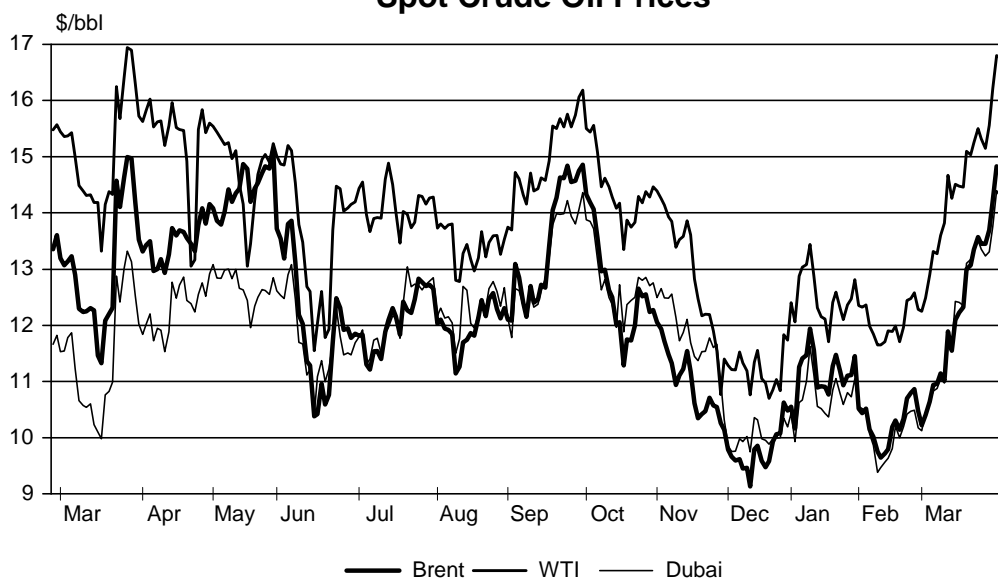


OIL PRICES AND REFINERY ACTIVITY

Summary

- **Crude oil prices** surged in March as a result of the emergence of a production cut agreement and the impact of late winter cold weather on inventories in February and March, especially in the highly visible US market. Prices of major benchmark crudes rose by \$5 per barrel from early-February lows, reaching their highest levels since just after last year's March OPEC meeting, at which the first of three rounds of production cuts was confirmed. Futures markets moved into backwardation (a downward sloping forward price curve), eliminating the incentive to store oil for speculative reasons. This incentive is thought to have played a major role in last year's inventory building outside of the OECD.
- Average West Texas Intermediate (WTI) prices for March were \$2.50 per barrel above the February average at over \$14.50 per barrel and made an intraday high of over \$17 per barrel on 30 March. Lower US crude production is supporting prices despite voluntary and involuntary cutbacks in refinery runs and continued high levels of crude oil imports. The upward price movement also reflects the anticipation of additional production cuts from several major suppliers of crude to the US as part of the "Hague" agreement. The price for Brent rose by somewhat less than that of WTI, averaging \$12.40 per barrel in March compared to \$10.25 per barrel in February. Local demand was restrained by high stocks and lower refinery runs but export possibilities to both the US and to Asia helped drive the increase. Dubai prices rose by less than WTI and more than Brent, increasing by \$2.25 per barrel to \$12.32 per barrel in March, a very modest 8 cent per barrel discount to Brent.
- **Spot product prices** rose faster than crude prices in the US as gasoline production problems on the West Coast caused prices to surge. Lower refinery production of heating and late season cold weather in the US and Europe supported distillate prices. Gasoline and other light product prices were strong across all three regions. Fuel oil prices also increased, but by less than crude prices and by far less than light product prices.
- The reactions of four major refining centres moved in opposite directions in the face of the price surge on the international crude spot markets. US Gulf Coast **refining margins** increased sharply by \$1.40 per barrel in March, while margins were almost unchanged in Northwest Europe and decreased by \$0.50 per barrel in the Mediterranean and Singapore.
- In February, OECD crude **throughputs** decreased slightly from January by 170 kb/d to 38.73 mb/d. European and US throughput volumes were almost unchanged. Throughputs increased in Japan while falling in Canada and Mexico. Refinery utilisation rates decreased by 0.4 percentage points to 91.9%.

Spot Crude Oil Prices



Spot Crude Oil Prices and CIF Crude Import Costs

The strong rally in crude oil prices in March was led by the growing credibility with oil market participants of the durable texture of the production accord fashioned in The Hague and verified with lightning speed at OPEC's scheduled meeting in Vienna. The agreement has since been confirmed in the market by a series of telexes notifying customers of cuts from most key producers. The agreement is knit out of stronger cloth than has been typical of these types of agreements. The political fabric underlying the Saudi-Iranian compromise is particularly significant as is the motivation of the new Government in Venezuela. It has been said by numerous commentators that this was an agreement made more between Heads of State than between Oil Ministers and that there is a consequent higher political cost of non-compliance. Notifications of export cuts went out within the first ten days after the 23 March meeting, from Saudi Arabia, Iran, Venezuela, Kuwait, the UAE, Qatar, Nigeria and Mexico and possibly other producers, sufficient to generate a high-level compliance in April, much faster than previous cuts and faster than expected. The pattern of vessel charterings and planned sailings for April and May offers further confirmation of the reality of the cuts.

Additional support for the price surge comes from good gasoline demand in several major markets, late season cold weather in the US and Europe, and a consequent reduction in product inventories, particularly in the bell-wether US gasoline and distillate markets (see Stocks section page 31). The stock draws in February and March remove one of the major clouds over market sentiment. The other cloud, the more than year-long precipitous drop in Asian demand which has been a counterforce to healthy demand growth in the US, has moderated somewhat over the last few months. The remaining counterforce to market balance is the large number of barrels of inventory built up over the year by speculators reacting to the strong upward slope to the forward price curve. Various estimates at 250 mb to over 500 mb, these barrels would be expected to return rapidly to the market in the face of the flattening and then inversion of the forward price curves for crudes (see graphs on page 35).

