



June 2004

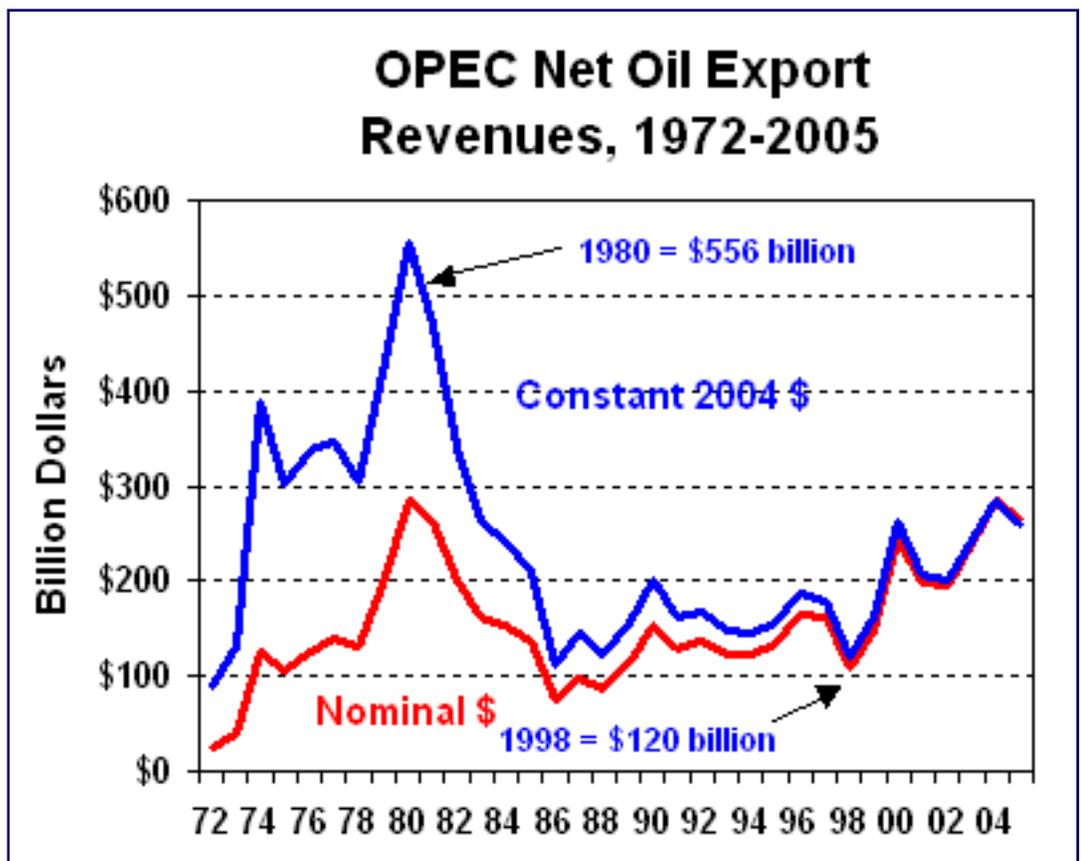
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OPEC Revenues Fact Sheet

The following provides information on OPEC oil export revenues. OPEC countries include: [Algeria](#), [Indonesia](#), [Iran](#), [Iraq](#), [Kuwait](#), [Libya](#), [Nigeria](#), [Qatar](#), [Saudi Arabia](#), [United Arab Emirates](#), and [Venezuela](#) . This report is based on the best available information as of June 2004 and can change. Please note that for the purposes of this report, the EIA's [Short-Term Energy Outlook](#) "reference case" is utilized. Low or high oil price cases would have resulted in, respectively, lower or higher OPEC oil export revenue forecasts -- possibly by about 10% in either direction.)

HIGHLIGHTS

*Assuming the U.S. Energy Information Administration's (EIA's) June 2004 "reference case" [forecast](#) for world oil prices and production (with adjustments for Iraq), OPEC net oil export revenues for 2004 are projected to be \$286 billion ([see table](#)), a 19%



increase from 2003 revenues of \$240 billion, and a 47% increase from 2002 revenues of \$195 billion.

*The growth in projected OPEC oil export revenues for 2004 results mainly from a 14.4% projected increase in 2004 crude oil prices compared to 2003. These higher prices come as world spare oil production capacity hits historic lows, as world oil demand grows strongly, and as OECD and U.S. oil inventories remain at the low end of the 5-year average normal range. As of June 2004, some of the trends seen in 2003 are continuing: 1) unrest and tension in Venezuela; 2) persistent low oil inventories in the United States; 3) instability and attacks on oil infrastructure in Iraq (the Iraq war, which led to a cutoff of Iraqi oil exports starting in mid-March 2003, was followed by a gradual recovery through the end of the year); 4) troubles in Nigeria, which resulted in the loss of some oil production in that country during the spring and summer of 2003; and 5) terrorist attacks in Saudi Arabia.

*Besides prices, increased OPEC net oil export revenues in 2004 will likely result from a 4.6% increase in net oil exports by OPEC countries year-over-year.

* Although OPEC oil export revenues over the past three years have been

significantly higher than during the oil price collapse of 1998/99, they remain, in inflation-adjusted, per capita terms, far below peaks reached in the late 1970s/early 1980s. For OPEC as a whole, per capita oil export revenues (in constant \$2004) are projected at \$530 in 2004, or only about 31% the \$1,691 in real per capita oil export revenues achieved in 1980. This continues to have significant implications for OPEC oil price preferences and policies.

* Iraq earned an estimated \$9.6 billion in oil export revenues during 2003, despite no revenues at all in April and May. For 2004, Iraq's oil export earnings are expected to reach \$17.7 billion, an 85% increase year-over-year. Forecasts for Iraqi oil export revenues are complicated by high levels of uncertainty regarding future Iraqi oil exports, as well as continuing attacks on oil infrastructure (such as the recent spate of attacks on pipelines in northern and southern Iraq).

* Saudi oil export revenues are projected to increase by 13% during 2004, to \$92 billion, compared to \$81 billion earned in 2003 (and \$63 billion in 2002). Since the Iraq war starting in March 2003, Saudi Arabia has benefited both from higher world oil prices as well as from its ability to increase production and exports sharply and rapidly due to the country's large spare production capacity. As a result, Saudi Arabia was able to replace some of the lost production from Venezuela, Iraq, and Nigeria and to reap higher revenues as a consequence. Saudi spare production capacity is now down to around 1-1.5 million bbl/d, leaving little room for increased Saudi production if needed..

*In 2005, OPEC revenues are forecast to be \$267.4 billion, down 7% from 2004 levels, on 7% lower oil prices and roughly flat net oil exports. Iraq's oil export revenues could exceed \$19 billion in 2005, the highest revenues the country has seen since 2000, although there is a high degree of uncertainty attached to this forecast.

* Saudi Arabia maintains the highest share of OPEC oil export revenues (at 34% of the OPEC total in 2003). By 2005, Saudi Arabia's share of OPEC oil export revenues is expected to fall to 31%, as Iraq's share grows from 4% to 7%.

OVERVIEW

OPEC net oil export revenues for 2003 ([see table](#)) are now estimated at

around \$240 billion, up 23% from 2002 levels. For 2004, OPEC net oil export revenues are forecast at \$285 billion, up 19% compared to 2003 levels. Several major world events during 2003 buffeted world oil markets and OPEC oil export revenues. These included: 1) unrest and a major oil supply disruption in Venezuela starting in December 2002; 2) a bitterly cold winter in the northeastern United States; 3) persistent low oil inventories in the United States; 4) the Iraq war, which led to a cutoff of Iraqi oil exports starting in mid-March 2003; and 5) troubles in Nigeria, which resulted in the loss of some oil production in that country in the spring and summer of 2003. Many of these trends are continuing into 2004.

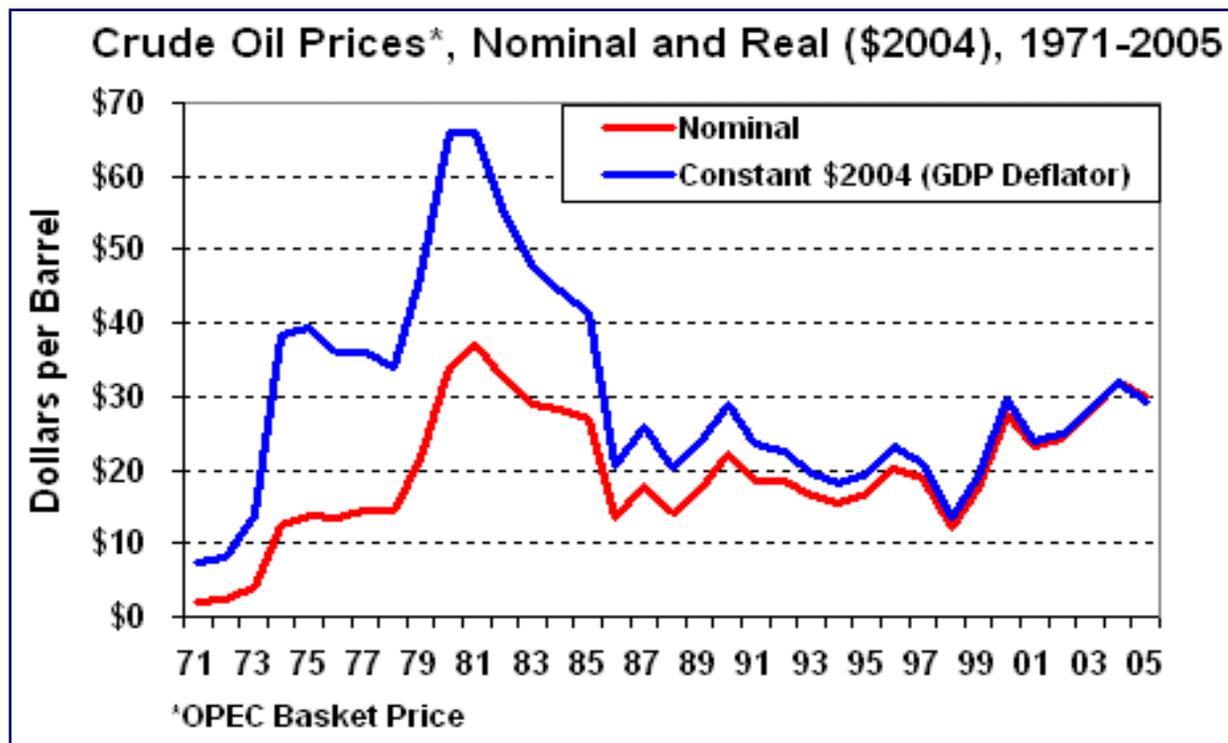
OPEC net oil export revenues in real (inflation adjusted) terms are currently running about 60%-70% above average annual revenues for the 1990s, but remain below the high levels seen from 1974 through 1985. The boom-bust cycle of oil revenues seen over the past 30 years (the 1973 and 1979 oil price shocks; the 1985/86 oil price collapse; the 1990/91 Iraq crisis and oil price spike; the 1997/98 Asian economic crisis and oil price collapse; the current uncertainty regarding terrorist threats, Middle East instability, surging oil demand, etc.), makes long-term budgetary planning a challenge in many OPEC countries, and also complicates efforts to deal with balance of payments deficits, accumulated debt, budget problems, economic reform and rapid population growth.

