

# DEMAND

## Summary

- **Forecast global oil demand for 2009 has been revised down slightly** following weaker-than-expected preliminary data in various regions and minor baseline changes to non-OECD demand. Global oil demand is projected at 83.2 mb/d (-3.0% or -2.6 mb/d when compared with 2008). The demand estimate for last year, meanwhile, is down by 0.1 mb/d at 85.8 mb/d (-0.3% or -0.2 mb/d versus 2007). This report incorporates the latest GDP assumptions from the IMF's *World Economic Outlook*, published in late April. The projections are broadly in line with what we had anticipated and factored in last month, with global economic growth foreseen to contract by almost 1.4% in 2009.
- **Forecast oil demand in the OECD has been adjusted down marginally** for 2009 to 45.1 mb/d (-5.1% or -2.4 mb/d on a yearly basis). An upward revision of some 160 kb/d in 1Q09 has been largely offset by a downward adjustment in 2Q09, resulting from very weak preliminary data for the US in April and to a lesser extent in Europe, which has been partially carried forward. By contrast, the oil demand estimate for 2008 remains virtually unchanged at 47.5 mb/d (-3.4% or -1.7 mb/d versus 2007).

### Global Oil Demand (2007-2009)

(million barrels per day)

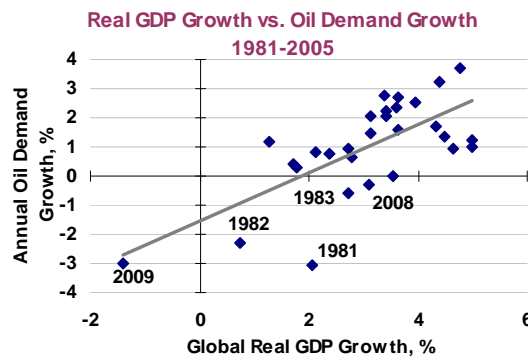
	1Q07	2Q07	3Q07	4Q07	2007	1Q08	2Q08	3Q08	4Q08	2008	1Q09	2Q09	3Q09	4Q09	2009
Africa	3.0	3.0	3.0	3.1	3.0	3.1	3.1	3.1	3.1	3.1	3.2	3.1	3.0	3.2	3.1
Americas	31.1	31.0	31.3	31.3	31.2	30.5	30.5	29.8	30.0	30.2	29.2	28.8	29.2	29.0	29.1
Asia/Pacific	25.7	25.2	24.7	25.9	25.4	26.6	25.6	24.9	25.0	25.5	25.4	24.6	24.0	24.6	24.7
Europe	15.9	15.6	16.1	16.3	16.0	15.9	15.5	16.0	15.9	15.8	15.4	14.7	15.3	15.3	15.2
FSU	4.1	3.9	4.1	4.2	4.1	4.2	4.1	4.3	4.2	4.2	3.9	3.9	4.1	4.0	4.0
Middle East	6.3	6.4	6.6	6.3	6.4	6.6	7.0	7.4	6.8	7.0	6.7	7.3	7.7	7.1	7.2
<b>World</b>	<b>86.0</b>	<b>85.0</b>	<b>85.8</b>	<b>87.2</b>	<b>86.0</b>	<b>86.9</b>	<b>85.8</b>	<b>85.4</b>	<b>85.0</b>	<b>85.8</b>	<b>83.8</b>	<b>82.3</b>	<b>83.4</b>	<b>83.3</b>	<b>83.2</b>
Annual Chg (%)	0.3	1.4	1.0	1.3	1.0	1.0	0.9	-0.5	-2.5	-0.3	-3.6	-4.0	-2.4	-1.9	-3.0
Annual Chg (mb/d)	0.3	1.1	0.9	1.1	0.9	0.9	0.8	-0.4	-2.2	-0.2	-3.1	-3.4	-2.1	-1.7	-2.6
Changes from last OMR (mb/d)	-0.16	-0.02	-0.11	-0.09	-0.09	-0.05	-0.06	-0.08	-0.08	-0.07	0.06	-0.50	-0.25	-0.23	-0.23

- **Forecast non-OECD oil demand has been revised down slightly for both 2008 and 2009** as annual data for 2007 for around 70 countries spread across all regions was incorporated. Preliminary data in several large countries such as China and Russia continue to exhibit sustained weakness. Oil demand is foreseen to average 38.1 mb/d this year (-0.4% or roughly -140 kb/d versus the previous year), which would be the first contraction since 1994. The estimate for 2008, meanwhile, now stands at 38.3 mb/d (+3.8% or +1.4 mb/d versus 2007).
- **The 2009 oil demand forecast is consistent with recent patterns of economic activity, on the assumption that the global economy will markedly recover in 2010 at the earliest.** However, a string of 'green shoots' in a few countries has led to expectations that strong global economic growth will actually resume late this year, if not before. If so, this oil demand forecast could indeed prove to be too pessimistic. Yet it remains to be seen whether the recent outbursts of economy activity simply reflect the rebuilding of depleted inventories across several industries. As far as oil demand is concerned, the weakness of the latest available data suggest that such a quick recovery remains so far elusive.

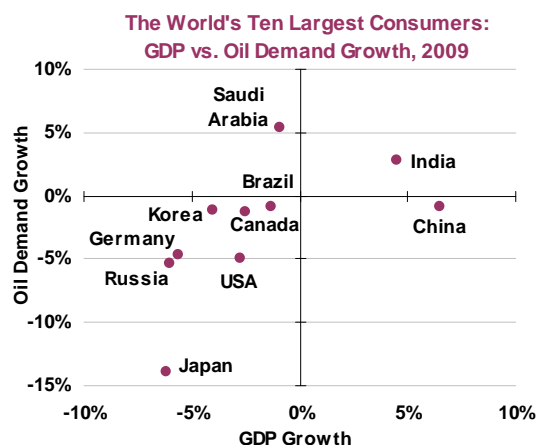
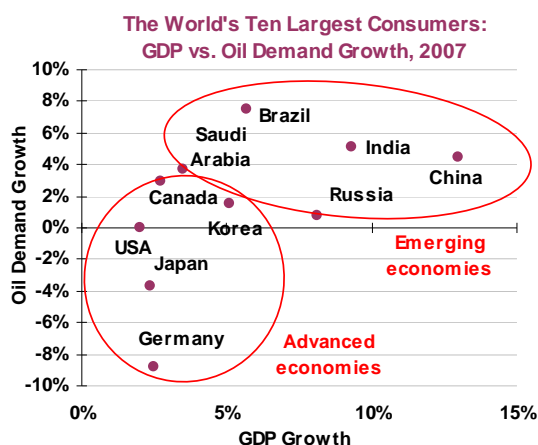
## Global Overview

Last month's sharp downward revision to our 2009 global oil demand forecast was dubbed by some observers as 'methodologically inconsistent' and therefore excessive. Yet the, admittedly imperfect, correlation between oil demand and GDP growth, as highlighted in the graph overleaf, suggests that the prognosis is actually in line with the unprecedented economic recession that has extended throughout the world.

The correlation's more obvious outliers correspond to the early 1980s, when advanced economies – then largely driving oil demand growth – were much more dependent on oil. Since then, however, the oil market has changed vastly, becoming more price inelastic and more sensitive to economic activity, as can be seen in the graph. On the one hand, demand in the OECD became more geared towards transportation fuels, while efficiency improvements reduced oil intensity in most sectors. On the other hand, demand in several large non-OECD countries picked up as income per capita gradually reached the threshold where energy demand takes off.