Spot Crude Oil Prices and Differentials

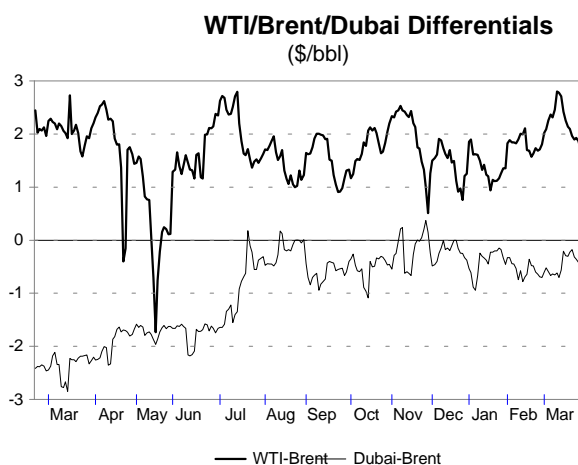
(monthly and weekly averages, \$/bbl)

	Jan	Feb	Mar	Change	Week Ending:					
					26 Feb	05 Mar	12 Mar	19 Mar	26 Mar	02 Apr
WTI	12.50	12.06	14.58	2.51	12.35	12.84	14.17	14.87	15.55	16.78
Brent Dated	11.13	10.25	12.40	2.15	10.63	10.63	11.54	12.79	13.68	14.80
Urals (delivered Mediterranean)	10.85	9.44	11.67	2.22	10.00	10.09	10.82	12.07	12.78	13.90
Dubai	10.73	10.07	12.32	2.25	10.35	10.58	11.60	12.87	13.43	14.34
Tapis	12.44	11.41	13.46	2.05	11.35	11.52	12.52	13.84	14.97	15.99
Brent over Dubai	0.40	0.18	0.08		0.28	0.05	-0.06	-0.08	0.25	0.46
WTI over Brent	1.37	1.81	2.18		1.72	2.21	2.64	2.07	1.87	1.98
Tapis over Brent	1.31	1.16	1.06		0.72	0.88	0.98	1.05	1.29	1.19
Brent 1st month minus 2nd month	+0.11	-0.13	-0.04		-0.17	-0.17	-0.11	0.00	0.05	0.07
WTI 1st month minus 2nd month	-0.07	-0.12	-0.08		-0.11	-0.13	-0.03	-0.09	-0.13	0.03

Crude oil prices moved steadily upward during March, with Brent prices increasing on 16 out of the 21 trading days in March. **West Texas Intermediate** (WTI) closed at \$16.80 per barrel on 30 March, a 12-month high and \$4.61 per barrel higher than its closing price on 1 March. WTI was pushed up not only by the OPEC agreement, but also by the accelerating declines in US production, especially of the low-volume, high-cost grades like WTI and other crudes in Texas, Oklahoma and Kansas. The production declines are being partly matched by cuts in refinery runs, but a \$2 per barrel differential between WTI and Brent has kept crude imports relatively high and has prevented US crude stocks from falling. The supply response to the turnaround in crude prices is likely to be slow in coming. The lack of workover activity and the irreversible shut-ins of some wells as well as the slashed upstream budgets could keep production declining for several more months. Merger activity may also take some money off the table that would have gone for upstream activity, and all of this in the context of an intensifying geological decline in the mature regions of the US Midwest.

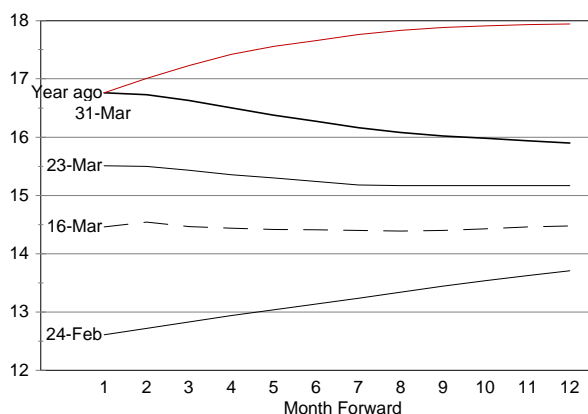
The other major factor behind the US crude price rise has been the gasoline production problems on the US West Coast, which have forced up gasoline prices even faster than crude prices and raised refinery margins. A fatal fire at one California refinery and a series of problems affecting three other West Coast gasoline units have resulted in a severe shortage of gasoline on the West Coast, which is drawing product from Gulf Coast refineries and running down stock levels.

Brent prices have been supported by the attractive arbitrage possibilities to both the US and Asia as European markets continue to be oversupplied with crude. As shown in the graph on the right, the differential between Brent and WTI has remained around \$2 per barrel, making it economical to ship to the US Gulf Coast, although the inability to move additional quantities into the Midcontinent markets due to pipeline constraints is progressively disconnecting the physical markets of these two marker crudes. The Dubai-Brent differential has stayed well under \$1 per barrel, enticing Brent barrels to Asia. Cyclones affecting production in Northwest Australia and extended maintenance to the Wanaea-Cossack production vessel have reduced regional supplies, and prospective cuts in Middle East sour crude production are keeping Dubai discount tight. The concentration of demand in the lighter end of the product barrel is also supporting Brent prices. Dated-Brent prices closed at \$14.83 per barrel on 30 March, \$4.55 per barrel higher than on 1 March and the highest level since 30 September 1998.

