17.1	89	18.9	94	17.1	-	-	-
Finland	29.5	136	26.3	111	29.7	126	27.1	-	-	-
France	166.1	90	174.5	91	175.3	87	179.9	-	-	-
Germany	289.1	120	283.5	110	276.5	107	274.6	-	-	-
Greece	33.6	85	35.6	85	34.8	74	37.4	-	-	-
Hungary	18.1	107	16.0	94	17.1	98	15.4	-	-	-
Ireland	12.9	69	11.1	56	12.6	63	10.6	-	-	-
Italy	133.9	80	133.0	82	134.2	78	132.9	-	-	-
Luxembourg	0.9	15	0.9	15	0.9	15	0.7	-	-	-
Netherlands	117.7	137	115.9	128	122.9	134	116.6	-	-	-
Norway	20.2	78	21.2	83	21.9	80	26.8	-	-	-
Poland	43.9	90	50.0	90	50.9	94	58.2	-	-	-
Portugal	23.7	78	24.7	80	23.2	75	23.7	-	-	-
Slovak Republic	7.0	83	6.9	79	7.7	86	7.9	-	-	-
Spain	129.3	81	130.5	82	136.7	84	133.9	-	-	-
Sweden	38.0	105	35.2	99	33.6	93	34.5	-	-	-
Switzerland	38.7	173	38.5	157	38.1	132	35.9	-	-	-
Turkey	59.2	89	60.5	80	61.1	92	60.3	-	-	-
United Kingdom	105.8	59	100.8	58	98.5	57	97.7	-	-	-
Total	1358.3	91	1352.5	88	1364.1	88	1359.6	89	1366.7	91
Total OECD	4100.2	85	4166.3	86	4184.0	84	4103.7	84	4089.3	85
DAYS OF IEA Net Imports[6]	-	120	-	121	-	121	-	121	-	-

1 Total Stocks are industry and government-controlled stocks (see breakdown in table below). Stocks are primary national territory stocks on land (excluding utility stocks and including pipeline and entrepot stocks where known) they include stocks held by industry to meet IEA, EU and national emergency reserves commitments and are subject to government control in emergencies.
2 Note that days of forward demand represent the stock level divided by the forward quarter average daily demand and is very different from the days of net imports used for the calculation of IEA Emergency Reserves.
3 End December 2007 and March 2008 forward demand figures are IEA Secretariat forecasts.
4 US figures exclude US territories. Total includes US territories.
5 Data not available for Iceland.
6 Reflects stock levels and prior calendar year's net imports adjusted according to IEA emergency reserve definitions. Net exporting IEA countries are excluded.

TOTAL OECD STOCKS

CLOSING STOCKS	Total	Government[1] controlled	Industry	Total	Government[1] controlled	Industry
	Millions of Barrels			*Days of Fwd. Demand[2]*		
1Q2005	3995	1462	2533	82	30	52
2Q2005	4106	1494	2612	83	30	53
3Q2005	4121	1494	2628	82	30	52
4Q2005	4073	1487	2586	81	29	51
1Q2006	4072	1487	2585	85	31	54
2Q2006	4141	1493	2648	85	30	54
3Q2006	4253	1495	2758	85	30	55
4Q2006	4171	1499	2672	84	30	54
1Q2007	4100	1507	2593	85	31	54
2Q2007	4166	1506	2660	86	31	55
3Q2007	4184	1520	2664	84	31	54
4Q2007	4104	1524	2580	84	31	53
1Q2008	4089	1528	2561	85	32	53

1 Includes government-owned stocks and stock holding organisation stocks held for emergency purposes.
2 Days of forward demand calculated using actual demand except in 4Q2007 and 1Q2008 (when latest forecasts are used).