The comparison between the oil demand picture that prevailed in 2007 (rather than in 2008, which was an atypical year because a sharp price surge coincided with the start of a deep economic downturn) with what is expected in 2009 highlights the damage brought about by the current global recession. Seven of the 10 largest oil-consuming countries posted positive demand growth in 2007, notably emerging countries (excepting Russia, where a relatively mild winter weighed on fuel oil demand). In the OECD, only Japan, Germany and the US featured flat or negative growth – the first facing a pronounced structural oil demand decline and the latter two largely as a result of a very mild winter, with depressed heating oil and fuel oil use.

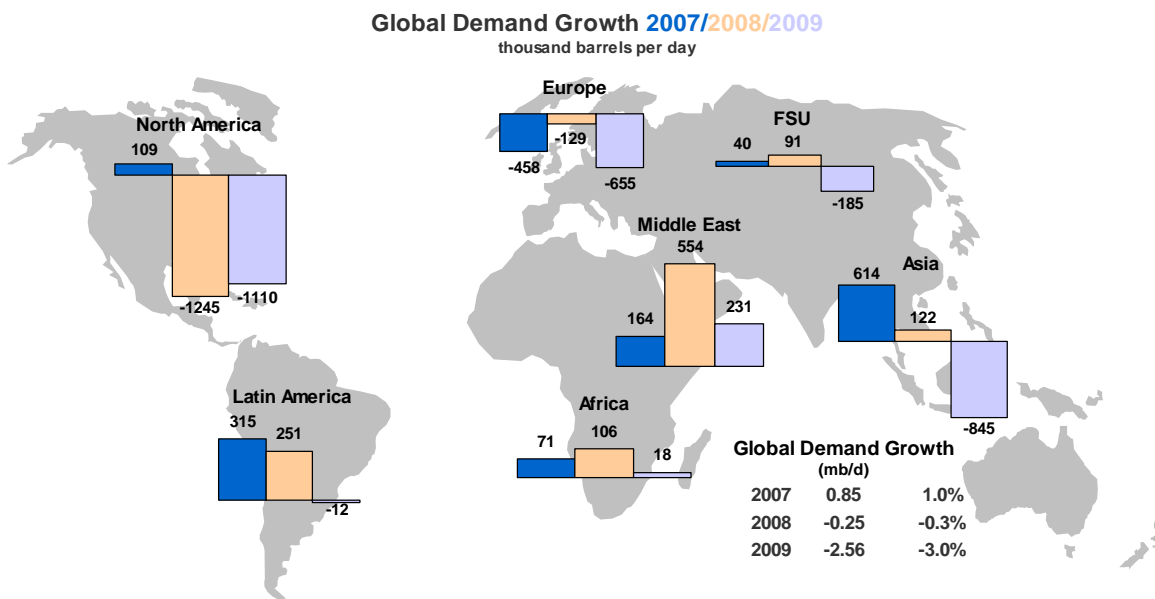
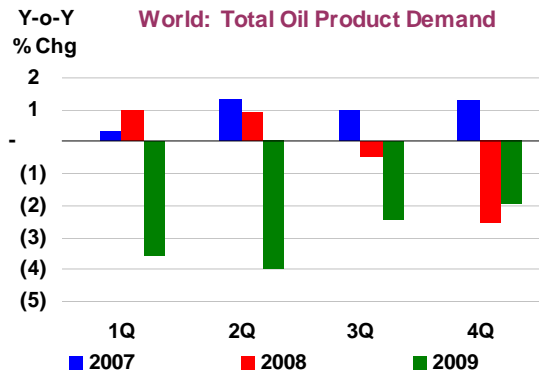


By contrast, in 2009 eight of these 10 countries are likely to register a marked fall in oil demand as their economies slow down or contract. This could be particularly dramatic in OECD countries, *despite* an unusually cold winter in most of the Northern Hemisphere. In China, which has witnessed a sharp deceleration in manufacturing as export markets dry up, oil demand will fall slightly or at best remain flat, although economic growth will firmly remain in positive territory. Only in India and Saudi Arabia is demand poised to grow; the former has so far managed to weather the worst effects of the economic storm, while in the latter oil demand is supported by very low end-user prices, sustained electricity needs and an expanding petrochemical sector.

This prognosis could obviously change if the global economy were to rebound strongly towards the end of the year. A closer examination of our outlook and those of other forecasters shows that the main differences are concentrated in the second half of the year, particularly in 4Q09. Whereas we predict an annual contraction in oil demand of 1.9% in that quarter, based on the assessment by both the IMF and the OECD that economic recovery will be likely deferred to early 2010, other forecasters see a much lower fall or even a rebound. This school of thought assumes that the global economy will feature a pronounced 'V-shaped' bounce much earlier than we have assumed, and cites as evidence a recent

string of so-called 'green shoots' in several key countries – a slight rebound in industrial production in Japan, Germany and China and, in the US, stronger-than-expected consumer demand despite dismal 1Q09 GDP figures, a rebound in house sales and a slower pace of jobs destruction, to name just a few.

These 'green shoots', which are certainly welcome, may be interpreted as proof that the global recession has bottomed out, with significant fiscal and monetary loosening in key economies working their way up. However, these recent bursts of economy activity could also simply reflect the rebuilding of depleted inventories across several industries, making it arguably premature to predict an imminent and strong economic rebound – not least because the elimination of spare capacity, the deleveraging of the private sector in several highly indebted countries and the rebalancing of global demand are still at an early stage. As such, the recovery could conceivably be more 'L-shaped' (i.e., shallow), as the IMF and others posit. The debate will undoubtedly continue – yet, as far as oil is concerned, the latest available data indicate that the 'demand green shoots', if any, continue to be buried under the thick ice of the current economic winter.



## OECD

Preliminary data show that OECD inland deliveries (oil products supplied by refineries, pipelines and terminals) contracted by 4.5% year-on-year in March, with all three regions recording losses for the eleventh month in a row. In **OECD North America** (which includes US Territories), oil product demand fell by 5.9% year-on-year, with all product categories again posting losses. In **OECD Europe**, strong counter-seasonal heating oil deliveries failed to offset declines in other product categories, with total demand shrinking by 0.3%. In **OECD Pacific**, demand contracted by an astonishing 7.6%, despite a marked rebound in gasoline deliveries.

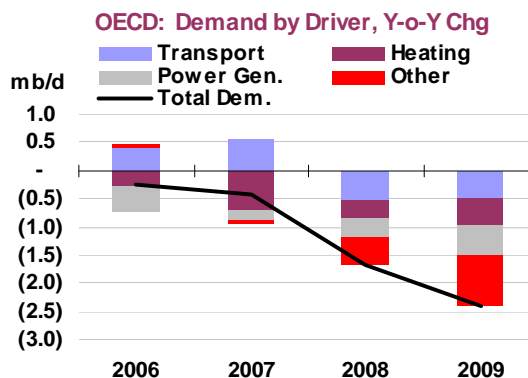
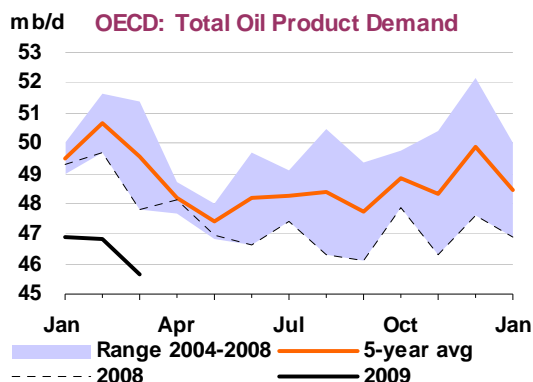
## OECD Demand based on Adjusted Preliminary Submissions - March 2009