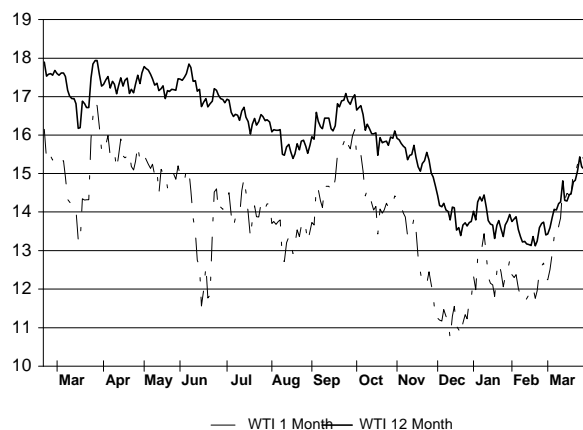


The rise in **Dubai** crude prices lagged those of WTI and Brent increasing \$4.10 per barrel between 1 March and a closing high of \$14.40 per barrel on 30 March, about 50 cent per barrel less than the other two benchmark crudes. In addition to the Australian supply problems, Dubai prices should benefit from substantial production cuts taking place to sour Middle East grades as a result of the "Hague Agreement". There is an expectation of sizeable tenders for Dubai from India for April and May. India is also continuing to stock sweeter **West African** grades for start up of a major refinery later this year. The relative appetite of India for Dubai contrasts with the sluggish foreign crude demand from China which has had a preference for **Omani** crude, keeping Omani crude at an unusual discount to Dubai.

NYMEX WTI Forward Price Curve
(\$/bbl)

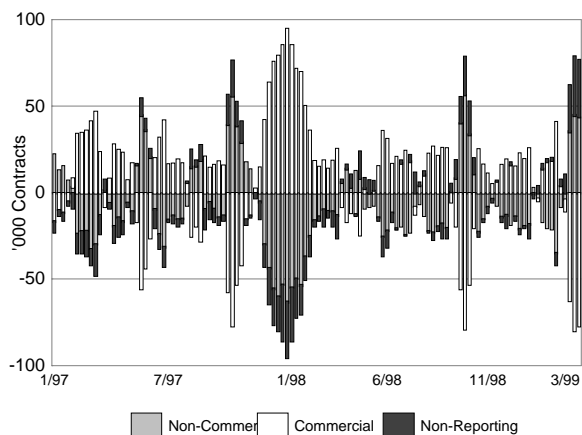


WTI Futures Prices on the NYMEX
(\$/bbl)

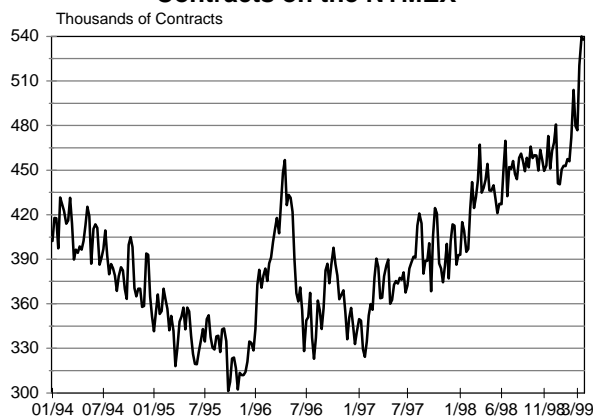


Futures prices moved definitively into backwardation by the end of March, as indicated by the downward sloping forward price curve shown in the left-hand graph above. The 31 March curve is in sharp contrast to shape last year at this time. As recently as a month ago, the WTI curve had a distinct upward slope. There has been a remarkable rally in the near end of the forward price curve, moving first month prices above the 12-month price, as shown in the right-hand graph above. March, the near month was at a \$0.86 per barrel premium to the 12-month future compared to a discount of more than \$1 per barrel at the beginning of the month and over \$3 per barrel in early December. The backwardation in the WTI market and similar occurrences in the Brent market have eliminated the returns to storing crude oil. This should cause the selling of barrels held in storage in support of paper trading along the forward price curve. However, expectations of additional price rises in physical markets could limit the amount of selling. Futures market psychology has become very bullish and very active over the last few weeks (shown in the right-hand graph on the top of the next page), as indicated by the commitments of non-commercial and non-reporting traders.

Distribution of Net Open Position: WTI Contracts on the NYMEX



Volume of Open Interests in WTI Contracts on the NYMEX



The preliminary **CIF crude import cost** into all IEA countries averaged \$10.57/bbl in January, recovering slightly from the record-low \$10.24/bbl in December. Following spot market prices, which rose by around \$1.20/bbl in January, the European CIF import cost increased by \$1.15/bbl to \$10.81/bbl. However, the cost for North America increased by only \$0.58/bbl to \$9.98/bbl. Due to the transportation time lag, the cost for Pacific continued to fall, reflecting the earlier spot prices. The cost for Pacific decreased by \$1.71/bbl to \$11.14/bbl.

Weighted-Average CIF¹ Crude Import Cost by Area

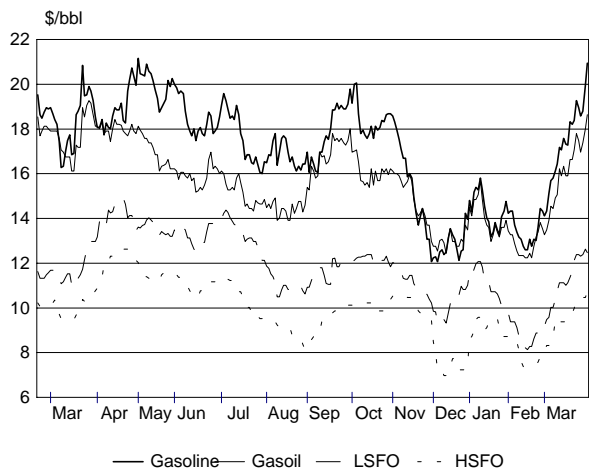
	\$/bbl			
	Total IEA	IEA Europe	IEA North America	IEA Pacific
Aug 98	11.72	11.44	11.32	13.13
Sept 98	12.58	12.53	12.31	13.17
Oct 98	12.68	12.28	12.48	13.98
Nov 98	11.36	10.65	11.06	13.54
Dec 98	10.24	9.66	9.40	12.85
Jan 99*	10.57	10.81	9.98	11.14