OPEC Oil Export Revenues at a Glance

	Nominal Dollars (Billions)				Constant \$2004 (Billions)				
	2003E	2004F	Change 2004/2003	2005F	1972E	1980E	1998E	2004F	2005F
<u>Algeria</u>	\$17.8	\$20.8	17%	\$21.0	\$4.8	\$25.6	\$6.8	\$20.8	\$20.6
<u>Indonesia</u>	\$1.4	\$0.2	-86%	-\$0.9	\$3.2	\$29.6	\$3.5	\$0.2	-\$0.9
<u>Iran</u>	\$23.9	\$27.5	15%	\$25.6	\$14.9	\$26.1	\$11.7	\$27.5	\$25.1
<u>Iraq</u>	\$9.6	\$17.7	85%	\$19.4	\$5.2	\$53.8	\$7.5	\$17.7	\$19.0
<u>Kuwait</u>	\$18.7	\$22.5	20%	\$21.4	\$10.0	\$37.3	\$8.9	\$22.5	\$21.0

Libya	\$13.4	\$15.7	17%	\$14.4	\$10.6	\$44.3	\$6.6	\$15.7	\$14.2
Nigeria	\$20.9	\$27.0	29%	\$25.8	\$7.5	\$47.5	\$9.8	\$27.0	\$25.3
Qatar	\$9.4	\$11.2	20%	\$11.0	\$1.6	\$10.7	\$3.8	\$11.2	\$10.8
Saudi Arabia	\$80.8	\$91.7	13%	\$80.9	\$16.8	\$207.8	\$37.9	\$91.7	\$79.4
UAE	\$23.7	\$26.3	11%	\$25.7	\$3.8	\$37.5	\$11.2	\$26.3	\$25.2
Venezuela	\$20.6	\$25.8	25%	\$23.3	\$11.0	\$36.2	\$13.2	\$25.8	\$22.9
TOTAL	\$240.2	\$286.4	19%	\$267.4	\$89.5	\$556.2	\$120.3	\$286.4	\$262.5

Since their collapse to under \$10 per barrel in December 1998, the lowest oil price since prior to the Arab Oil Embargo of 1973, oil prices have rebounded. The OPEC "basket" price (a weighted average of Algeria's Saharan Blend, Indonesia's Minas, Nigeria's Bonny Light, Saudi Arabia's Arabian Light, Dubai's Fateh, Venezuela's Tia Juana, and Mexico's Isthmus), for instance, averaged \$28.10 per barrel during 2003, more than double its 1998 level. For 2004 and 2005, the OPEC basket is forecast to average around \$32 and \$30 per barrel, respectively.



World oil price spikes and crashes are, in many respects, cyclical, as they affect oil supply and demand. For example, the oil price collapse of

1998 led to a large number of well closures (as well as a reduction in oil

exploration and production) in non-OPEC countries, including the United States, where thousands of so-called "stripper" wells were shut down in Oklahoma and Texas. The price collapse also tended to stimulate world oil demand. Higher oil prices since 1999, on the other hand, have tended to encourage an upsurge in oil sector drilling activity and a reduction in oil demand growth.

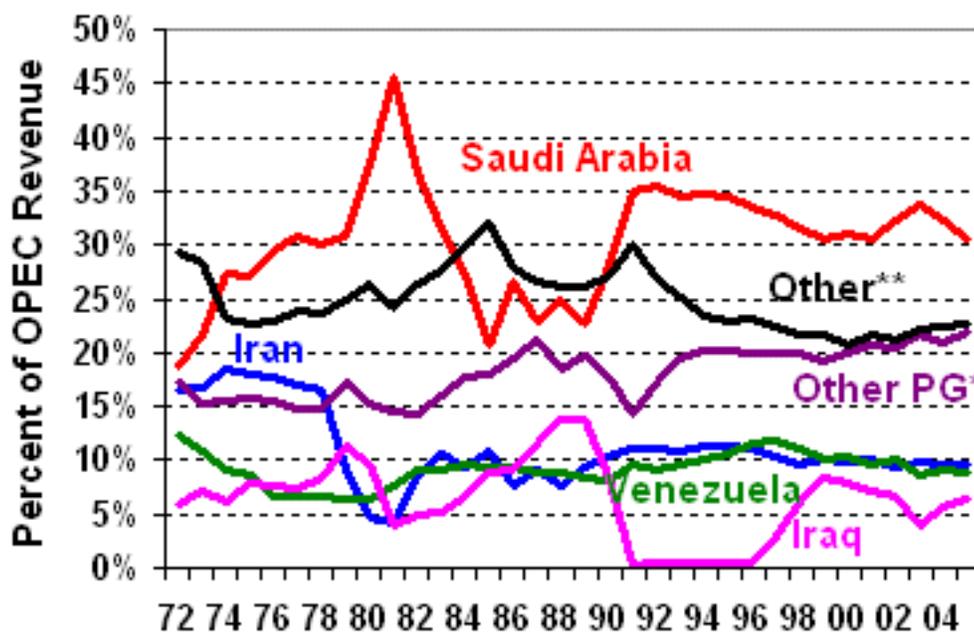
All else being equal, increased oil prices tend to result in improved OPEC countries' economic situations, budgets, and trade balances. Higher oil export revenues also tend to lessen pressures for economic reforms, and make it easier for OPEC countries to increase their spending. However, the impact of higher oil prices is tempered by memories of past price collapses (i.e., 1998), as well as a general understanding that oil prices can be highly volatile. Still, there is little doubt that pressures to make difficult political choices (like cutting popular state subsidies for food and fuel) tend to be lower during relatively prosperous times than in more difficult ones.

Rapidly fluctuating oil export revenues over the past few years also have affected non-OPEC countries, such as Russia and Mexico, significantly. The economic situation in Russia, for instance, improved significantly (with positive economic growth since 1999, following a sharp downturn in 1998), in part as a result of a rebound in the country's oil and gas export revenues since 1998. Russia earned an estimated \$61 billion in net oil export revenues during 2003, with the country's revenues expected to increase another 23% in 2004, to \$75 billion. Russian real (constant \$2000) oil export revenues in 2004 are projected to be the highest since 1990, and nearly four times the revenues earned in 1998.

In real terms (constant \$2004), OPEC revenues peaked in 1980, at \$556 billion (see graph). OPEC's worst revenue year in constant dollar terms since the early 1970s (\$90 billion in 1972) was 1998, when revenues fell to only \$120 billion, slightly below the previous low revenue year of 1988 (\$121 billion in earnings), following the oil price collapse of late 1985/early 1986. OPEC revenues for all of 2003 are estimated at about \$243 billion (in

constant \$2004), just over 40% of 1980 revenues, but around twice as high as 1998 revenues. For the 1990s as a whole (1991-2000), OPEC net oil export revenues (in constant \$2004) were \$1.7 trillion, compared to \$2.3 trillion in the 1980s, and \$3.0 trillion in the 1970s. Thus, total OPEC oil export revenues in real terms during the 1990s were under 60% of revenues in the 1970s. So far, OPEC oil export revenues (in constant \$2004) for 2001-2003 are averaging \$217 billion per year, about 28% above the annual average during the 1990s.