Table 6

IEA Member Country Destinations of Selected Crude Streams[1]

(million barrels per day)

	2005	2006	2007	1Q07	2Q07	3Q07	4Q07	Dec 07	Jan 08	Feb 08	Year Earlier Feb 07	Year Earlier change
Saudi Light & Extra Light												
North America	0.46	0.60	0.73	0.68	0.73	0.71	0.78	0.91	0.79	0.78	0.69	0.09
Europe	0.90	0.78	0.70	0.72	0.64	0.74	0.68	0.71	0.70	0.55	0.60	-0.05
Pacific	1.31	1.32	1.19	1.17	1.20	1.15	1.25	1.32	1.30	1.30	1.21	0.08
Saudi Medium												
North America	0.81	0.64	0.56	0.47	0.59	0.59	0.57	0.56	0.53	0.58	0.47	0.10
Europe	0.16	0.14	0.05	0.05	0.10	0.02	0.04	0.04	0.06	0.06	0.03	0.03
Pacific	0.26	0.35	0.34	0.34	0.31	0.31	0.38	0.47	0.35	0.43	0.38	0.05
Saudi Heavy												
North America	0.17	0.21	0.09	0.15	0.05	0.11	0.04	0.04	0.10	0.04	0.21	-0.18
Europe	0.23	0.18	0.11	0.09	0.16	0.11	0.09	0.11	0.05	0.02	0.09	-0.07
Pacific	0.25	0.23	0.20	0.20	0.18	0.20	0.23	0.21	0.25	0.21	0.22	-0.01
Iraqi Basrah Light[2]												
North America	0.60	0.52	0.50	0.51	0.39	0.64	0.45	0.40	0.58	0.91	0.41	0.50
Europe	0.23	0.32	0.30	0.29	0.28	0.38	0.24	0.28	0.17	0.17	0.39	-0.22
Pacific	0.06	0.08	0.17	0.11	0.18	0.20	0.21	0.26	0.14	0.19	0.15	0.03
Iraqi Kirkuk												
North America	-	0.00	-	-	-	-	-	-	-	-	-	-
Europe	0.05	0.01	0.11	0.04	-	0.06	0.32	0.35	0.26	0.18	0.11	0.07
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Iranian Light												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.20	0.26	0.27	0.31	0.31	0.27	0.21	0.20	0.24	0.25	0.39	-0.14
Pacific	0.15	0.13	0.09	0.12	0.06	0.07	0.11	0.10	0.14	0.10	0.09	0.00
Iranian Heavy[3]												
North America	-	-	-	-	-	-	-	-	-	-	-	-
Europe	0.63	0.58	0.56	0.55	0.62	0.60	0.47	0.43	0.48	0.35	0.58	-0.23
Pacific	0.62	0.56	0.64	0.66	0.63	0.56	0.73	0.80	0.77	0.60	0.60	0.00
Venezuelan Light & Medium												
North America	0.82	0.66	0.75	0.68	0.71	0.75	0.86	0.69	0.79	0.69	0.64	0.06
Europe	0.04	0.11	0.08	0.09	0.07	0.09	0.05	0.10	0.06	0.04	0.14	-0.10
Pacific	-	-	0.01	-	-	-	0.02	-	-	-	-	-
Venezuelan 22 API and heavier												
North America	0.72	0.72	0.67	0.55	0.70	0.76	0.68	0.73	0.59	0.60	0.69	-0.09
Europe	0.06	0.06	0.07	0.06	0.09	0.06	0.06	0.04	0.06	0.06	0.06	-0.01
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Maya												
North America	1.27	1.24	1.22	1.19	1.19	1.25	1.24	0.78	1.03	1.02	1.15	-0.12
Europe	0.17	0.16	0.14	0.14	0.11	0.18	0.15	0.15	0.13	0.19	0.14	0.05
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Mexican Isthmus												
North America	0.03	0.04	0.01	0.02	0.01	0.01	0.00	-	0.01	0.07	0.03	0.04
Europe	0.03	0.01	0.02	0.01	0.06	-	0.02	0.00	-	-	-	-
Pacific	-	-	-	-	-	-	-	-	-	-	-	-
Russian Urals												
North America	0.13	0.09	0.06	0.11	0.12	0.01	0.01	0.02	0.02	-	0.08	-
Europe	1.77	1.68	1.86	1.85	1.97	1.90	1.73	1.80	1.95	1.77	2.10	-0.33
Pacific	0.00	0.00	0.00	0.00	-	-	0.01	-	-	-	0.01	-
Nigerian Light[4]												
North America	0.90	0.79	0.85	0.95	0.77	0.87	0.82	0.81	0.76	0.91	0.98	-0.07
Europe	0.35	0.33	0.24	0.23	0.27	0.22	0.23	0.19	0.41	0.16	0.26	-0.10
Pacific	0.05	0.04	0.01	0.02	0.02	-	0.01	-	-	-	0.03	-
Nigerian Medium												
North America	0.17	0.17	0.23	0.24	0.15	0.22	0.31	0.30	0.37	0.23	0.22	0.01
Europe	0.07	0.10	0.07	0.06	0.02	0.08	0.11	0.14	0.04	0.05	0.11	-0.06
Pacific	0.01	0.00	0.01	0.02	-	-	-	-	-	-	0.03	-