* estimated
1 cost, insurance and freight

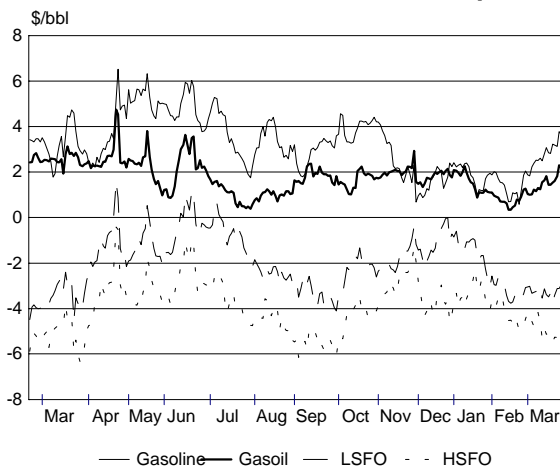
Spot Product Prices in March

Product prices rose sharply in March, pushed up by the surge in crude oil prices, higher demand and declining inventories. Growth in naphtha prices, from very depressed February levels, generally led the way, but gasoil and jet fuel also outpaced crude price gains in most markets. Gasoline prices just about held their ground with crude in Europe, while increasing relative to WTI in the US and lagging Dubai in Singapore. Month-on-month growth in excess of 25% occurred for naphtha in New York Harbour and the Mediterranean, and for gasoil and low sulphur fuel oil in New York Harbour. Most other product prices grew by 15%-25%, with products on the lower end of that range losing ground to crude oil. Fuel oil differentials to crude in Europe fell by \$1.25-\$1.70 per barrel and by \$0.80-\$0.90 per barrel in Singapore.

New York Harbour Product Price:



New York Harbour Product Spread to W



The most far-reaching event for product markets was a series of outages at gasoline production facilities on the US West Coast. Problems or planned shutdowns at five refineries in California and two in Washington State created a shortage of gasoline that has had a domino effect across world product markets. US Gulf Coast product has been moved to the West Coast and East Coast gasoline production has been shipped to the US Gulf creating an arbitrage opportunity for European gasoline to move into markets in the US northeast and southeast. Very tight quality specifications in California have limited the amount of foreign material being brought into the region, which has been used mainly for blending, although a few South Korean and Japanese refineries are reported to be able to meet the specification.

Americas

US prices have benefited from relatively strong gasoline demand and late season cold weather. Combined with rapidly declining domestic production and refinery shutdowns on the West Coast and the Midwest, inventories of gasoline and distillates fell sharply through the second half of the first quarter (see graphs on page 31). The rebound in US refinery margins and the end of maintenance may bring sufficient US refining capacity back on stream to reverse the stockdraws, as may high levels of product imports. However, the fatal explosion at the Avon refinery near San Francisco has raised serious community relations issues for refiners in general. Very high levels of operation during 1998 deferred maintenance and strained equipment, creating safety concerns. A second major explosion at a hydrocracker in nearby Richmond California heightened concerns. Technical problems and earlier low margins had shut in gasoline capacity at two refineries in the Midwest; at Toledo, Ohio and Lemont, Illinois. Similarly, output had been cut back at the New Jersey Bayway refinery and at some refineries on the Gulf Coast.

Spot Product Prices

(monthly and weekly averages, \$/bbl)

	Jan	Feb	Mar	Mar-Feb	%Chg	Week Ending					Jan	Feb	Mar
						05 Mar	12 Mar	19 Mar	26 Mar	02 Apr			
Rotterdam, Barges FOB						Differential to Brent							
Premium 0.15 g/l	14.43	14.10	16.23	2.13	15.1%	14.10	15.20	16.29	17.97	19.64	5.36	3.85	3.83
Regular Unleaded	12.66	12.56	14.42	1.86	14.8%	12.40	13.30	14.43	16.20	17.83	3.56	2.31	2.02
Naphtha	11.01	10.42	12.90	2.48	23.8%	11.37	12.18	13.14	14.00	15.21	2.40	0.16	0.50
Jet/Kerosene	14.77	13.96	16.15	2.19	15.7%	14.20	15.72	16.34	17.42	18.44	5.05	3.70	3.75
Gasoil	13.50	13.00	15.76	2.76	21.2%	13.72	15.52	15.90	17.10	17.66	4.07	2.75	3.36
Fuel Oil 1.0%S	10.98	9.27	9.84	0.57	6.2%	9.42	9.45	9.77	10.30	10.91	-2.02	-0.99	-2.56
Fuel Oil 3.5%S	9.75	8.76	9.51	0.75	8.6%	9.04	8.99	9.33	10.06	10.96	-4.19	-1.50	-2.90
Mediterranean - Basis Italy, Cargoes FOB						Differential to Urals							
Premium 0.15 g/l	14.10	13.73	15.98	2.25	16.4%	14.02	14.89	16.12	17.63	19.16	5.14	4.29	4.32
Naphtha	9.74	9.20	11.61	2.41	26.1%	10.14	10.88	11.79	12.69	14.02	2.07	-0.24	-0.06
Jet/Kerosene	12.79	12.51	14.46	1.94	15.5%	12.45	13.97	14.68	15.75	17.01	3.78	3.07	2.79
Gasoil	12.95	11.30	13.99	2.69	23.8%	11.98	13.40	14.22	15.44	16.13	3.24	1.86	2.32
Fuel Oil 1.0%S	11.02	8.66	9.61	0.95	11.0%	8.71	9.29	9.94	10.25	10.30	-1.42	-0.78	-2.05
Fuel Oil 3.5%S	8.78	7.88	8.42	0.54	6.8%	8.11	8.11	8.29	8.87	9.24	-4.31	-1.56	-3.25
NY Harbour, Barges						Differential to WTI							
Premium Unleaded 93	16.03	15.35	18.11	2.76	17.9%	15.97	17.25	18.30	19.49	21.75	4.49	3.29	3.53
Regular Unleaded 87	14.37	13.44	17.60	4.16	31.0%	15.02	16.87	17.90	19.11	21.30	3.38	1.38	3.03
Jet/Kerosene	14.48	13.55	16.71	3.16	23.3%	14.61	16.16	17.00	18.00	19.27	4.14	1.49	2.13
No.2 (Heating Oil)	14.05	12.84	16.15	3.31	25.8%	13.93	15.69	16.43	17.52	18.60	2.87	0.77	1.57
Fuel Oil 1.0%S (Cargo)	11.06	8.85	11.23	2.38	26.9%	9.66	10.91	11.45	12.42	12.48	-2.96	-3.21	-3.35
Fuel Oil 3.0%S (Cargo)	9.15	7.86	9.57	1.71	21.8%	8.40	9.36	9.63	10.44	10.73	-5.18	-4.21	-5.01
Singapore, Cargoes						Differential to Dubai							
Gasoline Unleaded 95	14.15	13.82	15.79	1.98	14.3%	13.84	14.86	15.50	17.42	19.68	6.61	3.74	3.47
Naphtha	12.04	11.51	13.66	2.15	18.6%	12.12	13.03	13.84	14.85	15.68	3.74	1.44	1.34
Jet/Kerosene	15.79	13.37	15.82	2.45	18.3%	13.78	15.06	15.93	17.13	19.06	4.74	3.29	3.50
Gasoil	14.65	12.35	14.10	1.75	14.2%	11.85	12.96	14.67	15.72	16.87	4.29	2.28	1.78
LSWR (0.3%S)	9.95	9.01	10.85	1.83	20.3%	9.96	10.49	11.27	11.44	11.38	-1.48	-1.06	-1.47
HSFO (3.5%S 180cst)	10.14	9.02	10.49	1.46	16.2%	9.91	10.22	10.64	10.56	11.72	-3.44	-1.05	-1.84
HSFO (3.5%S 380cst)	9.62	8.45	9.81	1.36	16.1%	9.16	9.59	10.05	9.95	10.79	-4.15	-1.62	-2.51