(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
<b>OECD North America*</b>	<b>10.59</b>	<b>-0.4</b>	<b>1.75</b>	<b>-5.4</b>	<b>3.84</b>	<b>-2.7</b>	<b>0.93</b>	<b>-26.5</b>	<b>1.07</b>	<b>-4.2</b>	<b>5.00</b>	<b>-14.22</b>	<b>23.17</b>	<b>-5.9</b>
US50	9.00	-0.9	1.50	-5.8	3.28	-3.3	0.42	-43.8	0.59	1.4	3.63	-17.5	18.43	-7.0
Canada	0.70	1.1	0.12	3.2	0.21	2.5	0.35	-2.2	0.17	-0.3	0.71	-7.9	2.26	-2.3
Mexico	0.79	4.5	0.07	-15.4	0.27	-0.5	0.12	2.2	0.19	-23.3	0.57	0.4	2.01	-1.5
<b>OECD Europe</b>	<b>2.22</b>	<b>-3.1</b>	<b>1.19</b>	<b>-6.8</b>	<b>4.12</b>	<b>0.5</b>	<b>2.25</b>	<b>24.8</b>	<b>1.57</b>	<b>-1.8</b>	<b>3.35</b>	<b>-8.8</b>	<b>14.70</b>	<b>-0.3</b>
Germany	0.46	-2.3	0.18	-4.1	0.60	6.1	0.69	81.9	0.18	1.6	0.53	-15.1	2.63	9.8
United Kingdom	0.38	8.4	0.34	-0.9	0.43	4.0	0.13	-2.6	0.06	-11.2	0.35	-5.0	1.69	0.8
France	0.18	-10.0	0.14	-5.6	0.67	3.1	0.39	21.0	0.12	30.3	0.44	-7.7	1.93	2.7
Italy	0.26	-8.0	0.07	-14.9	0.53	-0.9	0.10	11.2	0.20	-7.7	0.34	-7.8	1.50	-4.7
Spain	0.14	-5.7	0.10	-15.5	0.48	-3.4	0.22	-1.1	0.21	-0.6	0.36	0.4	1.52	-2.9
<b>OECD Pacific</b>	<b>1.54</b>	<b>6.3</b>	<b>1.01</b>	<b>0.9</b>	<b>1.21</b>	<b>-1.6</b>	<b>0.52</b>	<b>-13.2</b>	<b>0.83</b>	<b>-16.1</b>	<b>2.67</b>	<b>-15.2</b>	<b>7.78</b>	<b>-7.6</b>
Japan	0.98	10.2	0.73	5.8	0.59	0.3	0.36	-16.1	0.43	-23.0	1.37	-26.3	4.47	-11.0
Korea	0.17	3.7	0.15	-17.9	0.26	-7.1	0.13	-6.4	0.36	-7.9	1.12	1.5	2.20	-3.1
Australia	0.32	-0.1	0.11	0.9	0.30	-0.3	0.02	-1.0	0.04	-0.8	0.16	-2.6	0.95	-0.5
<b>OECD Total</b>	<b>14.34</b>	<b>-0.1</b>	<b>3.95</b>	<b>-4.3</b>	<b>9.17</b>	<b>-1.1</b>	<b>3.69</b>	<b>0.9</b>	<b>3.48</b>	<b>-6.3</b>	<b>11.03</b>	<b>-12.9</b>	<b>45.65</b>	<b>-4.5</b>

\* Including US territories

Overall revisions to February's preliminary figures were positive, with the three regions submitting much higher-than-anticipated demand, notably for naphtha, gasoline, jet/kerosene and heating oil. February's OECD demand estimates were thus adjusted down by 100 kb/d, indicating that demand fell by 5.8% during that month, rather than by 5.4% as previously estimated. Moreover, preliminary data for April were noticeably weaker than anticipated, entailing a 350 kb/d downward revision for 2Q09 demand, partially carried forward in 3Q09 and 4Q09. Overall, 2009 OECD demand is now expected to contract by 5.1% on a yearly basis (-2.4 mb/d) to 45.1 mb/d (80 kb/d below last month's assessment).



## Total OECD Demand by Product

(million barrels per day)

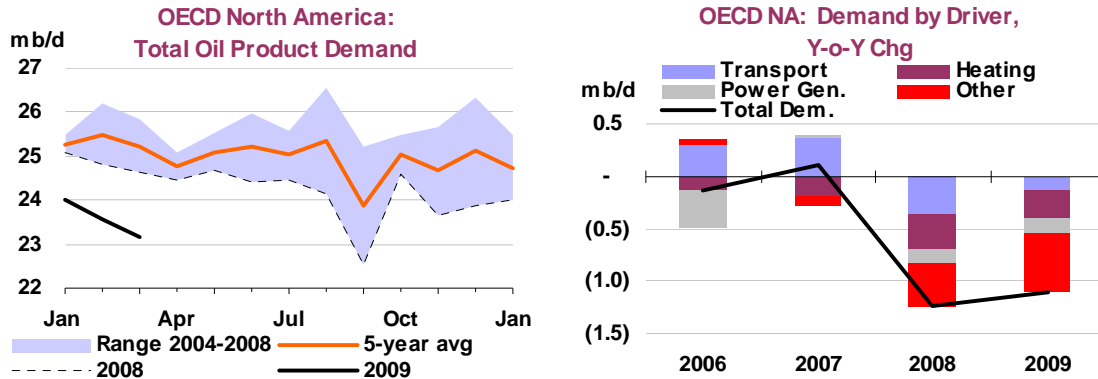
	2007	2008	1Q08	2Q08	3Q08	4Q08	Dec 08	Jan 09	Feb 09*	Latest month vs.	
										Jan 09	Feb 08
LPG & Ethane	4.82	4.66	5.17	4.59	4.31	4.56	4.75	5.03	4.84	-0.19	-0.50
Naphtha	3.24	3.04	3.30	3.00	3.02	2.84	2.77	2.80	3.05	0.25	-0.35
Motor Gasoline	14.92	14.46	14.23	14.73	14.48	14.39	14.52	13.83	14.13	0.30	-0.16
Jet & Kerosene	4.12	3.99	4.36	3.87	3.82	3.91	4.21	4.17	4.02	-0.15	-0.52
Gas/Diesel Oil	13.14	12.98	13.39	12.62	12.57	13.34	13.22	13.11	13.19	0.09	-0.61
Residual Fuel Oil	3.96	3.65	3.85	3.62	3.52	3.62	3.76	3.92	3.53	-0.39	-0.23
Other Products	4.97	4.74	4.63	4.83	4.88	4.61	4.34	4.04	4.09	0.05	-0.49
<b>Total Products</b>	<b>49.17</b>	<b>47.50</b>	<b>48.92</b>	<b>47.24</b>	<b>46.59</b>	<b>47.27</b>	<b>47.57</b>	<b>46.89</b>	<b>46.85</b>	<b>-0.04</b>	<b>-2.86</b>

\* Latest official OECD submissions (MOS)

## North America

According to preliminary data, oil product demand in North America (including US Territories) decreased by 5.9% year-on-year in March, the fifteenth monthly contraction in a row. Oil demand in the United States, which has contracted uninterruptedly over the past year and a half, was particularly pronounced

(-6.8% year-on-year in March), while Canada's (-2.3%) and Mexico's (-1.5%) fared only marginally better. Meanwhile, two-thirds of February's revisions to preliminary data (-150 kb/d) were attributable to the US, and the rest to Canada. Demand in OECD North America was thus weaker than anticipated in that month, falling by 5.1% year-on-year, instead of 4.5%. Regional total demand is now expected to reach 23.2 mb/d in 2009 (-4.6% or -1.1 mb/d versus 2008 and about 90 kb/d lower than previously anticipated), given the continued weakness of preliminary weekly data on US oil demand.