Share of OPEC Net Oil Export Revenues for Selected Countries, 1972-2005



* Other PG (Persian Gulf) includes: Kuwait, Qatar, and the United Arab Emirates

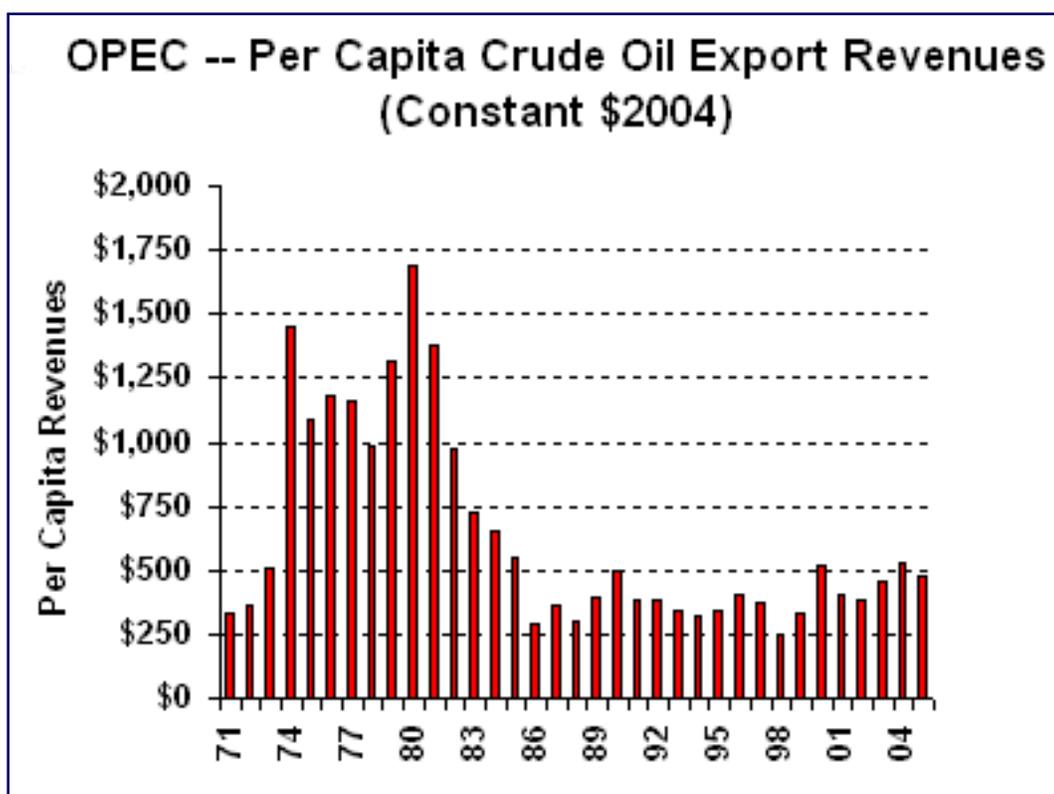
** Other includes: Algeria, Indonesia, Libya, and Nigeria

Individual OPEC members' shares of total oil export revenues have fluctuated over the past three decades, but several trends are apparent (see graph). First, Saudi Arabia consistently has earned more oil export revenues than any other single member of OPEC, with the

Saudi share ranging from below around 16% in 1971 to as high as 46% in 1981, and 34% in 2003. Second, Iran's revenue share fell after the 1978/79 Iranian Revolution (followed soon thereafter by the Iran-Iraq War for much of the 1980s), and has not recovered since. Today, Iran accounts for about 10% of total OPEC net oil export revenues, down from 17%-19% in the 1970s. Third, Iraq's oil export revenue share has fluctuated sharply, from a high of around 14% in the late 1980s, to basically 0% for several years following its

August 1990 invasion of Kuwait (and the subsequent U.N. oil embargo, which continued until May 2003). Iraqi oil export revenues increased since late 1996 under the U.N. "oil-for-food" deal, which permitted Iraqi oil exports to buy food and medicine, for war reparations, and for other U.N.-authorized purposes. For 2003, Iraq's share of total OPEC oil revenues was about 4%, with the share expected to reach 6% in 2004 and 7% in 2005.

In inflation adjusted terms, OPEC per capita oil export revenues are far below the peaks reached in the late 1970s/early 1980s. For OPEC as a whole, per capita oil export revenues (in constant \$2004) are estimated to have reached \$456 in 2003, up 19% from 2002, but just one-fourth the \$1,691 per capita revenues achieved in 1980. For 2004, per capita revenues are expected to reach \$530, still less than one-third of per capita revenues in 1980. The decline in per capita oil export revenues has significant implications for OPEC oil price preferences and policies, especially combined with the fact that OPEC countries' populations are growing rapidly, and that many OPEC countries, despite their seeming oil wealth, are heavily indebted (in part as a result of low oil prices for most of the period from the mid 1980s through the late 1990s, combined with economic mismanagement, war, corruption, etc.).



As with OPEC oil producers, major non-OPEC producers also are affected by fluctuating world oil prices. Russian oil export revenues, for instance, surged sharply after reaching a low point in 1998. This was the result of increases both in oil prices as well as production.

Russian net oil export revenues surged by 35% in 2003 over 2002, to \$61 billion (in constant \$2004). Russia's oil export revenues for 2004, at \$75 billion, are projected to be over four times greater than their low point in 1998.

According to EIA's [Monthly Energy Review](#), the oil price collapse of late 1997 and 1998 cut U.S. net oil import costs during 1998 by around \$20 billion (to \$44 billion) compared to the previous two years. Increased oil prices since then have increased U.S. net oil import costs: to \$60 billion in 1999; \$109 billion in 2000; \$94 billion in both 2001 and 2002, and \$122 billion during 2003. For the first quarter of 2004, U.S. net oil import costs were running about 11% higher than during the first three months of 2003. Oil accounts for just under one-fourth of the total U.S. merchandise trade deficit.

Sources for this report include: Africa News; Agence France Presse; Associated Press; Barclay's Bank Country Reports; BBC Worldwide Monitoring; Business Week; Dow Jones; The Economist; Economist Intelligence Unit (EIU) Country Reports; EIU Viewswire; Emerging Markets Online; Energy Day; Financial Times; Global Insight; International Herald Tribune; International Market Insight Reports; International Petroleum Finance; Middle East Economic Digest (MEED); Middle East Economic Survey (MEES); New York Times; Oil Daily; OPEC Annual Statistical Bulletin, Platt's Oilgram News; Reuters; Washington Post; World Markets Analysis.

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OPEC Revenues: Country Details

Algeria

Algeria's oil and natural gas export revenues account for more than 95% of Algeria's total export revenues, and around three-quarters of total fiscal revenues as well. The combination of strong oil prices and higher net oil exports since 1999 has resulted in significantly higher oil export revenues for Algeria -- an estimated \$17.8 billion in 2003 -- up 48% from \$12.0 billion in 2002 and more than triple the \$5.7 billion earned in 1998. For 2004 and 2005, Algeria's net oil export revenues are forecast at \$20.8 billion and \$21.0 billion, respectively, on higher net oil exports and continued high prices.

In early November 2003, Algeria unveiled its draft budget for 2004. The budget calls for increased social spending and assumes economic growth of 5.1%, inflation of 2.0%, and a \$19 per barrel price for Algerian oil. The oil price assumption appears to be extremely conservative, considering that prices in 2003 averaged around \$10 per barrel higher than this. For 2004, EIA's forecast also indicates significantly higher prices for Algerian oil, perhaps \$9 per barrel above the country's budgetary assumption. Revenues earned from oil prices above the budgeted assumptions are to be channeled into a "stabilization fund." Including the stabilization fund, Algeria's foreign reserves reached around \$30 billion by the end of 2003. In comparison, Algeria's total external debt was estimated at around \$20 billion -- and falling -- at the end of 2002.

Algeria's real GDP grew by over 7% in 2003, with continued strong real growth (around 6%-8%) also expected in 2004 and 2005, as both oil and natural gas export revenues increase. With rapid population growth, Algeria's top priority is to reduce the country's extremely high unemployment rate (estimated at around 50% for the "under-30s" age group). Regardless of fluctuating oil and natural gas revenues, structural reforms and fiscal discipline appear to remain important parts of the government's economic program, as urged by the IMF. To date, however, little progress in this regard appears to have been made. For instance, an important hydrocarbons reform bill, which among other things would "corporatize" state oil company Sonatrach, had gone nowhere as of June 2004. In February 2003, a two-day strike among oil and gas workers was launched in protest of the proposed legislation. Algeria is scheduled to hold Presidential elections in April 2004, meaning that any new reform initiatives will likely wait until mid-2004.

Algeria had net oil exports of 1.6 million barrels per day (bbl/d) of oil in 2003, with 1.7 million bbl/d and 1.8 million bbl/d expected in 2004 and 2005, respectively. This represents a sharp increase in just the past few years (i.e., 1.2 million bbl/d in 2000), and very well could continue given Algeria's ambitious oil

production expansion plans. Algeria produces well over its OPEC crude output quota of 750,000 bbl/d.

Besides oil, Algeria is a large and growing natural gas exporter, both by pipeline (to Europe) as well as by liquefied natural gas (LNG) tanker. In the long run, export revenues from natural gas exports are likely to grow in importance as new fields (like In Salah and In Amenas) come online. A short-term setback occurred, however, on January 19, 2004, with a boiler explosion at the Skikda LNG export terminal, Algeria's second largest next to Arzew. The blast killed at least 27 people and shut down operations at several adjacent facilities, including a refinery and crude oil and petroleum product loading terminals. Three liquefaction trains (out of six) at Skikda were heavily damaged, accounting for 11% of Algeria's total LNG capacity. Energy Minister Chekib Khelil has promised to build two new LNG trains in Skikda, with double the capacity of the three destroyed units and utilizing the most advanced technology. The cost of rebuilding could approach \$800 million.