1 Data based on monthly submissions from IEA countries to the crude oil import register (in '000 bbl), subject to availability. May differ from Table 8 of the Report.
IEA North America includes United States and Canada.
IEA Europe includes all countries in OECD Europe except Hungary and Poland. The Slovak Republic is excluded through December 2007 but included thereafter.
IEA Pacific data includes Australia, New Zealand, Korea and Japan.

2 Iraqi Total minus Kirkuk.

3 Iranian Total minus Iranian Light.

4 33 API and lighter (e.g., Bonny Light, Escravos, Qua Iboe and Oso Condensate).

Table 7
Regional OECD Imports[1,2]
(thousand barrels per day)

	2005	2006	2007	1Q2007	2Q2007	3Q2007	4Q2007	Dec-07	Jan-08	Feb-08	Year Earlier Feb-07	Year Earlier % change
Crude Oil												
North America	8457	8163	8117	8082	8151	8267	7968	8101	8364	8095	6775	19%
Europe	9792	9771	9771	9353	9738	10059	9924	10348	10079	9288	10005	-7%
Pacific	6801	6813	6718	6953	6340	6576	7003	7490	7279	7021	6955	1%
Total OECD	25050	24747	24606	24388	24229	24902	24895	25939	25721	24404	24298	0%
LPG												
North America	18	14	27	16	14	38	41	37	37	31	10	197%
Europe	248	265	276	287	282	244	291	293	347	321	332	-3%
Pacific	527	579	557	565	588	502	572	643	613	592	448	32%
Total OECD	793	858	860	867	884	785	903	974	997	944	790	19%
Naphtha												
North America	115	64	39	33	31	33	60	20	22	40	40	-1%
Europe	273	312	266	271	223	279	289	297	233	215	230	-6%
Pacific	746	754	794	838	812	768	758	705	812	769	909	-15%
Total OECD	1133	1129	1099	1141	1066	1080	1108	1022	1068	1024	1179	-13%
Gasoline[3]												
North America	1034	1142	1132	916	1362	1198	1048	905	870	897	862	4%
Europe	165	154	204	261	219	156	181	140	127	243	181	34%
Pacific	102	97	72	76	83	56	71	67	95	119	88	35%
Total OECD	1301	1393	1407	1254	1663	1410	1301	1113	1092	1258	1131	11%
Jet & Kerosene												
North America	173	155	183	179	204	205	143	103	139	95	192	-51%
Europe	375	375	367	329	349	386	401	404	345	318	361	-12%
Pacific	66	71	41	49	35	37	43	57	43	46	39	19%
Total OECD	614	602	590	557	588	628	587	564	528	459	592	-22%
Gasoil/Diesel												
North America	143	172	132	130	142	142	116	140	142	123	101	21%
Europe	845	971	776	906	635	740	822	957	957	836	940	-11%
Pacific	79	81	94	83	97	90	106	87	85	128	80	59%
Total OECD	1067	1225	1002	1120	874	972	1044	1183	1185	1087	1122	-3%
Heavy Fuel Oil												
North America	527	340	323	362	323	286	320	306	423	303	275	10%
Europe	491	476	434	458	420	457	400	460	457	462	477	-3%
Pacific	85	92	92	79	97	92	101	93	136	141	78	80%
Total OECD	1102	908	848	898	840	835	821	859	1016	905	830	9%
Other Products												
North America	1024	1111	1052	1035	1209	1032	932	914	1187	1031	911	13%
Europe	781	920	870	866	856	924	832	722	733	695	818	-15%
Pacific	248	243	252	256	207	262	282	336	352	249	205	22%
Total OECD	2053	2273	2173	2157	2272	2218	2046	1972	2271	1975	1933	2%
Total Products												
North America	3034	2999	2887	2670	3285	2934	2660	2425	2821	2519	2392	5%
Europe	3177	3473	3191	3377	2985	3187	3216	3273	3199	3090	3340	-7%
Pacific	1852	1918	1901	1947	1918	1808	1934	1988	2137	2043	1846	11%
Total OECD	8063	8389	7980	7994	8188	7929	7810	7686	8157	7652	7578	1%
Total Oil												
North America	11490	11162	11005	10753	11436	11201	10628	10526	11184	10614	9730	9%
Europe	12970	13243	12962	12730	12723	13246	13140	13621	13278	12378	13345	-7%
Pacific	8654	8731	8619	8900	8258	8384	8937	9478	9416	9064	8801	3%
Total OECD	33113	33136	32585	32383	32417	32831	32705	33625	33878	32056	31876	1%