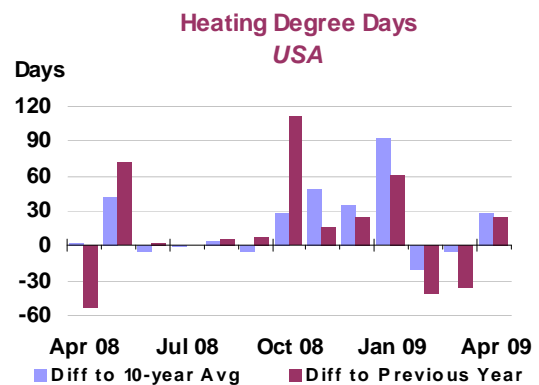
OECD North America Demand by Product  
(million barrels per day)

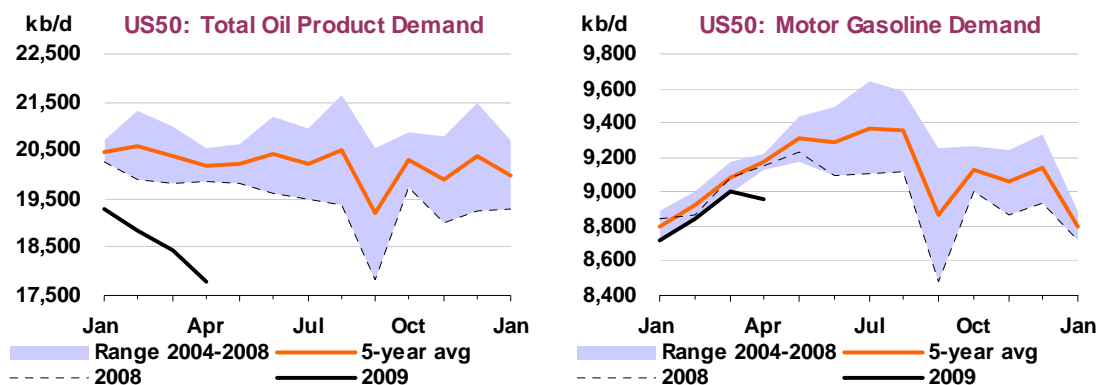
	2007	2008	1Q08	2Q08	3Q08	4Q08	Dec 08	Jan 09	Feb 09*	Latest month vs.	
										Jan 09	Feb 08
LPG & Ethane	2.92	2.73	3.10	2.63	2.52	2.68	2.71	3.01	2.88	-0.14	-0.31
Naphtha	0.41	0.35	0.36	0.37	0.34	0.32	0.30	0.28	0.27	-0.01	-0.10
Motor Gasoline	10.84	10.56	10.47	10.74	10.51	10.53	10.56	10.25	10.39	0.14	-0.01
Jet & Kerosene	1.89	1.79	1.84	1.84	1.81	1.66	1.66	1.67	1.65	-0.01	-0.21
Gas/Diesel Oil	5.24	5.01	5.29	4.96	4.77	5.03	4.80	5.14	4.97	-0.17	-0.41
Residual Fuel Oil	1.25	1.13	1.14	1.22	1.07	1.08	1.20	1.24	0.95	-0.29	-0.13
Other Products	2.97	2.72	2.63	2.77	2.71	2.76	2.65	2.40	2.43	0.03	-0.09
<b>Total Products</b>	<b>25.53</b>	<b>24.28</b>	<b>24.84</b>	<b>24.52</b>	<b>23.73</b>	<b>24.05</b>	<b>23.88</b>	<b>24.00</b>	<b>23.54</b>	<b>-0.46</b>	<b>-1.26</b>

\* Latest official OECD submissions (MOS)

Adjusted preliminary inland deliveries – a proxy of oil product demand – in the continental **United States** plummeted by 10.4% year-on-year in April, with all product categories posting losses, reflecting the burden of the economic recession – GDP contracted by 6.1% year-on-year in 1Q09, almost as much as in 4Q08 (-6.3%). It is worth noting that colder temperatures (the number of heating-degree days in April was much higher than both the 10-year average and the same month of the previous year) should have arguably provided a modicum of support to heating and electricity needs, yet demand for heating oil and fuel oil receded markedly. More telling, perhaps, is the fact that gasoline demand fell by 2.0% (the highest rate of decline since December 2008), thus casting a shadow on its allegedly strong recovery, which many observers were confidently predicting last month.

Our pre-emptive adjustment to preliminary weekly data continues to perform relatively well. Compared with the EIA's weekly-to-monthly revisions (-810 kb/d for February), we adjusted our demand figures by only -110 kb/d for that month. The data now show that February's year-on-year annual decline reached 5.4%, slightly more than previously estimated (-4.9%). Based on February's revisions and preliminary March and April data, oil demand in 2009 is expected to contract by 5.1% or 1.0 mb/d to 18.5 mb/d, about 110 kb/d lower when compared with last month's report.





It is important to note that this forecast assumes a resumption of the driving season – which petered out last year as very high gasoline prices coincided with the dawn of the financial crisis. In other words, being the first OECD country to fall into recession, the US could emerge out of it more rapidly than its peers, probably by the end of the year. However, as argued earlier, GDP growth is likely to be modest for several quarters, as the economy's imbalances will take some time to be resolved. In that context, some doubts have arisen as to whether the financial system's woes are being decisively addressed, notably after questions were raised regarding the stringency of the recent round of so-called 'stress' tests, which were aimed at determining the optimal equity that banking institutions should have.

### **A Relentless Efficiency Drive?**

Following the recent flurry of policy initiatives by the federal government with regards to fuel efficiency (such as the tightening of CAFE standards in late March and the insistence over the past few weeks that the ailing GM and Chrysler prioritise the production of smaller vehicles to benefit from government aid), the state of California adopted in late April a rule to regulate emissions from *oil products* – as opposed to those from vehicles themselves. California's new standard – a first worldwide – mandates refineries and suppliers to reduce the 'carbon intensity' of transportation fuels sold in the state by 10% by 2020, a rate poised to increase afterwards. The targets may be met either directly – by reducing the carbon content of produced fuels – or indirectly – by buying and reselling cleaner fuels or purchasing offsetting carbon credits. The ultimate goal is to replace 20% of the state's fossil fuels with cleaner energy sources, such as electricity, hydrogen, natural gas and biofuels.

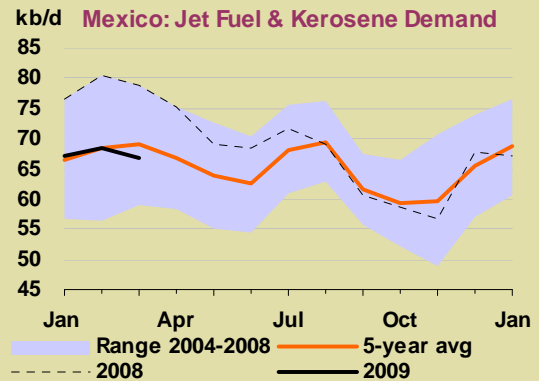
More strikingly, perhaps, the chairman of Ford Motor Company – the only US car manufacturer that has not sought the government's financial assistance – has publicly called for a massive increase in gasoline taxes (so that retail prices increase by as much as 70% over current levels) in order to usher in a new generation of fuel-efficient vehicles, arguing that the recent fall in domestic retail prices may entice consumers to turn once again to gas-guzzling SUVs and light trucks. Such a statement – presented as an alternative to the carbon cap-and-trade system that has been proposed by the Obama administration – marks an unprecedented break with the rest of the industry and with the long-held view that raising gasoline taxes in the US is politically impossible.

Taken together, all these moves suggest that the goal of enhancing the fuel efficiency of the US vehicle fleet is indeed gaining momentum. In the medium- to long-term, this will arguably have profound effects upon transportation fuels demand. The growth in gasoline demand (including biofuels), in particular, is unlikely to emulate the recent past. Demand will probably be marginal or flat in the years ahead (and negative if biofuels are excluded from the pool) – and if so, pose considerable challenges to refiners.