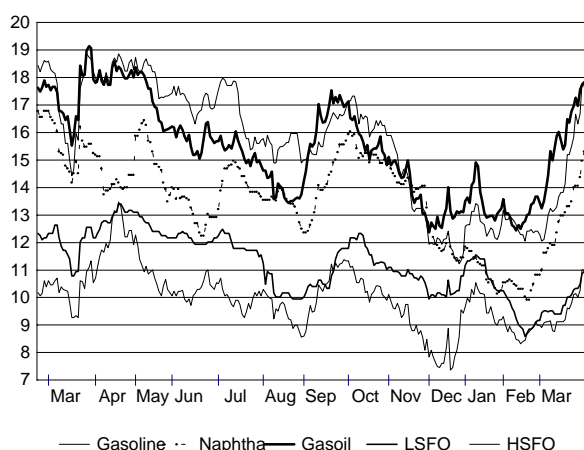
With strong demand related to temperate weather through most of the winter compounding these supply reductions, US **gasoline** prices rose to over \$22 per barrel in late March, the highest level for premium grade since 5 June 1998. The price of unleaded regular reached its highest level since the end of 1997.

Distillate prices increased by even more than gasoline, driven by colder weather and reduced supplies as refiners oriented production away from heating oil to gasoline. The outage at the Avon refinery also pushed up distillate prices, as it has been a major source of high quality diesel needed to meet California Air Resources Board specification standards. An influx of European gasoil was prevented by heavy buying by German consumers ahead of a major environmental tax increase on 1 April and the residual effects of UK tax increases under the new budget introduced on 9 March. Prices of **jet/kero** moved up with heating oil prices. Contrary to other regions, **fuel oil** prices were relatively strong in the US, with New York Harbour 1% sulphur cargoes up almost 27% in March compared to February and 3% fuel oil increasing almost 22%. Utility demand was sparse but regional demand from Cuba and the Caribbean reduced fuel oil imports from Mexico and Venezuela. The exceptional strength in light product prices and the relatively stable crack spreads for the heavy end products resulted in a significant improvement in margins.

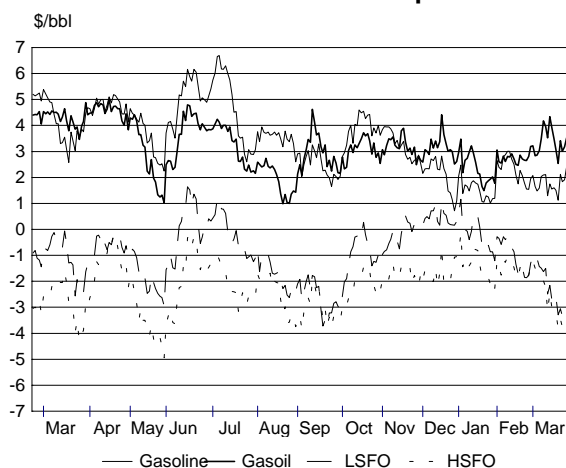
Europe

European product markets followed a similar pattern to the US but were not as robust due to weaker underlying demand. Arbitrage cargoes of product to the US helped support prices, especially for naphtha and gasoline. **Naphtha** price gains played a starring role in European product markets advancing by 26% in the Mediterranean and 24% in Rotterdam. **Gasoline** prices advanced around 15% in both Rotterdam and the Mediterranean, about keeping pace with Brent and Urals increases. Gasoline demand was limited with northern Germany and Poland showing healthy demand in northern Europe, and Lebanon and Turkey drawing Mediterranean supplies to the eastern Mediterranean. With the large gains in naphtha prices, the reforming margin fell below \$0.50 per barrel in early March, but recovered strongly with the late month surge in gasoline prices. Although **jet fuel** prices also were up by about 15% in March, markets may further strengthen with additional military demand for air operations over Kosovo and blending demand for jet/kero to meet tighter gasoil specifications. **Gasoil** prices rose by over 20% in both main European markets as a result of aggressive buying by German consumers in advance of the 1 April tax increase of over 15 cents per gallon. In contrast, **fuel oil** markets were depressed by an onslaught of Russian high sulphur cracked fuel oil, which overwhelmed local demand growth, which was primarily from Portugal for power generation use. The return of shut-in fuel oil production capacity could keep prices soft. The weakness in heavy product prices kept refinery margins at about \$1 per barrel for Urals cracking in the Mediterranean and well under \$1 for Brent cracking in Rotterdam. Hydroskimming was at break even at the end of the month in the Mediterranean but -70 cents per barrel in Rotterdam.