Indonesia

Indonesia's oil export revenues are forecast at just \$0.2 billion in 2004, down 82% from the \$1.4 billion earned in 2003 and a decline of 95% from 2000 revenue levels. Reduced Indonesian oil production, combined with increased consumption, have been responsible for a continuing sharp decline in Indonesia's oil exports since 1998. Indonesia is expected to export only 16,000 bbl/d of oil (on a net basis) in 2004, down over 97% from the 697,000 bbl/d of net oil exports seen in 1998. In 2005, Indonesia actually is expected to become a net oil *importer* for the first time in decades (at its peak in 1977, Indonesia exported nearly 1.4 million bbl/d). The result of this decline, despite relatively strong oil prices, has been a sharp -- and ongoing -- reduction in Indonesia's oil export earnings. At the same time, however, liquefied natural gas exports -- and earnings -- have been increasing. This is important since Indonesia depends heavily on oil and gas export earnings account for a significant share (around 29%) of its government revenues. Already, Indonesia has the lowest per capita oil export revenues in OPEC, at around \$6 per person (in constant \$2004) in 2003, down 97% from the \$204 per person earned in 1981.

For 2003, the Indonesian economy, despite unresolved structural problems and political turmoil, as well as around \$150 billion in foreign debt, grew (in real terms) by an estimated 4.1%. For 2004, real GDP growth is forecast at around 4.9%. Indonesia's merchandise trade balance recorded a surplus of \$24.7 billion in 2003, given strong prices for major export commodities (including oil).

Indonesia's oil price projection for the country's 2004 state budget is \$22 per barrel (for Indonesian oil), compared to around \$30 per barrel for Indonesian oil in 2003 (and around \$34 per barrel through the first half of 2004). For 2005, Indonesia is proposing an oil price assumption of \$22-\$25 per barrel. Fluctuating oil prices affect Indonesia in a variety of ways, particularly since the country is a relatively small net oil exporter. For instance, lower oil prices reduce oil export revenues but also lower fuel costs to consumers. Indonesia maintains large, expensive, but politically popular state subsidies on many basic commodities, including fuels. In 2004, these subsidies are expected to triple, to more than \$4 billion, given the fact that oil prices are so much higher than assumed in the budget.

Iran

Iran's economy relies heavily on oil export revenues -- around 80% of total export earnings and 40%-50% of the government budget. Strong oil prices the past couple of years have helped Iran's economic and budgetary situations greatly. For 2003, Iran's real GDP grew by around 5%; for 2004 and 2005 it is expected to grow at around 4.5%-5.5% annually. High oil prices and revenues also have helped Iran's trade surplus grow sharply, to \$2 billion in 2003/2004, while foreign debt fell from \$14 billion in March 1999 to \$9 billion in June 2003. Iran's Forex Reserve Fund, in which surplus hard currency earnings are deposited, reached \$5.5 billion in late 2003.

As a result of higher oil prices and net oil exports, Iran's net oil earnings during 2003 rose by 29%, to \$23.9 billion. For 2004 and 2005, Iran is expected to earn around \$28 billion and \$26 billion, respectively. Despite these relatively strong oil export revenues, Iran continues to face budgetary pressures, a rapidly growing, young population with limited job prospects; high unemployment; heavy dependence on oil revenues; significant external debt (including a high proportion of short-term debt); expensive state subsidies on many basic goods; a large, inefficient public sector and state monopolies (bonyads, which control at least a quarter of the economy and constitutionally are answerable only to supreme leader Ayatollah Ali Khamenei); international isolation and sanctions. To cope with its economic problems, Iran's government has proposed a variety of privatization and other restructuring and diversification measures. Progress in this area has been slow, although in early 2003, a parliamentary commission approved foreign investment in the country's oil refining sector.

Iran's \$127 billion budget for 2004/2005 reportedly was based on a price assumption for Iranian oil of around \$19.90 per barrel. This compares to an average price for Iranian crude oil in 2003 of around \$26 per barrel, and a forecast price for 2004 of around \$30 per barrel. Iranian budget deficits have been a chronic problem, in part due to large-scale state subsidies -- totaling some \$4.7 billion per year -- including foodstuffs and especially gasoline. Higher oil export revenues the past couple of years have helped ameliorate this situation, as Iran gains around \$900 million in revenues for every \$1 per barrel increase in the price of its oil. Excess revenues above \$16.1 billion are slated to go into an "oil stabilization fund." Iran is expected to average net oil exports of around 2.5 million bbl/d of crude oil in 2004 and 2005, about the same as in 2003.

[Iraq](#)

The past year has been a tumultuous time for Iraq, and this has been reflected in its oil exports and oil export revenues. At the beginning of 2003, Iraq was producing around 2.6 million bbl/d of oil. This fell to just 73,000 bbl/d in April, before rising gradually to 2.0 million bbl/d by December. For 2003 as a whole, EIA estimates Iraqi oil production of 1.3 million bbl/d, and export earnings of \$9.6 billion. Iraq's 2003 oil export revenues were down 25% from the \$12.8 billion earned in 2002, and less than half the revenues earned in 2000. For 2004, Iraqi oil export revenues are expected to be up 85%, to \$17.7 billion. For 2005, revenues are expected to increase once again, to \$19 billion or more. This forecast assumes that Iraqi net oil exports will reach 1.6 million bbl/d in 2004 and 1.9 million bbl/d in 2005. This assumption is subject to a large degree of uncertainty. If, for instance, Iraqi production and exports do not rebound as forecast, Iraqi oil export revenues could be far less than forecast. Alternatively, if Iraqi production and exports rebound faster than expected, revenues would be higher than projected here.

In October 2003, Iraq unveiled its draft 2004 budget, which anticipated spending of \$13.5 billion. One of the largest components of Iraq's spending is subsidies, largely on food and fuel. One estimate is that Iraq spends \$4 billion per year on such subsidies, which are highly popular politically and therefore difficult to trim. Besides subsidies, Iraq will need to spend large amounts of money in coming years on rebuilding the country's infrastructure, including power generation and transmission, crude oil production and exports, and oil refining. Currently, Iraq has insufficient refining capacity to meet its product needs and must import around \$250 million per month in gasoline, kerosene, etc.

In May 2004, a revenue stabilization account was set up to help protect Iraq from fluctuations in oil revenues. The account received an initial \$180 million in funds from the Development Fund for Iraq (DFI), which is run by the Coalition Provisional Authority (CPA) and which uses oil revenues to help rebuild Iraq. At the end of June 2004, when the CPA officially hands over sovereignty, the DFI, with assets from oil export revenues of \$10 billion, is to be run by the Iraqi government. In late June 2004, U.N.-mandated auditors (under the authority of the U.N.-authorized International Advisory and Monitoring Board) issued an interim report stating that the DFI has been "open to fraudulent acts," and criticizing the way \$11 billion in Iraqi oil revenues have been spent since a May 2003 UN Security Council resolution creating the DFI. The auditors also criticized Iraq's State Oil Marketing Organization (SOMO) for its accounting practices.

Besides the DFI, a portion of Iraq's oil revenues are also obligated to pay for claims stemming from the 1990/91 Gulf War. In 2003, the percent of Iraqi oil revenues going towards such claims was reduced from 25% to 5%. Iraq's interim leaders have stated that Iraq should not be liable for claims stemming from a war started by former President Saddam Hussein, nor should they be forced to pay the \$120 billion in debts incurred by Hussein. Already, talks have taken place with major creditor nations on forgiving or reducing some of Iraq's debt burden.

In the medium- and long-term, Iraq could increase its oil production, exports, and export revenues substantially. According to the Oil and Gas Journal, Iraq contains 115 billion barrels of proven oil reserves, the third largest in the world (behind Saudi Arabia and Canada). Estimates of Iraq's oil reserves and resources vary widely, however. Some analysts (e.g., the Baker Institute, the Center for Global Energy Studies) believe, for instance, that deep oil-bearing formations located mainly in the vast, unexplored Western Desert region could yield large additional oil resources (possibly another 100 billion barrels or more). Other analysts, such as the US Geological Survey, are not as optimistic, with median estimates for additional Iraqi oil reserves closer to 45 billion barrels.

Iraq's oil production costs are amongst the lowest in the world, making it a highly attractive oil prospect. However, only 15 of 73 discovered fields have been developed, while few deep wells have been drilled compared to Iraq's neighbors. Overall, only about 2,000 wells reportedly have been drilled in Iraq (of which about 1,500-1,700 are actually producing oil), compared to around 1 million wells in Texas for comparison purposes. In addition, Iraq generally has not had access to the latest, state-of-the-art oil industry technology (i.e., 3D seismic), sufficient spare parts, and investment in general throughout most of the 1990s, but has instead reportedly been utilizing questionable engineering techniques (i.e., overpumping, water injection/"flooding") and old technology to maintain production.

Kuwait

With oil revenues accounting for about 90% of Kuwait's government income (and around 40%-50% the country's GDP), sharply increased oil prices since early 1999 have had positive implications for Kuwait's financial, budgetary, and economic situations. For fiscal year 2003/04 (which runs through March 2004), Kuwait assumed oil prices of \$15 per barrel (for Kuwaiti oil), with actually prices running more than \$10 per barrel higher. As a result of this windfall, Kuwait recorded a large budget surplus, estimated around \$7 billion, for the fiscal year ending March 31, 2004.

Following a serious recession in 1997 and 1998, Kuwait's economy grew by about 1.5% in 2002 and 5.6% in 2003. During 2004 and 2005, Kuwaiti real GDP is expected to grow by 5.5% and 4.1%, respectively. Kuwaiti net oil export revenues in 2004 are projected at \$22.5 billion, up 20% from 2003 revenues of \$18.7 billion, and more than double 1999 revenues. Kuwaiti net oil exports are expected to average around 2.1 million bbl/d in 2004, up from 2.0 million bbl/d in 2003, as the country increases production in response to high world oil prices.