### Dealing With Pandemics

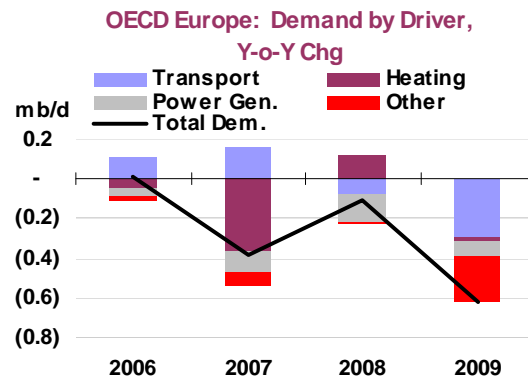
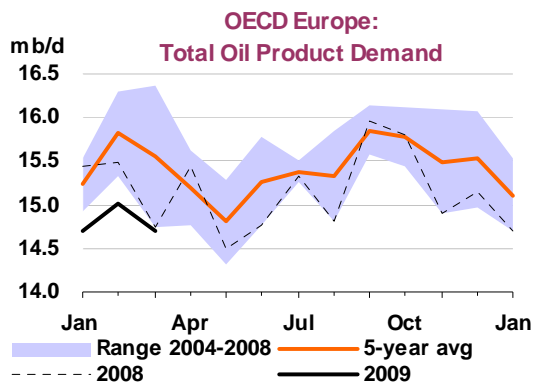
The outbreak of the A/H1N1 flu virus in Mexico in late April has raised concerns about an impending pandemic, with the World Health Organisation on high alert, the Mexican government partially shutting down public and private sector activities in early May, and some countries such as China quarantining inbound flights from Mexico. Even though the global death toll remains relatively minor (compared with regular, seasonal influenza), there are worries that economic activity and global oil demand may be significantly affected if punitive travel bans concerning Mexico or even North America at large were to be adopted. However, aside from the fact that, in a globalised economy, travel bans after the event are often counterproductive, estimating the likely impact of this flu on air travel and ultimately on jet fuel demand is difficult.

Previous episodes of sharply falling jet fuel demand are not strictly comparable, and hence provide at best only a rough yardstick. Atlantic Basin jet fuel demand in 4Q01 fell by 13.0% year-on-year (around 410 kb/d) to 2.8 mb/d, after the September 2001 terrorist attacks, and demand did not fully recover until 4Q02. The SARS epidemic in 2003, which may prove to have been more severe than the current outbreak, saw jet fuel demand in China plummet by 18.9% (40kb/d) in 2Q03, but then rebound by 10.6% in 3Q03, while overall demand in OECD Pacific fell by 8.2% year-on-year in 2H03 (180 kb/d) but rebounded in early 2004. As far as Mexico is concerned, jet fuel demand has been falling significantly since mid-2008 as a result of the unfolding economic recession. It is therefore open to question whether the flu impact will be little more than a ripple in an already weakened environment. As such, our Mexican demand forecast does not account for flu effects; we may alter it once better data become available.



### Europe

According to preliminary inland data, oil product demand in Europe shrank by a relatively modest 0.3% year-on-year in March. Somewhat colder temperatures continued to support heating oil (+24.8% year-on-year), as the number of heating-degree days in February was higher than the 10-year average but similar to the same month of the previous year. Sluggish performance among Europe's largest economies weighed once again on the demand for LPG (-8.5%), naphtha (-14.0%) and jet/kerosene (-6.8%), although diesel recorded a modest bounce (+0.5%).



February's data, meanwhile, were adjusted down by 60 kb/d, given lower-than-expected figures for diesel and residual fuel oil. Oil demand in OECD Europe is seen averaging 14.6 mb/d in 2009, -4.1% or -620 kb/d compared with the previous year and 20 kb/d lower than previously anticipated.

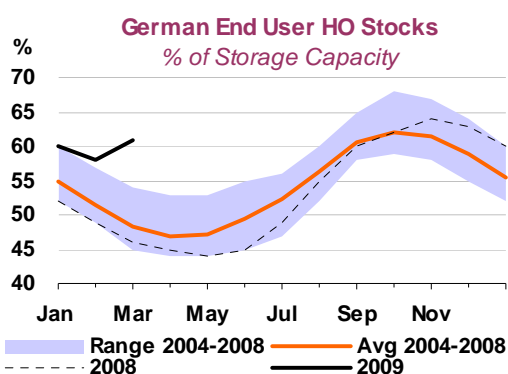
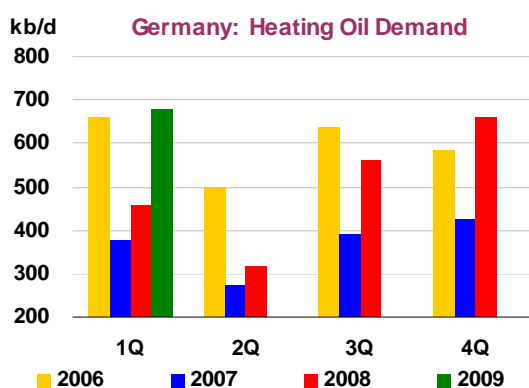
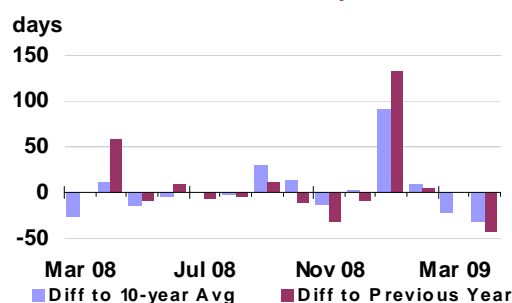
## OECD Europe Demand by Product

(million barrels per day)

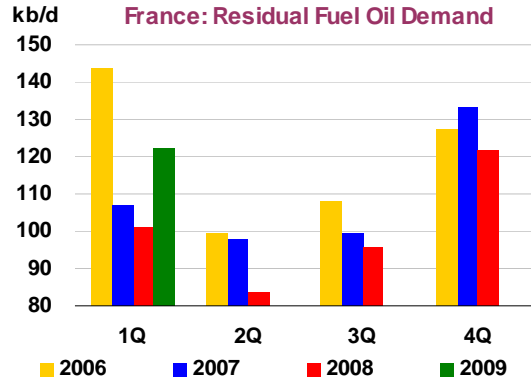
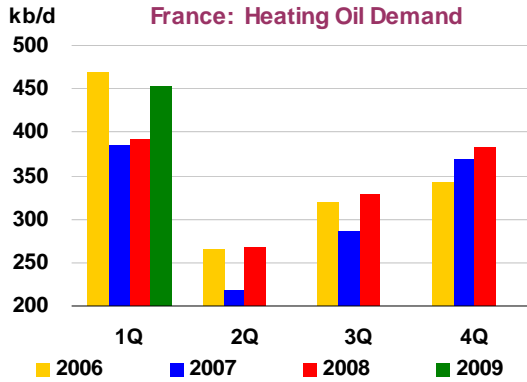
	2007	2008	1Q08	2Q08	3Q08	4Q08	Dec 08	Jan 09	Feb 09*	Latest month vs.	
										Jan 09	Feb 08
LPG & Ethane	0.95	0.96	1.06	0.99	0.87	0.93	1.01	1.01	0.97	-0.04	-0.10
Naphtha	1.17	1.10	1.24	1.07	1.08	1.01	0.97	0.96	1.11	0.16	-0.21
Motor Gasoline	2.50	2.37	2.29	2.44	2.46	2.31	2.30	2.11	2.23	0.11	-0.10
Jet & Kerosene	1.31	1.31	1.27	1.30	1.41	1.26	1.26	1.21	1.21	0.00	-0.06
Gas/Diesel Oil	6.10	6.26	6.30	5.94	6.23	6.58	6.60	6.38	6.53	0.15	0.00
Residual Fuel Oil	1.75	1.61	1.65	1.51	1.60	1.68	1.68	1.72	1.64	-0.08	0.01
Other Products	1.52	1.57	1.41	1.64	1.72	1.51	1.33	1.30	1.32	0.02	-0.02
<b>Total Products</b>	<b>15.30</b>	<b>15.19</b>	<b>15.22</b>	<b>14.89</b>	<b>15.37</b>	<b>15.28</b>	<b>15.15</b>	<b>14.69</b>	<b>15.01</b>	<b>0.32</b>	<b>-0.48</b>