Rotterdam Product Prices



Rotterdam Product Spreads to Brent



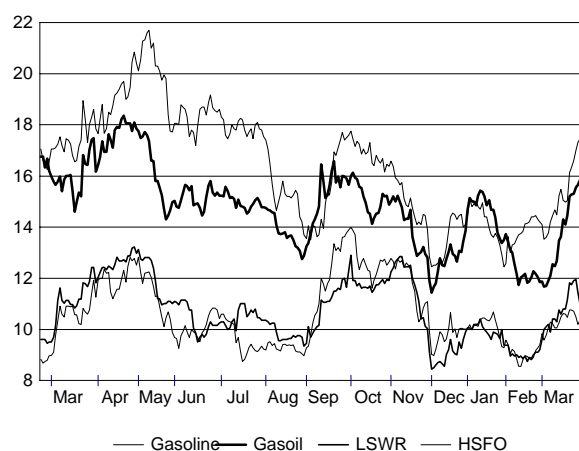
Asia-Pacific

Singapore product markets were not as robust as the US and European markets. Continued weak local demand and plentiful supplies kept product price increases for the month under 20%, except for low sulphur waxy residue (LSWR). A number of Chinese gasoline exports on offer in the region and an unusual export of gasoil weighed down regional markets. Indonesia experienced credit problems early in the month and decided to postpone maintenance activities so that the Cilacap refinery could meet local product demand and continue exports to the region. Prices would have performed worse if not for strong demand for gasoline exports to the US West Coast as a gasoline blendstock to compensate for problems

at several West Coast refineries. In other arbitrage trade, there were some gasoline and gasoil exports into Central America and Argentina, with naphtha being backhauled to Asia.

Singapore **gasoline** prices were pushed up to almost \$20 per barrel for the first time since last May. The Latin American **naphtha** backhaul cargoes replaced previously ubiquitous European barrels and an accident at the Thai Rayong petrochemical plant limited demand keeping the naphtha price increase in Singapore to 18.6% for the month, compared to 31% in New York Harbour and 26% in the Mediterranean. The relative price changes kept the **reforming margin** in Singapore at over \$2 per barrel. **Gasoil** prices increased to over \$17 per barrel at the end of the month, but averaged only \$14.10 per barrel for the month, having started March at under \$12 per barrel. Indonesia again cancelled an expected tender for gasoil to be delivered in April, as it had done in February for March gasoil. Domestic gasoil stocks in Indonesia are considered sufficient to meet demand, despite a potential buying spree before parliamentary elections to be held in June. Chinese buying has been curtailed by weak demand and mandated increases in domestic refinery output to counter smuggling. Average **high sulphur fuel oil (HSFO)** prices were 16% higher than in February, but lagged crude oil price increases. China was slow to issue import licenses and buying had not materialised until late in the month. **LSWR** did somewhat better than HSFO as a result of good demand from South Korea, India and Japan.

Singapore Product Prices



End-User Product Prices

Responding sharply to the price surge on the international crude spot markets, mid-month end-user prices in March increased in the countries shown in Table 9 at the back of the Report. Transportation fuel (**Gasoline** and **Diesel**) prices rose across-the-board. Gasoline prices increased by 6% in the US and Canada. The price increases in the UK, 6% for gasoline and 8% for diesel, include the tax hike that took place in March. Domestic **heating oil** prices also increased in most countries. German heating oil prices rose by 24% from February and by 10% year-on-year due to pre-buying, resulting from the tax increase that became effective on 1 April. **Industrial fuel oil** prices rose in European countries (except for Spain) but fell in Japan.

Mid-Month End-User Product Price Changes March 1999 versus February 1999

Local Currency Including Taxes

	Gasoline ¹	Automotive Diesel ³	Domestic Heating Oil	HFO for Industry ⁵
US	6.0% ²	2.0% ²	n.a.	n.a.
Canada	6.0%	-0.2%	n.a.	n.a.
France	1.0%	3.2%	4.6%	2.7%
Germany	2.6%	4.8%	24.0%	5.5%
Italy	1.3%	1.8%	1.6%	3.1%
Spain	0.9%	1.6%	6.7%	-1.6%
UK	5.6%	8.4%	-2.7%	1.2%
Japan	0.0%	0.0%	0.3% ⁴	-2.9%

¹ premium leaded gasoline for France, Italy, Spain, the UK; regular unleaded gasoline for Canada, Germany, Japan and the US

² estimated

³ VAT excluded where it is refundable: Heavy Fuel Oil for Industry, Automotive Diesel for Industry

⁴ kerosene

⁵ high sulphur fuel oil price for France, Spain, the UK and Japan; low sulphur fuel oil price for Germany and Italy - details are shown in Table 9 at the back of the Report

Refining Margins in March

The reactions of four major refining centres moved in opposite directions in the face of the price surge on the international crude spot markets. US Gulf Coast refining margins increased sharply by \$1.40 per barrel in March, while margins were almost unchanged in Northwest Europe and decreased by \$0.50 per barrel in the Mediterranean and in Singapore.

Increases in crude prices were matched by the rise in product prices in **Northwest Europe** so that both hydroskimming and cracking margins remained almost constant. Although there were fluctuations during the month, the monthly averages of -\$0.20 per barrel for hydroskimming and \$0.55 per barrel for cracking were almost unchanged from February and held at those levels in the first week of April. Margins deteriorated by \$0.20 per barrel to \$0.50 per barrel in the **Mediterranean**, where refiners had enjoyed a relatively wide margin over the last two years. Hydroskimming margins suffered by more than cracking margins did, falling to \$0.25 per barrel. Both margins decreased further in the first week of April as crude prices grew faster than product prices.