Kuwait's relatively healthy oil export revenues and economic situation, paradoxically could make things worse in the long run if they dissuade Kuwait from undertaking important reforms (i.e., privatization, taxation, foreign investment) or maintaining fiscal discipline. Currently, however, Kuwait's budget appears to be in surplus, and the country appears to be moving ahead with spending increases on public works, including port expansion and a new north-south pipeline. Meanwhile, Kuwait's population is growing rapidly, and job opportunities for native Kuwaitis remain limited. And, despite the current surge in oil revenues, Kuwait's per capita oil export revenues in constant, 2004 dollars, are projected at \$8,584 in 2004, less than one-third the peak levels reached in 1979/1980.

Kuwait maintains large cash reserves -- more than \$65 billion as of late 2003 -- in its Reserve Fund for Future Generations (RFFG), which by law receives 10% of all revenues. Despite this, and despite sporadic attempts at diversification, privatization, and attraction of foreign investment, Kuwait today remains nearly totally dependent on the vagaries of oil markets for its economic fortunes.

Kuwait is still being affected by the 1990/91 Iraqi invasion. Billions of dollars in compensation claims have been paid to Kuwaiti individuals and institutions, and billions more remain unpaid. In total, Kuwait claims around \$120 billion from Iraq for damage done during the 1990/91 war. The chances of Kuwait receiving all this money, however, are growing increasingly doubtful, as the Iraqi government has claimed it should not be liable for actions taken by former President Saddam Hussein. Also, in 2003, the percent of Iraqi oil revenues going towards compensation claims was reduced from 25% to 5%.

Libya

Libya earned an estimated \$13.4 billion from oil exports in 2003, up 28% from 2002 revenues. For 2004, Libya is projected to earn \$15.7 billion. Oil export revenues account for about 95% of Libya's hard currency earnings and around 75% of government expenditures. Over the past several years, Libyan oil export production and export earnings have been adversely affected by U.N. (and U.S.) sanctions

imposed in the years following the 1988 bombing of Pan Am flight 103 over Lockerbie, Scotland, in which 270 people were killed (see EIA's report on [energy sanctions](#)). In late April 2003, Libya's foreign minister stated that Libya had "accepted civil responsibility for the actions of its officials in the Lockerbie affair," and in September 2003 the UN Security Council officially lifted its sanctions. Following this action, Libya made its first payment -- \$4 million -- to each family.

In January 2004, the Bush Administration announced that US sanctions would remain in place for the time being, despite Libya's formal announcement on December 19, 2003 that it would abandon its weapons of mass destruction (WMD) programs and allow unconditional international inspections on its facilities. On February 26, 2004, the United States rescinded a ban on travel to Libya and authorized U.S. oil companies with pre-sanctions holdings in Libya to negotiate on their return to the country if and when the United States lifted economic sanctions. On April 23, 2004, the United States eased economic sanctions even further. A written statement from the White House Press Secretary stated, "U.S. companies will be able to buy or invest in Libyan oil and products. U.S. commercial banks and other financial service providers will be able to participate in and support these transactions" (that same day, Libya's state-owned National Oil Corporation announced its first shipment of oil to the United States in over 20 years). On May 4, 2004, the Director of Planning for the National Oil Company of Libya announced that Libya would hold an auction by the middle of 2004 for eight new prospective oil and natural gas projects, marking the first opportunity for U.S. energy companies to do new business in Libya since U.S. sanctions were greatly eased in April 2004.

For 2003, Libya's real GDP grew by around 4.7%, up from -0.2% growth in 2002. For 2004 and 2005, Libya's real GDP is expected to grow by 6.1% and 6.8%, respectively. Low oil revenues in 1998 and 1999 had forced Libya to adopt a more conservative fiscal policy and to limit public infrastructure spending to a few main projects, such as the Great Man Made River (GMR), a \$25 billion project to bring water from underground aquifers beneath the Sahara to the Mediterranean coast. The rebound in oil prices since 1999, and the suspension of U.N. sanctions, have resulted in a modest improvement in Libya's economic situation. On the other hand, higher oil earnings may also be removing incentives for Libya to restrain spending and to implement needed economic reforms.

Still, Libya is looking at possible areas, such as tourism, for economic expansion outside the hydrocarbons sector. In June 2003, President Qadhafi said that the country's public sector had failed and should be abolished, while calling for privatization of the country's oil sector, in addition to other areas of the economy. Qadhafi also pledged to bring Libya into the World Trade Organization (WTO), and appointed former Trade and Economy Minister Shukri Muhammad Ghanem, a proponent of privatization, as Prime Minister. During 2003, Libya unified its multi-tiered exchange rate system (official, commercial, black-market) while effectively devaluing the country's currency. Among other goals, the devaluation aimed to increase the competitiveness of Libyan firms and to help attract foreign investment into the country. In October 2003, Prime Minister Ghanem announced a list of 361 firms in a variety of sectors -- steel, petrochemicals, cement, agriculture -- to be privatized in 2004. Whether or not this will be carried out remains to be seen.

For 2003, Libya's per capita oil export revenues in constant 2004 dollars were \$2,449, only about 15% of

1980 peak levels. Libya continues its attempts at diversifying the country's economy away from oil and towards natural gas, and generally has kept government spending under tight control in recent years. Libya is expected to export around 1.3 million bbl/d of oil in 2004 and 2005, about the same as 2003 export levels.

Nigeria

Crude oil exports generate over 90%-95% of Nigeria's foreign exchange earnings and 80% of government revenues. Nigeria's net oil export revenues are expected to increase 29% in 2004, to \$27.0 billion, compared to \$20.9 billion in 2003 and \$16.5 billion in 2002. This represents a big increase from 1998, when the country earned less than \$9 billion amidst a period of political and social turmoil following the deaths of President Sani Abacha on June 8, 1998 and of Mashood Abiola -- presumed winner of 1993 presidential elections -- on July 7, 1998, and the election of a new president (General Olusegun Obasanjo) on March 1, 1999. Political turmoil over the past several years, including a flare up in March 2003 which resulted in *force majeure* declarations by ChevronTexaco and Shell, both large oil producers in Nigeria, has had a serious effect on the country's economic and fiscal situations. In addition, Nigeria's oil revenues are reduced by theft and illegal bunkering of oil (by thieves and criminal syndicates), possibly by several billion dollars per year.

Nigeria's real GDP is estimated to have grown by 4.2% in 2003, with forecast growth of 3.6% in 2004 and 3.1% in 2005. Nigeria is expected to export around 2.2 million bbl/d of crude oil in 2004, up from the 1.9 million bbl/d it exported in 2003. Nigeria's 2004 budget reportedly is based on an assumption of \$23 per barrel (for Nigerian oil), about \$11 per barrel below EIA's oil price forecast for Nigeria for 2004.

Despite its huge oil wealth, most of Nigeria's population is extremely poor. According to the World Bank, around 80% of Nigeria's oil and natural gas revenues accrue to just 1% of the population, while the other 99% receive the remaining 20% of the revenues. Overall, Nigeria's per capita oil export earnings are the second lowest in OPEC, next to Indonesia, at around \$212 per person (in constant \$2004). This compares to \$589 per person earned in 1980, the peak year for Nigerian oil export revenues (in inflation-adjusted terms).

Nigeria maintains significant subsidies on oil products, and attempts to raise product prices have often met with angry reactions by the Nigerian people. In late May and early June 2004, for instance, increases in gasoline prices led to calls for a nationwide strike called by the Nigerian Labor Congress (NLC). The Nigerian High Court subsequently ordered the NLC not to proceed with the strike, and also ordered fuel marketers to reverse price increases.

Another source of tension in Nigeria is over the division of oil revenues between state and national governments. In February 2001, the Obasanjo government (reelected in April 2003) took the unprecedented step of asking Nigeria's Supreme Court to intervene in its argument with the 36 regional state governments over control of the country's offshore oil and gas resources. In a 10-point statement, the Obasanjo government stated that all natural resources within the territorial waters of Nigeria are derived from the federation and not from any one state, and asked that the Supreme Court validate this

position. In April 2002, the Supreme Court ruled that Obasanjo's position was correct, sparking threats of violence and unrest. In October 2002, however, the Nigerian legislature passed an amendment to the country's oil revenue sharing law, meaning that coastal states will once again earn 13% of the revenues from oil produced in the Gulf of Guinea off their coasts. In February 2003, both parties agreed that this area should be returned to the JDZ, with future oil revenues from it split on a 60-40 basis.

Qatar

Oil continues as the dominant feature of Qatar's economy, although liquefied natural gas (LNG) exports and gas-based petrochemical industries are becoming increasingly important and the government is pushing diversification efforts. Oil accounts for around 70% of Qatar's government revenues, and also has an impact on production of condensate and associated natural gas. Increased oil prices since early 1999 are helping Qatar in several ways, not the least of which is the increase in revenues which can be used to balance the country's budget and to pay for a huge liquefied natural gas (LNG) and petrochemicals development program. Qatar has the third largest gas reserves in the world, after Russia and Iran, and is rapidly expanding LNG export facilities, including the Rasgas development (a third LNG train is slated to come online in 2004). Qatar also is increasing spending on public services, infrastructure development, and debt repayment. Meanwhile, the country is looking to reform its generous welfare system, including heavy subsidies on water and electricity consumption, although this could prove politically difficult to carry out.

Qatar's oil export earnings for 2004 currently are forecast at \$11.2 billion, up 20% from the \$9.4 billion earned in 2003. Qatar's budget for 2003/2004 was based on an assumed oil price of only \$17 per barrel, around \$10-\$15 per barrel below the actual price. Given this, combined with higher earnings from LNG exports, Qatar's budget appears likely to achieve a significant budget surplus, despite increases in spending. Qatar's real GDP is estimated to have grown by about 5.0% in 2003. For 2004, Qatar's real GDP growth is forecast at 4.7%. Qatar is expected to export around 40,000 bbl/d more oil in 2004 than it did in 2003.