\* Latest official OECD submissions (MOS)

According to preliminary estimates, inland deliveries in **Germany** surged by 9.8% year-on-year in March. As in previous months, the rise was primarily driven by heating oil demand (about 26% of the country's oil demand), which increased outstandingly and counter-seasonally by 81.9% year-on-year on the back of cold weather. Heating oil consumer stocks, at 61% of capacity by end-March, were sharply above the levels recorded in the same month of the previous year (46%) and higher than in February (58%). This highlights the significant influence that weather conditions can have upon German – and European – oil demand. Indeed, German heating oil demand in 1Q09 was 48.1% higher than in 1Q08, when mild temperatures and rising prices contributed to cap deliveries. It also conceals the fact that demand for other product categories continues to fall, largely as a consequence of the recession. In that respect, the decline in demand for industrial fuels such as LPG and naphtha (-10.2% and -14.8% year-on-year, respectively) shows little sign of abating. Only diesel demand (+6.1%) appears to be rebounding, but it remains to be seen whether this figure is an outlier related to the Easter holidays (which occurred in March this year) or the beginning of an ascending trend (the strong growth in diesel demand reported last month actually turned out to be a contraction following data revisions).

Heating Degree Days  
OECD Europe

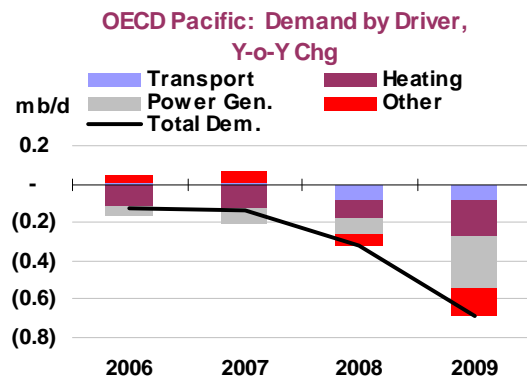
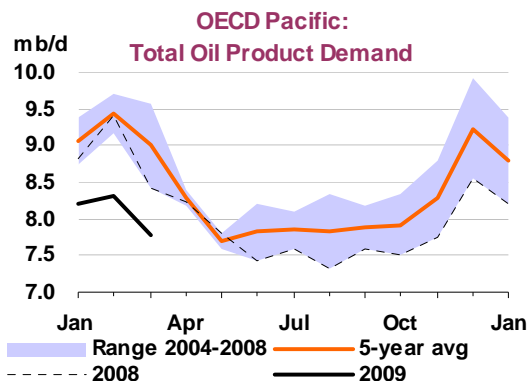
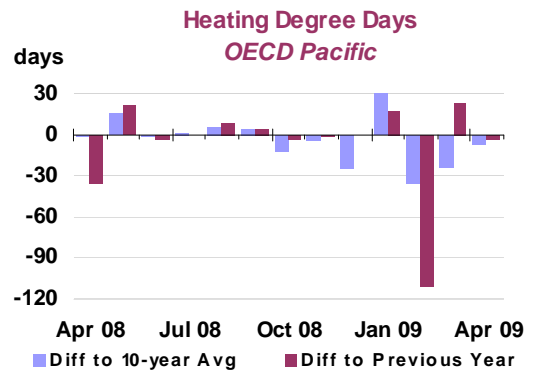
The demand picture in **France** tends to mirror developments in Germany, with deliveries rising by +2.7% year-on-year in March as a result of strong demand for heating oil (+21.0%) and residual fuel oil (+30.3%), which more than offset losses in other product categories such as naphtha (-20%). As in Germany, this year's much colder weather and lower prices led to a surge of French heating oil demand in 1Q09 of 15.5% year-on-year. Unlike Germany, though, France is becoming more dependent upon fuel oil for peak electricity generation (power is increasingly being used for heating), despite its sizeable nuclear industry and numerous gas-fired power plants. The rise in electricity consumption was closely matched by fuel oil demand, which increased by 21.2% year-on-year in 1Q09.



Since early April, French motorists are in principle able to fill their tanks with E10 gasoline, a blend of unleaded 95-octane gasoline and 10% ethanol. Well ahead of EU directives (which mandate the introduction of such a fuel in all member countries by 2015), France hopes to reduce CO<sub>2</sub> emissions by 1 million tonnes in 2010. However, given that only some 10% of the country’s service stations are currently equipped to sell the new fuel, that the price difference between E10 and conventional gasoline is minimal (about 2 cents) and that only vehicles produced from 2000 (approximately 60% of the total fleet) can safely take the new fuel, the domestic downstream industry remains sceptical as to whether the new fuel’s penetration will be achieved as quickly as intended. The industry argues that in order to meet the government’s biofuels goal (7% of total gasoline demand), E10 would need to account for 80% of total gasoline sales in 2009 and for 100% in 2010 – a tall order indeed. Yet retailers will face stiff penalties if the goal is not fulfilled.

**Pacific**

According to preliminary data, oil product demand in the Pacific dropped for the ninth month in a row in March (-7.6% year-on-year) – less than the collapse of the previous month but nonetheless significant. Once again, demand was being dragged down by Japan, whose export-oriented economy continues to be pounded by the global recession. Korean demand also contracted markedly, offsetting its brief February rebound. Even the relatively cold weather failed to provide support to the region’s demand; heating-degree days were sharply lower in March compared with the 10-year average, although temperatures were slightly higher than the same month of the previous year.



Nonetheless, February's preliminary data were revised up (+100 kb/d), as Japanese figures were somewhat stronger than previously expected. Still, demand is set to contract sharply in 2009 (7.3 mb/d (-8.6% or -690 kb/d versus the previous year and +30 kb/d higher than last month's report).

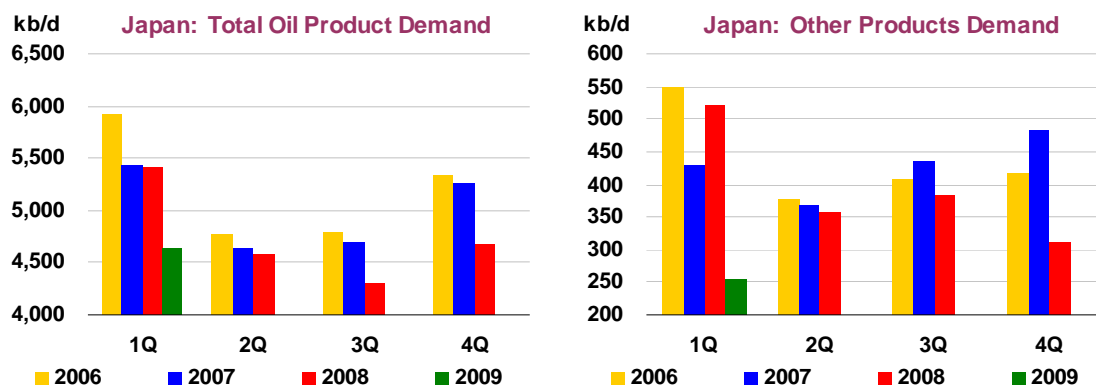
### OECD Pacific Demand by Product

(million barrels per day)