The US Gulf Coast reacted the most sharply to the crude price surge and domestic gasoline production problems. The margins started rising promptly at the end of February and kept increasing throughout March. Both Brent cracking and WTI cracking margins widened by \$1.50 per barrel. The margins were reaching \$3.00 per barrel for Brent and \$2.00 per barrel for WTI at the beginning of April.

Singapore refiners, which suffered from depressed Asian markets, were not able to pass higher crude costs through their product prices. The margins decreased by \$0.60 per barrel for hydrodeskimming and \$0.50 per barrel for cracking in March. However, the margins started to recover at the end of March.

Refining Margins in Major Refining Centres

(monthly and weekly averages, \$/bbl)

	Jan	Feb	Mar	Change	Week Ending:					
					26 Feb	05 Mar	12 Mar	19 Mar	26 Mar	02 Apr
NW Europe										
Brent (Hydrodeskimming)	-0.04	-0.06	-0.20	-0.14	-0.30	0.10	0.17	-0.41	-0.44	-0.65
Brent (Cracking)	0.23	0.46	0.55	0.09	0.24	0.66	0.81	0.32	0.47	0.47
Mediterranean										
Urals (Hydrodeskimming)	0.58	0.73	0.25	-0.48	0.27	0.44	0.55	-0.01	0.19	-0.08
Urals (Cracking)	0.92	1.21	1.02	-0.19	0.84	1.01	1.21	0.76	1.15	1.07
US Gulf Coast										
Brent (Cracking)	0.13	0.31	1.79	1.48	0.13	0.80	2.19	1.64	2.11	2.90
WTI (Cracking)	-0.01	-0.54	0.79	1.33	-0.51	-0.30	0.72	0.86	1.39	2.00
Singapore										
Dubai (Hydrodeskimming)	0.13	0.32	-0.26	-0.58	0.11	0.17	-0.15	-0.62	-0.57	-0.12
Dubai (Cracking)	1.09	1.30	0.81	-0.49	1.11	0.86	0.72	0.45	0.91	1.47

OECD Refinery Throughputs in February

Aggregate refinery throughputs of **OECD** countries in February decreased by 170 kb/d from January levels (which have been revised downwards by 0.04 mb/d), to an estimated 38.73 mb/d. Crude throughputs were almost unchanged from January in OECD Europe and the US, but increased in Japan while decreasing in Canada and Mexico. Year-on-year, the throughputs increased by 670 kb/d. Provisional data suggest that refinery utilisation rates in OECD countries averaged 91.9% in February, an increase of 1.4 percentage points from a year earlier, but a decrease of 0.4 percentage points from the previous month.

Refinery Crude Throughputs and Utilisation in OECD Countries

	million barrels per day					change from Feb 98		utilisation rate ²	
	Sept	Oct	Nov	Dec	Jan ¹	mb/d	%	Jan 99	Oct
OECD Europe ³	14.06	14.06	14.32	14.10	14.10	0.610	4.5	96.5%	92.3%
France	1.83	1.75	1.80	1.74	1.69	-0.074	-4.2	96.9%	101.2%
Germany	2.28	2.07	2.21	2.23	2.15	-0.069	-3.1	95.0%	98.1%
Italy	1.88	2.01	1.98	1.93	1.88	0.139	8.0	92.9%	86.0%
Netherlands	1.24	1.23	1.23	1.20	1.15	0.001	0.1	94.3%	94.2%
Spain	1.17	1.21	1.32	1.30	1.32	0.107	8.9	103.2%	94.8%
UK	1.74	1.74	1.74	1.79	1.76	0.182	11.5	101.2%	90.8%
US	14.00	14.77	14.83	14.48	14.49	0.460	3.3	91.5%	89.3%
Canada	1.45	1.41	1.46	1.55	1.43	-0.051	-3.5	77.3%	80.1%
Mexico	1.24	1.25	1.28	1.29	1.15	-0.256	-18.3	73.8%	90.3%
Japan	3.76	4.30	4.45	4.43	4.54	-0.120	-2.6	90.2%	92.6%
Korea	2.37	2.42	2.52	2.27	2.26	0.013	0.6	91.5%	91.0%
Australia/New Zealand	0.65	0.75	0.79	0.77	0.77	0.018	2.4	93.4%	91.2%
OECD Total ⁴	37.52	38.97	39.64	38.90	38.73	0.668	1.8	91.9%	90.5%

¹ estimate

² based on crude throughput and current operable refining capacity

³ includes Czech Republic, Hungary and Poland

⁴ includes Czech Republic, Hungary, Poland, Mexico and Korea

Estimated throughputs of **European** OECD countries in February were unchanged from the previous month, at 14.10 mb/d. The throughputs, however, were 0.61 mb/d or 4.5% higher than a year earlier. Throughputs increased in Italy, Spain and the UK. The total European utilisation rate decreased by 4.2

percentage points from a year earlier to 96.5%. Utilisation rates in Northwest Europe rose from 95.7% to 97.5% while those in Southern Europe increased even more, from 89.4% to 96.9%. Eastern European utilisation remained low at 82.1%. February throughputs in the **US** were unchanged from January, at 14.49 mb/d. The movement of throughput volumes was in slight deviation from the normal seasonal pattern and, on a year-on-year basis, the throughputs increased by 460 kb/d. As a result, the utilisation rate was 2.2 percentage points higher than a year earlier at 91.5%. **Japanese** throughputs in February averaged 4.54 mb/d, an increase of 0.11 mb/d from January, in line with seasonal changes. The throughputs were still lower than a year earlier by 120 kb/d, and the utilisation rate fell year-on-year from 92.6% to 90.2%.

Refinery throughputs in **March** are thought to have increased in Europe but to have decreased in the US and Japan. Japanese throughputs are estimated at around 4.36 mb/d. US weekly statistics suggest that US throughput levels averaged 14.34 mb/d for the four weeks ending 26 March.