Saudi Arabia

Saudi Arabia is the world's largest crude oil producer and a leader in OPEC's production quota decisions. As such, Saudi Arabia was a critically important player behind the oil price collapse of late 1997 through early 1999, and also in actions taken by world oil producers which have led to a tripling in oil prices by the fall of 2000. During 2003, Saudi Arabia produced an estimated 9.9 million bbl/d of oil (33% of total OPEC oil production), with net export of around 8.4 million bbl/d (the comparable figures for 2002 as a whole were 8.4 million bbl/d and 6.9 million bbl/d, respectively).

During the first few months of 2003, with Venezuelan production partially disrupted (see below), along with the Iraq situation as well as problems in Nigeria, significant excess oil production capacity from Saudi Arabia -- the main country in OPEC with surplus capacity available -- was brought online. As a result, Saudi total oil production (crude, natural gas liquids, lease condensates, other liquids) increased from about 8.7 million bbl/d in the third quarter of 2002 to 9.9 million bbl/d in the first quarter of 2003 and 10.3 million bbl/d in the second quarter of 2003. Combined with higher oil prices, this resulted in a huge surge in Saudi oil export revenues, from around \$6 billion per month during the second half of 2002

to over \$7 billion per month during the first few months of 2003. For 2003 as a whole, Saudi Arabia earned about \$81 billion in net oil export revenues, up \$18 billion from 2002 revenue levels. As oil prices Saudi net oil export revenues are forecast to reach \$92 billion in 2004, up 13% from 2003, on higher prices. For 2005, Saudi revenues are forecast at \$81 billion, on lower oil production and exports.

The dramatic decline in oil revenues which Saudi Arabia experienced during 1998 and early 1999 represented a major challenge for the country's government (since oil export revenues account for nearly 90% of total Saudi export earnings). Increased oil prices -- and revenues -- since then have significantly improved Saudi Arabia's economic situation, with real GDP growth of 4.6% in 2003, 3.5% growth forecast for 2004, and a healthy current account surplus. For fiscal year 2003, Saudi Arabia had been expecting a budget deficit of around \$10 billion, but this was based on an extremely conservative price assumption of \$17.50 per barrel for Saudi oil, and also did not take into account the huge production surge which actually occurred. As a result of both higher oil prices and exports, Saudi Arabia reportedly experienced a large budget surplus, on the order of \$12 billion, in 2003. This was only the second such surplus for Saudi Arabia in 20 years. For 2004, another budget surplus appears likely.

In spite of the recent surge in its oil income, Saudi Arabia continues to face serious long-term economic challenges, including high rates of unemployment (around 15%-20%), one of the world's fastest population growth rates, and the consequent need for increased government spending. All of these place pressures on Saudi oil revenues. The Kingdom also is facing serious security threats, including a number of terrorist attacks (on foreign workers, primarily) in 2003 and 2004. In response, the Saudis reportedly have ramped up spending in the security area (reportedly by 50% in 2004, from \$5.5 billion in 2003). For 2004, the budget appears expansionary, with strong spending on infrastructure projects. According to the Saudi American Bank (SAMBA), the 2004 budget requires a \$19 per barrel price for Saudi oil at 7.7 million bbl/d of crude oil production (compared to an OPEC quota of 8.288 million bbl/d. This compares to the EIA forecast price for Saudi oil of \$30 per barrel in 2004.

Saudi Arabia's per capita oil export revenues (in inflation adjusted, \$2004) remain far below high levels reached during the 1970s and early 1980s. In 2003, for instance, Saudi Arabia earned around \$3,683 per person, versus \$22,174 in 1980. This 83% decline in real per capita oil export revenues since 1980 is in large part due to the fact that Saudi Arabia's young population has more than doubled since 1980, while oil export revenues in real terms have fallen by around two thirds (despite the recent increase in revenues). Meanwhile, Saudi Arabia has faced nearly two decades of heavy budget and trade deficits, the expensive 1990/1991 war with Iraq, and total government debt approaching 100% of Saudi GDP. On the other hand, Saudi Arabia does have extensive -- around \$110 billion -- foreign assets, which provide a substantial fiscal "cushion." In 2003, Saudi Arabia used some of its budget surplus to pay down its debt.

Finally, surging oil export revenues removes an incentive for Saudi Arabia to undertake needed economic reforms, such as reduction in the bloated state sector, as urged by the IMF and others. Movement towards economic reform in Saudi Arabia remains uneven at best. For instance, reducing subsidies and increasing tariffs on electricity has proven problematic, with a rate increase announced in April 2000 subsequently reversed in October in the face of widespread public opposition. Besides economic reform, Saudi Arabia also has made only slow progress on another of its main domestic goals -- attracting foreign direct

investment. One significant recent development on the foreign investment front was the cancellation, in May 2003, of the ambitious, \$20 billion "Saudi Gas Initiative." Following cancellation of the SGI, Saudi Arabia repackaged the project as a series of smaller, more focused contracts, with better rates of return than previously offered. At the same time, the Saudis moved away from the integrated upstream/downstream gas, water, power, and petrochemical nature of the SGI, and instead specifically targeted upstream natural gas development in the area that had comprised Core Venture 3. In January 2004, Russia's Lukoil won a tender to explore for and produce non-associated natural gas in the Saudi Empty Quarter. Lukoil will operate in Block A, near Ghawar, as part of an 80/20 joint venture with Saudi Aramco. Also in January 2004, China's Sinopec won a tender for gas exploration and production in Block B, while an Eni-Repsol consortium was granted a license to operate in Block C.

[UAE](#)

The United Arab Emirates (UAE) earned an estimated \$23.7 billion in net oil export revenues in 2003, up 30% from 2002 revenues. For 2004 and 2005, the UAE is projected to earn \$26 billion each year. As with other OPEC countries, relatively strong oil prices and revenues in recent years have helped to significantly improve the UAE's economic, trade, and budgetary situations. The UAE economy is relatively diversified, having moved increasingly towards services (tourism, banking, re-exports, information technology, etc.). Privatization has moved ahead relatively quickly, and the country has set up the Sharjah Airport International Free Zone to encourage foreign trade and investment. These moves have helped to moderate the effects of fluctuating oil prices (and revenues). The UAE's current account ran a \$12.5 billion surplus in 2003; for 2004, an \$8.7 billion surplus is expected.

In April 2003, the IMF praised the UAE's efforts at maintaining economic growth while keeping the fiscal, trade balance, and inflation situations under control. At the same time, the IMF urged the UAE to move ahead with needed structural reforms, including creation of a modern, broad-based tax system and encouragement of private investment.

For 2004, the UAE is expected to export around 2.2 million bbl/d of oil, down 4% compared to 2003 export levels. Real growth in the UAE's gross domestic product (GDP) is projected at 4.0% for 2004 and 4.6% for 2005, similar to the estimated 4.5% real growth experienced during 2003. The UAE's budget for 2004 reportedly calls for major increases in federal expenditures. Most of the UAE's federal revenue is provided by Abu Dhabi, the richest emirate in the federation.

[Venezuela](#)

Venezuela is expected to earn \$25.8 billion in oil export revenues during 2004, up 25% from 2003 revenues. During late 2002 and early 2003, a general strike and related unrest gripped Venezuela, reducing the country's oil production sharply. In January 2003, Venezuela's oil output fell to only 697,000 bbl/d, down nearly 80% from the 3.3 million bbl/d produced in November 2002. Total Venezuelan oil output then rebounded to 1.6 million bbl/d in February 2003 as the strike ended, 2.6 million bbl/d in March 2003, and 3.0 million bbl/d by the summer of 2003. For 2004, EIA expects Venezuelan output to average 2.8 million bbl/d, up from 2.6 million bbl/d in 2003. In contrast, Venezuela's proposed 2004 budget assumes total oil output of 3.4 million bbl/d, well above the EIA forecast.

Oil export revenues are a serious matter for Venezuela, since the country relies on these revenues for around 75%-80% of total export earnings and 40%-50% of government revenues. Given the country's recent political and economic crises, Venezuela's real GDP declined by about 9% in 2002 and another 9% in 2003. Venezuela's economy plummeted 29% in the first quarter of 2003 alone as a result of the nationwide unrest, costing the country billions of dollars in foregone oil revenues and other economic losses. For 2004, the country is expected to see a turnaround to some degree, with projected real economic growth of around 5%, and a budget which calls for sharply increased infrastructure and social spending. This assumes a degree of calm; however, a mid-August referendum on President Chavez's rule is believed by many Venezuela watchers to have the potential of causing political instability.

Over the past few years under President Chávez, cuts in state oil company PdVSA's budget, combined with a lack of adequate foreign investment, a policy of strict adherence to OPEC quotas, and the dismissal of many PdVSA employees have crimped the company's ambitious long-term expansion plans. According to a five-year plan released in late February 2001, PdVSA aimed to raise the country's crude oil production capacity to 5.5 million bbl/d by 2006 (Chávez had previously planned to reach capacity of 5.5 million bbl/d by 2008). Also, according to a statement made in May 2004, PdVSA plans to invest \$26 billion in oil and natural gas exploration and production between 2004-2009, with oil production reaching 5 million bbl/d by 2009. At present, this goal appears unlikely, with EIA estimating Venezuela's current crude oil production capacity at just 2.45 million bbl/d. In addition, private oil service companies operating in Venezuela reportedly had yet to see significant signs of increased investment by PdVSA as of June 2004.