	2007	2008	1Q08	2Q08	3Q08	4Q08	Dec 08	Jan 09	Feb 09*	Latest month vs.	
										Jan 09	Feb 08
LPG & Ethane	0.96	0.96	1.01	0.97	0.92	0.96	1.03	1.00	0.99	-0.01	-0.09
Naphtha	1.65	1.59	1.69	1.55	1.59	1.50	1.50	1.56	1.66	0.10	-0.04
Motor Gasoline	1.57	1.52	1.48	1.55	1.51	1.55	1.66	1.47	1.51	0.04	-0.04
Jet & Kerosene	0.93	0.89	1.24	0.72	0.60	0.99	1.29	1.30	1.17	-0.13	-0.26
Gas/Diesel Oil	1.80	1.71	1.80	1.72	1.57	1.73	1.82	1.58	1.69	0.11	-0.20
Residual Fuel Oil	0.96	0.91	1.06	0.89	0.85	0.86	0.88	0.95	0.93	-0.02	-0.11
Other Products	0.48	0.45	0.59	0.42	0.45	0.35	0.36	0.33	0.34	0.01	-0.38
<b>Total Products</b>	<b>8.35</b>	<b>8.03</b>	<b>8.87</b>	<b>7.82</b>	<b>7.50</b>	<b>7.93</b>	<b>8.54</b>	<b>8.19</b>	<b>8.30</b>	<b>0.11</b>	<b>-1.12</b>

\* Latest official OECD submissions (MOS)

In **Japan**, the pace of the recession-driven oil demand contraction appears to have receded somewhat. According to preliminary data, deliveries plummeted by 'only' 11.0% year-on-year in March, almost half as much as in February (-20.6%) but slightly higher than in January (-10.5%). Once again, demand for industrial fuels such as LPG (-10.1%), naphtha (-14.4% year-on-year) or gasoil (-6.7%) fell sharply. Similarly, lower electricity needs weighed on demand for residual fuel oil (-23.0%) and direct-burning crude (included in 'other products', down by 64.9%). By contrast, demand for jet/kerosene (which is mostly used for heating) rose by 5.8% (compared with -21.2% in February) given March's colder weather.



Following the release of last month's report, some critics argued that our forecast misconstrued the effects of February's warm weather upon Japanese oil demand, alleging that we wrongly carried forward that month's weak readings for some product categories, presumably those used for electricity generation (residual fuel oil and direct-burning crude). However, our prognosis is based on normal weather conditions (defined as the 10-year average of prevailing temperatures). As such, our March revision to residual fuel oil demand was negligible (+9 kb/d). By contrast, the adjustment to 'other products' demand was actually *downwards* (-122 kb/d), which suggests that the unusually warm temperatures recorded in February were less significant than those observers contend. In other words, the country's economic recession is seemingly accounting for the bulk of the fall in electricity consumption.

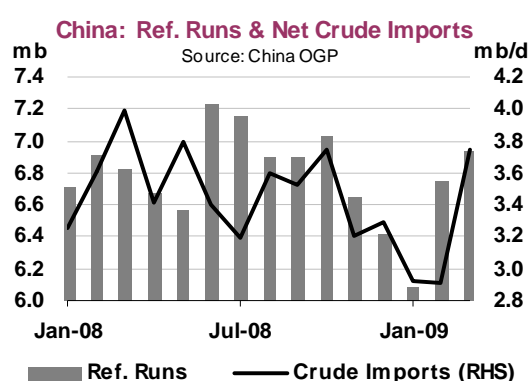
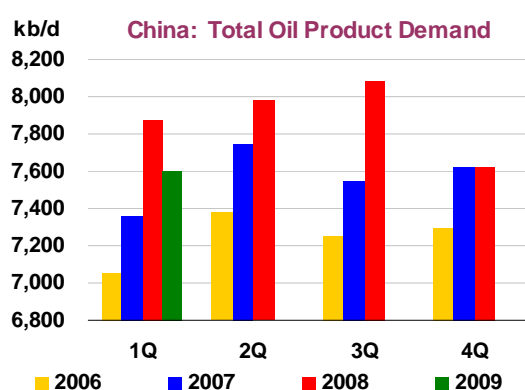
In addition, as we have widely flagged in previous reports, our forecast attempts to integrate the potential effects of greater power generation from nuclear sources, which will likely impinge upon oil-fired electricity production. In early May, Tokyo Electric Power Co. (TEPCO) finally won approval to restart one of the seven reactors of its giant 8.2-GW Kashiwazaki-Kariwa nuclear plant – the world's biggest – which had been shut down nearly two years ago following an earthquake. The restarting trials of the 1.4-GW unit are imminent, according to several reports, and commercial operations could resume in less than two months, assuming that the No. 7 generator passes a final government inspection.

Moreover, a second 1.4-GW reactor (No. 6) could also be brought back on line by the end of this year (or perhaps even this summer, according to some reports). The operation of both reactors at full capacity could reduce TEPCO's oil demand by as much as 70 kb/d, even though LNG is likely to be more severely affected.

## Non-OECD

### China

According to preliminary data, China's apparent demand (refinery output plus net oil product imports, adjusted for fuel oil, direct crude burning and stock changes) fell by 0.3% year-on-year in March. This estimate appears to confirm the country's economic slowdown; in fact, 1Q09 demand was down by 3.5% year-on-year, with two key industrial products, naphtha and gasoil, contracting by 6.3% and 12.5%, respectively. Meanwhile, the pace of growth of gasoline demand, which rose by 14.7% in 2008, slowed down sharply to 2.5% in 1Q09.



Moreover, higher refinery output (+14.3% month-on-month in March) and falling gasoline and gasoil stocks held by PetroChina and Sinopec (-21.6% and -15.8% month-on-month, respectively) appear to have essentially fed exports rather than respond to significantly higher domestic demand, although some stock volumes from the state-owned firms were reportedly purchased by independent retailers. The country remains a net exporter of both gasoline and gasoil, and the 29% month-on-month surge in net crude imports has mostly gone to higher refinery runs (+2.8% month-on-month) and crude stocks (+2.7% month-on-month). Given this subdued picture, forecast oil demand remains virtually unchanged at 7.8 mb/d or -0.9% versus 2008. It should be noted that this estimate incorporates a +25 kb/d revision to the 2007 baseline data, and assumes that GDP will expand by only 6.5% as predicted by the IMF, despite a relatively strong economic performance in 1Q09, according to official statistics. Indeed, much uncertainty continues to surround China's GDP measurement.

### China: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2007	2008	2009	2008	2009	2008	2009
LPG & Ethane	740	688	720	-52	32	-7.0	4.7
Naphtha	799	762	784	-37	22	-4.7	3.0
Motor Gasoline	1,314	1,507	1,516	194	8	14.7	0.6
Jet & Kerosene	274	289	303	15	13	5.6	4.7
Gas/Diesel Oil	2,557	2,825	2,634	268	-192	10.5	-6.8
Residual Fuel Oil	737	600	620	-137	20	-18.6	3.4
Other Products	1,147	1,217	1,240	70	23	6.1	1.9
<b>Total Products</b>	<b>7,567</b>	<b>7,889</b>	<b>7,817</b>	<b>322</b>	<b>-72</b>	<b>4.3</b>	<b>-0.9</b>

### Another Chinese Riddle: How Reliable Are GDP Figures?

In mid-April, the Chinese government reported that real GDP increased by 6.1% year-on-year in 1Q09. This figure was immediately taken up by the market as a tangible proof that the country is about to emerge from its downturn, and prompted numerous forecasters to upgrade their 2009 outlook of the Chinese economy. The current consensus view is that the government's fiscal boost, its plans to develop a social security net for rural households and the Central Bank's much looser monetary policy are not only having earlier-than-anticipated effects but also virtually guarantee that the Chinese economy may expand by as much as 8% this year and be back at double-digit growth figures in 2010.