Downstream Industry Developments

In the ongoing ebb flow of corporate merger activity, there was one major acquisition and termination of two intended mergers.

On 1 April BP Amoco PLC announced that it would pay \$26.6 billion in stock to buy Atlantic Richfield Co., an acquisition that would create the world's second largest oil company in terms of market capitalisation, behind the pending Exxon-Mobil merger. BP Amoco, currently the world's third largest publicly traded oil company, said that 2000 jobs were expected to be eliminated, mainly in the US, from a combined work force of 115,000. The purchase will give BP Amoco a retail network in the western US and add to its oil and gas reserves in Alaska. The deal is subject to approvals by both companies' shareholders and by US antitrust regulators and the European Commission.

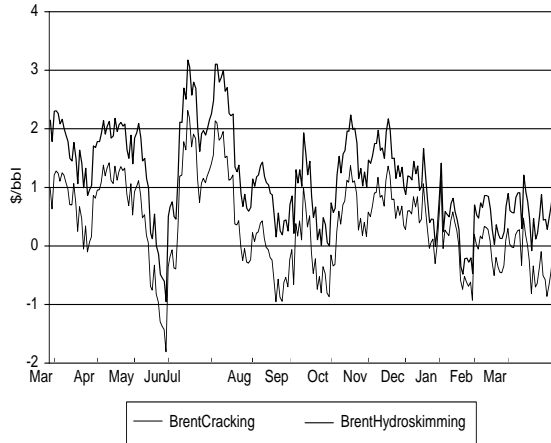
Conversely, US independents Phillips and Ultramar Diamond Shamrock called off their proposed merger. The two companies had signed a letter of intent six months ago to combine their North American refining assets into a new company called Diamond 66 (see page 38 of the Report dated 9 November 1998). Diamond 66 would have been the largest independent US refiner with 1 mb/d of refining capacity and 9% of US gasoline market. Ultramar Diamond Shamrock, which was created in 1996 through the merger between Ultramar and Diamond Shamrock, was to have a 55% stake of the new company.

In addition, BP Amoco and Caltex (a joint venture between Chevron and Texaco) announced that the two companies halted negotiations to combine their refining, storage and shipping operations in Australia. The announcement came two months after the start of negotiations (see page 37 of the Report dated 9 February 1999).

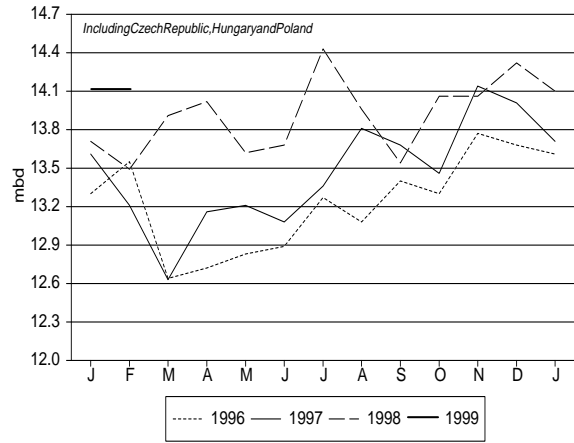
Japan's Showa Shell, a subsidiary of Royal/Dutch Shell, plans to integrate operations at its 120 kb/d Kawasaki refinery with Toa Oil's 60 kb/d Kawasaki refinery, which is located adjacent to Showa Shell's facility. Showa Shell owns 42% of Toa Oil. The two plants had already combined crude oil purchasing operations.

Despite the recent recovery in Asian (and other) naphtha prices, prospects for further improvement next year may be limited by plans for construction of a large processing facility in Singapore. The Royal/Dutch Shell group is reported to be planning to build a 70 kb/d condensate splitter to process output of 58° naphtha-rich condensate from the Australian Laminaria-Corallina field due onstream later this year in the Timor Sea Zone of Co-operation between Australia and Indonesia. Field production is scheduled to start at 140 kb/d in the fourth quarter from the world's largest Floating Production Storage and Offloading vessel, the *Northern Endeavour*, and to increase another 30 kb/d in the first few months.

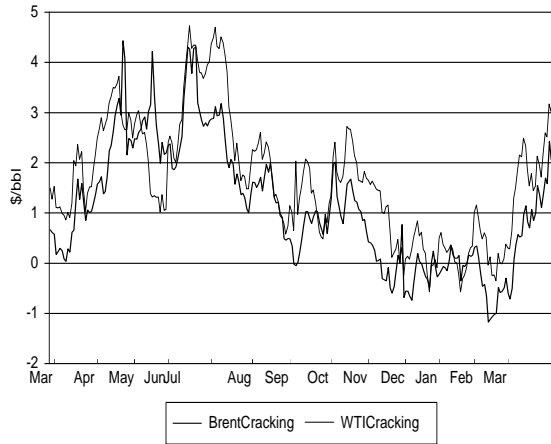
RotterdamRefiningMargins



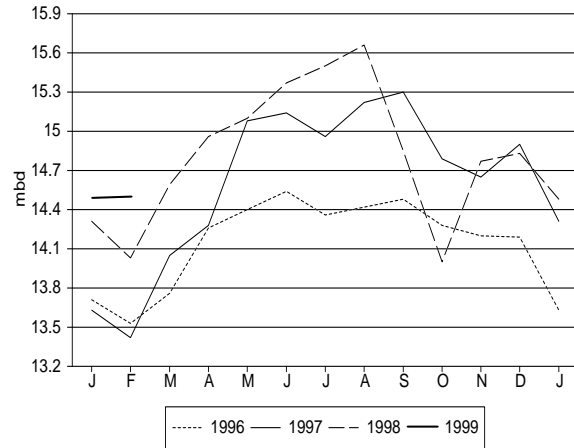
OECEuropeCrudeThroughputs



USGulfRefiningMargins



USCrudeThroughputs



SingaporeRefiningMargins



JapanCrudeThroughputs