According to PdVSA's 2004 budget, a total of \$1.7 billion of the company's \$15 billion budget has been dedicated to fund social programs, while \$5 billion is ostensibly targeted at boosting oil production capacity. In addition to the \$1.7 billion budgeted for social programs, PdVSA President Ali Rodriguez announced in early June 2004 that the company would also contribute \$750 million to a new development fund, plus \$600 million to a fund dedicated to agriculture. These contributions leave PdVSA with less money to invest in oil projects. For instance, it is believed that PdVSA requires around \$2 billion a year simply to compensate for natural decline rates at oilfield in the country, yet PdVSA may have only \$3 billion to invest in all oil-related projects in 2004. Many analysts have predicted that these social outlays could compromise the country's oil production, as Venezuela's oil sector reportedly has been suffering from under-investment.

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June 2004

Major Non-OPEC Countries Oil Revenues

Oil prices fell sharply after the terrorist attacks of September 11, 2001, but rebounded in early 2002 and have remained high since. Fluctuating oil prices (and revenues) can have a significant impact on non-OPEC oil exporting countries, such as **Mexico, Norway, Russia**, and others.

For **Mexico**, higher oil prices have a generally, but not completely, positive impact. One mitigating factor is that oil export revenues make up less than a tenth of Mexico's total exports, down from more than 70% two decades ago. Another mitigating factor is that the vast majority of Mexico's exports go to the United States, which on balance is harmed by high oil prices. Thus, an increase in oil prices tends to hurt Mexico's main customer for its non-oil exports, which in recent years have represented a rapidly growing sector of Mexico's economy. Higher oil prices also tend to increase inflationary pressures and interest rates in Mexico, while reducing pressures for important economic reforms. On the other hand, despite the fact that Mexican oil export revenues make up only about 7% of total export revenues, they account for around one-third of government income, meaning that the oil sector plays a major (even disproportionate) role in Mexican economic policy.

For 2003, EIA estimates Mexican oil export revenues of about \$16 billion, up 23% from 2002, on net oil exports of 1.7 million bbl/d and an average price for Mexican oil -- mainly heavy Maya crude -- of \$24.74 per barrel. For 2004, Mexico's oil export revenues are expected to increase by about 15% (to \$18.1 billion) on higher oil prices, then decline slightly (1%) in 2005.

Mexico's economy is expected to grow at a 3.8% rate in 2004, which represents an increase from the estimated 1.3% growth in 2003 (and 0.9% growth in 2002). In general, Mexico's economy appears to be recovering slowly from a recession which began in 2001. Still, Mexico's 2004 budget calls for a 1% reduction in government spending as the tax base has not kept up with population growth. The budget assumes a price for Mexican oil of \$18 per barrel, compared to \$18.35 per barrel in the 2003 budget. This is about \$10 per barrel below the forecast price for Mexican oil in 2004. Mexico's main crude export grade is heavy sour Maya, which is of relatively low quality and therefore fetches a relatively low price on world markets. The other main Mexican export crude is light Isthmus, which sells for around \$5-\$6 per barrel more than Maya.

Russia depends upon energy (mainly oil and natural gas) exports for critical shares of its total export earnings (around 50% in 2003) and government revenues. Oil export revenues also are used to help pay

off Russia's large (around \$123 billion as of early 2003) foreign debt. Thus, oil price fluctuations are of definite concern to Russia. The sharp rebound in oil prices over the past few years has been good news for Russia -- and especially its oil sector -- after an extremely difficult 1998 and early 1999. During 2000-2003, for instance, Russia's top oil producers (Lukoil, Yukos, etc.) made windfall profits, resulting in billions of dollars worth of additional tax revenues to the Russian government. Many Russian oil companies also have begun to upgrade decaying oil infrastructure and to undertake new exploratory drilling. EIA is forecasting Russian oil export revenues at \$75 billion for 2004, up 23% from the \$61 billion earned in 2003 (and the highest in "real" terms since 1990), on higher oil prices and net oil exports.

In addition to oil prices, Russian oil production has rebounded over the past few years. In 2004, Russia is expected to produce around 9 million bbl/d of oil, up 48%, from 6.1 million bbl/d, in 1998. For 2003, Russian oil production averaged about 8.4 million bbl/d, with consumption of 2.7 million bbl/d and net exports of 5.8 million bbl/d.

Buoyed by surging oil export revenues, Russia's real gross domestic product (GDP) grew 10% in 2000, with slower (but still strong) growth in 2001 (5%), in 2002 (4.3%), and in 2003 (5.9%). Russia's real GDP is expected to grow strongly again in 2004, at a 5.1% rate. The oil export revenue windfall experienced by Russia since 2000 has helped the Russian government pay down some of its large foreign debt and to run significant trade surpluses, with an estimated \$55 billion merchandise trade surplus and a \$38 billion current account surplus in 2003. In addition, Russia's foreign exchange and gold reserves totaled around \$78 billion at the end of December 2003. Given this positive fiscal situation, Moody's rating agency upgraded Russia's credit rating in October 2003 to "investment grade" for the first time ever. On a related note, the Russian government recently has been attempting to capture more of the country's oil revenues from oil companies, in part by raising their taxes and in part by cracking down on their use of tax "loopholes." It is estimated that Russian oil and natural gas revenues provide as much as 40% of the national government's budget (and 55% of export earnings), mainly through taxes on hydrocarbon production and duties on exported crude and products.

In the long term, the International Monetary Fund (IMF) and others have warned that Russia remains overly dependent on hydrocarbons, recommending that Russia push ahead with economic reform and diversification. For the short term, however, economists estimate that Russia would easily be able to deal with oil prices as low as \$17 per barrel for Urals crude. Currently, 55% of Russia's merchandise export revenues derive from the sale of oil, oil products, and natural gas.

For 2004, Russia reportedly is assuming (for budgetary purposes) an average oil price of \$22 per barrel for the country's benchmark Urals crude stream, well below EIA's forecast of around \$33 per barrel for Russian crude. Plans are for extra revenues above \$20 per barrel to be transferred to a yet-to-be-created stabilization fund. In the first quarter of 2004, Russia's budget surplus amounted to 1.7% of the country's GDP. For 2004 as a whole, Russia is likely to register its fifth straight surplus, largely on strong oil and natural gas export revenues. In May 2004, former Russian Energy Minister Yuri Shafranik estimated that Russia needs about \$35 billion per year to develop its oil fields. During 2003, Russia's economy grew by a rapid 7.3%, with a forecasted 6.8% real GDP growth rate for 2004.

Since 1999, **Norway** has experienced strong oil export revenues, raising concerns over possible economic overstimulation and also over how to allocate the money. In November 2003, Norway's government and opposition agreed on a budget for 2004, including some increases in spending (on health, education, and other social services, for instance) and \$7 billion in transfers from the country's 14-year-old Petroleum Fund (which stood at around \$130 billion as of May 2004). The strength in oil revenues had raised concerns of an overheated Norwegian economy, including increased inflationary pressures, but Norway's economy grew by only 1.4% in 2002 and 0.2% in 2003. As a result, Norway's central bank cut interest rates several times in late 2002 and 2003 as the country's currency, the krone, appreciated. Meanwhile, there have been increasing calls to tap into Norway's oil revenue windfall for various purposes, including lower taxes, increased social spending, and reductions in the country's budget deficit (in early June 2004, Norway agreed on a revised budget which increases spending on health and jobs). For 2003, EIA estimates that Norwegian oil export revenues reached \$32 billion, 14% higher than 2002, and more than twice as high as in 1998. For 2004 and 2005, Norway's net oil export revenues are forecast at \$38 billion and \$35 billion, respectively.

Egypt's economy was hurt following the September 11, 2001 terrorist attacks on the United States, with lower oil export revenues (as prices fell) and reduced tourist revenues hurting the country's GDP growth. Since then, Egypt's economy has remained relatively stagnant due to regional tensions and a world economic slowdown, with real GDP growth of only 2.6% in 2002 and 2.9% in 2003. For 2004, Egypt's real GDP is expected to grow by 3.6%. Besides oil exports, tourism, foreign aid, and revenues from the Suez Canal, the other major source of income to Egyptians is so-called "remittances" from Egyptian workers in oil-rich Persian Gulf states. Increased oil prices tend to help remittances. For 2003, Egypt is estimated to have earned oil export revenues of about \$1.6 billion, down sharply from the \$3.3 billion earned in 1996, mainly on declining oil production and net oil exports. Over the next two years, Egypt's oil export revenues are expected to decline by over 50%, reaching just \$1.0 billion in 2005, on sharply lower net oil exports.

Low oil prices between late 1997 and early 1999 adversely affected the **United States** oil industry, as U.S. crude oil production fell more than 500,000 bbl/d from the fourth quarter of 1997 through the first quarter of 1999, in large part due to shut-ins at small, so-called "marginal" wells (i.e., wells producing 15 bbl/d or less) in places like Oklahoma and Texas. In addition, oil (and gas) investment fell. Helped by higher oil prices, U.S. domestic crude oil production declined only slightly between 2000 and 2003, from 5.82 million bbl/d to 5.74 million bbl/d. For 2004, U.S. crude oil production is forecast to decline about 160,000 bbl/d, to 5.58 million bbl/d, then increase slightly in 2005.