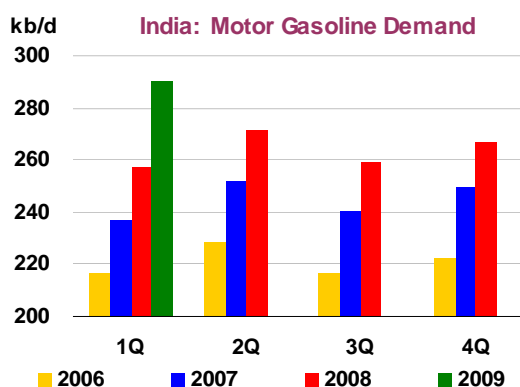
Oddly enough, 1Q09 reported GDP growth does not tally with oil demand data (nor with electricity demand, which was also inordinately weak). Oil demand contracted by 3.5% year-on-year, as noted earlier. Admittedly, pinpointing China's oil demand with accuracy is an exercise fraught with difficulties, given the lack of data and the underlying assumptions analysts must make regarding stocks and refinery output from independent producers. Still, one would have expected stronger, positive oil demand growth commensurate with the reported economic resilience, unless income elasticities had drastically changed.

Another possibility is simply that real GDP data are not accurate, and therefore should not be taken at face value. This is the view advocated by Lombard Street Research (LSR), a respected London-based economic consultancy. It argues that 6.1% real GDP growth in 1Q09 is inconsistent with a decline in trade volumes of about 20% over the same period, as it would have required domestic demand to expand by some 9% in real terms. Using official 1Q09 nominal annual growth rates for GDP and consumption, and consumer and fixed investment price indices as deflators for consumer spending and investment, respectively, LSR reckons that domestic demand expanded at most by 2% year-on-year in real terms. If so, China's terms of trade should have deteriorated sharply in order to achieve the decline in the GDP deflator implied by official data – yet the country recorded a significant improvement in its terms of trade. LSR concludes that 1Q09 real GDP growth was actually probably slightly negative or nil at best – a very large difference *vis-à-vis* official statistics – and adds that 4Q08 real growth was also likely negative or flat, if examining nominal data. If so, the last two quarters would effectively signal, from a Chinese perspective, a recession of a rare magnitude.

This analysis, which ultimately suggests that the country's falling exports have significantly weakened domestic demand and hence GDP growth, is of course one set of opinions among many. However, its conclusions regarding China's real 1Q09 GDP growth seem more consistent with oil demand estimates, and would imply that overall 2009 GDP growth could indeed match our current assumptions, despite the boost that fiscal and monetary policies will arguably provide in the quarters ahead.

### Other Non-OECD

According to preliminary data, **India's** oil product sales – a proxy of demand – increased by 3.8% year-on-year in March, boosted by strong gasoline (+12.8%) and gasoil (+8.8%) sales, which together account for almost 45% of total oil demand. It would appear that the country has so far succeeded in shrugging off the damaging effects of the global recession, even though economic activity has slowed. Given such remarkable resilience (gasoline demand, for example, surged by 13.1% year-on-year in 1Q09), we have slightly revised up our Indian forecast for 2009. Oil demand is now poised to grow to 3.2 mb/d (+2.8% year-on-year or +90 kb/d, some 30 kb/d higher than previously anticipated). Although this is roughly half the pace of the previous two years, India is set to post the highest oil demand growth rate among the world's 10 largest consumers.



As margins in India's subsidised fuel market turned positive in late 2008 following the sharp fall in international oil prices, domestic retailing again became an attractive option for private refiners. In 4Q08, Essar Oil reopened most of its 1,250 retail stations, which were closed in 2007 as the relentless rise in oil prices, coupled with domestic end-user price caps, rendered retail operations unprofitable. It may now be followed by Reliance Industries Limited (RIL), which is reportedly considering whether to reopen the 1,432 retail stations it shut down in 2008, either in partnership with private or state-owned companies or on its own. This reversal also reflects the fact that key export markets in the US and Europe – RIL's main product outlets – have sharply shrunk on the back of the global economic slump. In anticipation of this move, the company applied for a change in the status of one of its two refineries at Jamnagar (the 660 kb/d J-1 plant). The refinery will no longer be an 'Export Oriented Unit' (EOU) but rather a 'normal' refinery able to sell its products in the domestic market (and as such will now be obliged to pay import duty and other levies on crude, which are waived in the case of EOUs).

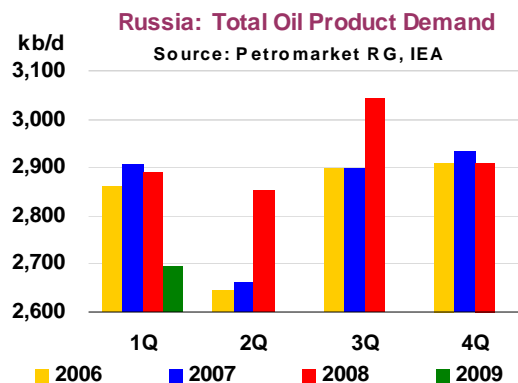
### India: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2007	2008	2009	2008	2009	2008	2009
LPG & Ethane	371	389	392	18	3	5.0	0.7
Naphtha	268	269	278	1	9	0.2	3.3
Motor Gasoline	245	264	294	19	30	7.8	11.5
Jet & Kerosene	300	301	295	1	-6	0.4	-2.0
Gas/Diesel Oil	970	1,068	1,105	98	37	10.1	3.5
Residual Fuel Oil	363	359	357	-5	-2	-1.2	-0.5
Other Products	429	428	444	0	15	-0.1	3.6
<b>Total Products</b>	<b>2,946</b>	<b>3,078</b>	<b>3,165</b>	<b>132</b>	<b>87</b>	<b>4.5</b>	<b>2.8</b>

Oil product demand in **Russia** reached new lows in March, when it contracted by 8.5% year-on-year, thus bringing the 1Q09 annual fall to 6.8%. The country has been severely hit by the global recession and the fall in commodity prices, and demand for industrial feedstocks has plummeted. LPG demand, for example, plunged by 20.2% year-on-year in 1Q09, while naphtha consumption shrank by 8.6%. Considering that the Russian economy is set to contract by 6.0% in 2009, total oil demand is foreseen to fall by 5.3% to 2.8 mb/d, some 30 kb/d less than previously expected.

The recession has also seemingly altered seasonal demand patterns. Both gasoline and gasoil demand normally begin to rise steadily in March, the former as the driving season unfolds and the latter with the start of the agricultural season. This year, however, demand for both products is sharply down – gasoline fell by 2.7% year-on-year in March and gasoil by 5.0%. The flip side is that the market tightening observed in previous years – as the surge in demand coincides with the spring refinery maintenance season – will probably be averted.



### Russia: Demand by Product

(thousand barrels per day)

	Demand			Annual Chg (kb/d)		Annual Chg (%)	
	2007	2008	2009	2008	2009	2008	2009
LPG & Ethane	304	324	284	20	-40	6.4	-12.4
Naphtha	254	246	236	-7	-10	-2.9	-4.2
Motor Gasoline	683	724	730	42	5	6.1	0.8
Jet & Kerosene	234	249	214	15	-35	6.2	-14.0
Gas/Diesel Oil	596	640	583	44	-57	7.4	-8.8
Residual Fuel Oil	304	261	252	-43	-9	-14.1	-3.5
Other Products	475	480	470	6	-10	1.2	-2.0
<b>Total Products</b>	<b>2,849</b>	<b>2,924</b>	<b>2,768</b>	<b>75</b>	<b>-156</b>	<b>2.6</b>	<b>-5.3</b>

Source: Petromarket RG, IEA