1 Based on Monthly Oil Questionnaire data submitted by OECD countries in tonnes and converted to barrels.

2 Excludes intra-regional trade

3 Includes additives

OIL MARKET REPORT CONTACTS

Editorial Enquiries

Editor — Lawrence Eagles
Head, Oil Industry & Markets Division
(+33) 0*1 40 57 65 90
e-mail: lawrence.eagles@iea.org

Demand — Eduardo Lopez
Toril Ekeland Bosoni (Consultant)
(+33) 0*1 40 57 65 93
e-mail: eduardo.lopez@iea.org

Supply — David Fyfe
(+33) 0*1 40 57 65 94
e-mail: david.fyfe@iea.org

Prices/OECD Stocks — Julius Walker
(+33) 0*1 40 57 65 22
e-mail: julius.walker@iea.org

Refining — David Martin
(+33) 0*1 40 57 65 95
e-mail: david.martin@iea.org

OECD Stocks/Freight/Trade — James Ryder
(+33) 0*1 40 57 66 18
e-mail: james.ryder@iea.org

Statistics/End-User Prices — Martina Repikova
(+33) 0*1 40 57 67 16
e-mail: martina.repikova@iea.org

Editorial Assistant — Anne Mayne
(+33) 0*1 40 57 65 96
e-mail: anne.mayne@iea.org

Fax: *(+33) 0*1 40 57 65 99/40 57 65 09*

* 0 only within France

Media Enquiries

Press Office — Gwyn Darling
(+33) 0*1 40 57 65 54
e-mail: ieapressoffice@iea.org

Subscription and Delivery Enquiries

Oil Market Report Subscriptions
International Energy Agency
BP 586-75726 PARIS Cedex 15, France

e-mail: OMRSubscriptions@iea.org

User's Guide and Glossary to the IEA *Oil Market Report*

For information on the data sources, definitions, technical terms and general approach used in preparing the *Oil Market Report (*OMR), *Medium-Term Oil Market Report (MTOMR) Report and Annual Statistical Supplement* (current issue of the statistical supplement dated 10 August 2007), readers are referred to the *Users' Guide* at www.oilmarketreport.org/glossary.asp. It should be noted that the spot crude and product price assessments are based on daily Platts prices, converted when appropriate to US$ per barrel according to the Platts specification of products (© 2008 Platts - a division of McGraw-Hill Inc.).