Fluctuating oil prices affect the cost of U.S. oil imports and the U.S. trade balance. In 1998, the United States imported (gross) around \$44 billion worth of oil. This increased to \$60 billion in 1999, and \$109 billion in 2000. For 2001 and 2002, U.S. oil imports were somewhat lower, at around \$94 billion each year, before increasing again to around \$122 billion in 2003 (and around \$35 billion for the first three months of 2004). In general, higher oil prices have a negative macroeconomic impact on the United States, including increased inflationary pressures and a deterioration in the merchandise trade balance.

Major Non-OPEC Countries: Oil Export Revenues at a Glance

	Nominal Dollars (Billions)				Constant \$2004 (Billions)			
	2003E	2004F	Change	2005F	1980E	1998E	2004F	2005F
<u>Angola</u>	\$8.4	\$11.1	31%	\$11.3	\$2.8	\$3.4	\$11.1	\$11.1
<u>Colombia</u>	\$2.9	\$2.8	-3%	\$1.9	-\$0.5	\$2.3	\$2.8	\$1.9
<u>Egypt</u>	\$1.6	\$1.5	-4%	\$1.0	\$6.9	\$1.5	\$1.5	\$1.0
<u>Mexico</u>	\$15.7	\$18.1	15%	\$17.9	\$20.6	\$6.0	\$18.1	\$17.6
<u>Norway</u>	\$32.3	\$37.7	17%	\$35.3	\$9.3	\$15.0	\$37.7	\$34.7
<u>Oman</u>	\$7.5	\$9.0	21%	\$9.2	\$6.3	\$4.2	\$9.0	\$9.0
<u>Russia</u>	\$60.7	\$74.9	23%	\$74.0	\$268.0	\$17.0	\$74.9	\$72.7
<u>Sudan</u>	\$1.8	\$2.6	45%	\$2.9	-\$0.4	-\$0.1	\$2.6	\$2.9
<u>Syria</u>	\$2.5	\$2.7	7%	\$2.3	\$1.3	\$1.4	\$2.7	\$2.3
<u>United Kingdom</u>	\$7.7	\$6.5	-16%	\$5.9	-\$0.4	\$5.7	\$6.5	\$5.8

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June 2004

Oil Prices and Revenues: an Economic Analysis

The price of oil is of critical importance to today's world economy, given that oil is the largest internationally traded good, both in volume and value terms (creating what some analysts have called a "hydrocarbon economy"). In addition, the prices of energy-intensive goods and services are linked to energy prices, of which oil makes up the single most important share. Finally, the price of oil is linked to some extent to the price of other fuels (even though oil is not fully substitutable for natural gas, coal, and electricity, particularly in the transportation sector). For these reasons, abrupt changes in the price of oil have wide-ranging ramifications for both oil producing and consuming countries. The fluctuations in world oil prices from late 1997 through 2003 certainly qualify as abrupt and significant changes.

Generally speaking, sharp decreases in oil prices help net oil importing nations and hurt net oil exporters. For net oil importers, lower oil prices act similarly to a tax cut, increasing consumer disposable income (click [here](#) for a chart showing the relationship between U.S. GDP and world oil prices). This often leads to a looser monetary policy, and hence lower interest rates with lower inflation and, usually after a few months, stronger economic growth. On the other hand, sharply higher oil prices have been identified as a major cause in many of the post-World War II recessions in the United States (i.e., 1973-1975; 1980; 1981-1982; 1990-1991; 2001). Although all this may sound like a relatively straightforward relationship, the economics of oil price changes are actually somewhat more complicated.

For one thing, oil revenues earned by producers are to a large extent "recycled" back to consumers in imports of all types of goods and services. For instance, Saudi Arabia may use its oil export revenues to buy construction goods and services, military hardware, food, or any other goods or services from companies located in its oil customer countries, like the United States, Japan, France, Italy, and Germany. In this way, net oil importing nations earn back some (or much) of the "petrodollars" they originally spend on oil purchases. Reduced oil revenues can leave oil producers with fewer "petrodollars" to "recycle"; in other words, they can buy less from countries like the United States, thus hurting U.S. exports, *ceteris parabis*.

Another complicating factor in considering the impact of oil price fluctuations on net oil importing countries is that certain states, or regions, within such a country may be affected differently from other states or regions within that country. Thus, while the effect of higher oil prices, for instance, may be negative on the overall economy of a net oil importing country (i.e., the United States), the effect on net oil exporting states (i.e., Alaska) may be positive, while at the same time it may be negative on net oil

importing states (i.e., the U.S. northeastern states).

The magnitude of any economic impact of an oil price change depends on several mediating factors, including the level and duration (both actual and perceived) of the change, the prevailing demand and supply elasticities for oil, and the overall share of oil in the country's economy. The implications are quite different, for instance, between an oil price "shock" (upwards or downwards) which ends quickly or which lasts a long time. Shifts in energy intensity, for instance, come about through changes in economic structure (i.e., towards or away from energy intensive industries), changeover of capital stock (i.e. houses, cars) or adoption of new technologies (i.e., more or less fuel efficient capital goods) which can take years, and which may only occur if people believe that the oil price change will last a long time.

Another issue is consumer expectations. If consumers are "surprised" (for instance, they believe an oil price change will be short-lived when in fact it is long-lived), this can result in a sub-optimal (either too-quick or too-slow) adaptation to the price signal. Demand elasticities (the degree of consumer response to price changes) are further complicated by their asymmetrical nature -- in other words, elasticities are different for an oil price increase than for a comparable decrease. In fact, most economic evidence points to the conclusion that a sudden, sharp oil price increase (or shock) has a negative impact on the economies of net oil importing nations. The impact of a similar oil price decrease (downward shock), on the contrary, has been found not to be as large. Such asymmetries can occur for a variety of reasons, such as consumer expectations and psychology, the "irreversibility" of technological improvement, and other factors, such as the high share of taxes (in Europe as high as 80%) in the price of oil products in many countries.

For oil producing countries, impacts of oil price fluctuations can vary greatly depending on many factors. Within OPEC, countries like Algeria, Nigeria, and Indonesia, for instance, contain relatively large populations and relatively small oil reserves. These countries, therefore, generally have tended (with numerous exceptions) to favor a strategy of short-term revenue maximization, and tend to have had relatively low political/social tolerance for the pain caused by low oil revenues. Countries with small populations, large oil reserves (and often large financial reserves as well) -- like Kuwait and the United Arab Emirates -- on the other hand, have tended (also with exceptions) to favor a strategy of long-term revenue maximization, and generally have been in stronger positions to weather price declines. Interestingly, Saudi Arabia's rapid population increase over the past few decades may now have increased revenue pressures in that country to such an extent that the Kingdom has shifted from long-term to short-term revenue maximization.

The effect of oil price fluctuations on oil producing countries also varies greatly depending on whether the country is a relatively low-cost or high-cost oil producer. For low-cost producers (like OPEC members Saudi Arabia, Kuwait, the United Arab Emirates, and Iraq), the marginal cost of producing each additional barrel of oil is relatively low, and therefore it often remains economical to produce oil from these countries when oil prices fall. For relatively high-cost oil producers like the United States, the North Sea, the United Kingdom, or Canada, on the other hand, low oil prices can turn many oil fields from economical to uneconomical in a short period of time. High oil prices, on the other hand, tend to encourage oil exploration and production in relatively expensive areas (like the North Sea in the late

1970s and early 1980s).

Finally, the impact of oil price fluctuations on oil producers (and consumers, for that matter) is greatly affected by government reactions (or lack thereof). An oil producing country can, for instance, react to an oil price collapse by devaluing its currency, cutting subsidies, raising taxes, privatizing energy industries, increasing efforts aimed at attracting foreign investment, etc. Oil consumers, meanwhile, can mitigate or worsen the impact of oil price changes by various policies. To defend themselves against oil price increases, in particular, consuming nations have created strategic oil reserves, coordinated with other oil importing nations, and attempted to reduce dependence on oil imports, among other policies.

Notes on Methodology

OPEC oil revenues in this report are defined as total net oil exports multiplied by an estimated price for that country's oil. For net oil exports, EIA domestic oil consumption estimates are subtracted from EIA total oil production (including lease condensate, natural gas liquids, other liquids, and refinery processing gain) estimates. Oil is assumed to be consumed either in domestic refineries for eventual consumption as petroleum products, or exported. At the time of this report, EIA data on individual country's oil production was available through October 2003, with estimates for the rest of the year. Projections for 2004 and 2005 are consistent with EIA's January 2004 *Short-Term Energy Outlook's* international oil market forecast.

Estimating an average price for each country's oil exports is somewhat more involved. Since there is no documentation on the price paid for each barrel of crude oil exported from each OPEC country (crude prices vary by country due to a variety of factors, like crude quality, production costs, etc.) an estimate using data from the [OPEC Annual Statistical Bulletin](#) and the average spot OPEC basket price was developed. For 1972-2002, either the official or posted price was used for selected crude oils that would best represent the average crude oil exported from each country. Prices for 1972-1987 were taken from Table 71 in the 1990 OPEC Annual Statistical Bulletin; prices for 1988-2002 were taken from Table 72 in the 2002 OPEC Annual Statistical Bulletin. To estimate country specific prices for 2003-2005, the average price paid for specific crude oil between 1988 and 2002 was compared to the average spot OPEC basket price over the same period. An average ratio between the two prices was then established, weighting the more recent years greater than the more distant years. Using this methodology, the average price for Algeria's Saharan Blend crude oil, for instance, was 5.9% higher than the spot OPEC basket price over the period 1988-2002. Thus, for each month in 2003 and 2004, the price of Algerian crude oil exports was assumed to be 5.9% more than the spot OPEC basket price. At the time of this report, spot OPEC prices were available through mid-June 2004. Projections for 2004 and 2005 are consistent with EIA's short-term world oil price forecast.

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