

# OIL-EXPORTING COUNTRIES: KEY STRUCTURAL FEATURES, ECONOMIC DEVELOPMENTS AND OIL REVENUE RECYCLING

## ARTICLES

Oil-exporting countries: key structural features, economic developments and oil revenue recycling

*This article reviews key structural features and recent economic developments in ten major oil-exporting countries. It also analyses imports of and financial flows originating from oil-exporting countries, which are often described as oil revenue recycling. Oil-exporting countries have benefited from high oil prices over recent years, which has been reflected in higher real GDP growth and fiscal and current account surpluses, while the adverse impact of high oil prices on oil-importing countries has been mitigated by oil revenue recycling. Economic developments in oil-exporting countries and oil revenue recycling via the trade and the financial channel have become an increasingly important feature of the global economy. Accordingly, these countries have played an enhanced role as trade partners and as investors since the rise in oil prices that began in 2003.*

## I INTRODUCTION

The average oil price increased sharply from USD 25.0 per barrel in 2002 to USD 65.4 per barrel in 2006.<sup>1</sup> After peaking in August 2006, oil prices declined somewhat but remained significantly above the level that prevailed over the decade before (the average oil price in the period 1993-2002 was USD 19.8 per barrel, with a spike to USD 28.5 per barrel in 2000). Global oil production increased from 76.6 million barrels per day (mb/d) on average in 2002 to 85.2 mb/d in 2006. As a result of these developments, the oil (and gas) revenues of oil-exporting countries increased significantly.

Against this background, this article reviews key structural features and recent economic developments of the top ten net oil-exporting countries for which oil and gas account for above 40% of total exports, which signifies a high degree of energy dependence.<sup>2</sup> These countries are (ranked by their importance as net oil exporters): Saudi Arabia, Russia, Norway, Iran, the United Arab Emirates (UAE), Nigeria, Kuwait, Venezuela, Algeria and Libya. They account for almost 70% of global oil exports, more than 50% of global oil production and more than 70% of global oil reserves. They also contribute around 45% to global gas exports and almost 40% to global gas production, and hold almost 60% of global gas reserves.

With high oil prices, the importance of oil-exporting countries for the global economy has increased. The shares in global GDP and global trade of the ten major oil-exporting countries under review rose from 3.6% and 2.4%,

respectively, in 2002 to 5.5% and 3.5% in 2005. Apart from being a supplier of energy to the global economy, oil-exporting countries have been playing an increasingly significant role as global investors, since most of the oil revenue that has been saved has been invested abroad. Furthermore, part of the oil revenue that has been spent has led to an increase in imports, i.e. these countries have become more important as a destination for oil-importing countries' exports.

Oil-exporting countries have accumulated large current account surpluses. At USD 420 billion, their 2006 current account surplus exceeded that of emerging Asia and constituted a major counterpart of the US current account deficit. A large share of their increased savings is invested in US assets. Thus oil-exporting countries have been called upon to contribute to an adjustment of global imbalances, for example through accelerated investment in capacity, increased economic diversification and, in some cases, enhanced exchange rate flexibility.<sup>3</sup>

<sup>1</sup> Annual average prices for Brent crude oil.

<sup>2</sup> 2005 data from the Energy Information Administration of the US government was used to identify the world top net oil exporters, and 2005 United Nations Comtrade data was used to capture energy dependence. Thus the article looks at those countries that are most relevant to the global oil markets and at the same time share the feature of being highly dependent on hydrocarbon (oil and gas) exports. International oil market developments are also key for countries where gas plays an important role, as gas prices tend to follow oil prices. In order to capture hydrocarbon dependency, gas is included in country data as far as it is available on a comparable basis. The ten countries considered in this article also include the five largest gas producers whose hydrocarbon exports exceed 40% of total exports (Russia, Algeria, Iran, Norway and Saudi Arabia, on the basis of 2005 data in the BP Statistical Review of World Energy 2006).

<sup>3</sup> See the annex on global imbalances to the statement by the G7 finance ministers and central bank governors of 21 April 2006.

In the remainder of this article, Section 2 provides an overview of key structural features of the ten oil-exporting countries under consideration. Section 3 examines recent macroeconomic developments. Section 4 analyses the use of oil revenues in the recent period of high oil prices and oil revenue recycling. Section 5 concludes.

## 2 KEY STRUCTURAL FEATURES OF OIL-EXPORTING COUNTRIES

### SIZE OF COUNTRIES AND ECONOMIES

Oil-exporting countries vary significantly with regard to population, GDP and per capita income. Of the ten countries under review, four (Kuwait, the UAE, Norway and Libya) have 6 million or fewer inhabitants. Three countries, Saudi Arabia, Venezuela and Algeria, have between 24 and 34 million inhabitants, while Iran, Russia and Nigeria – with a combined population of over 360 million – account for almost 80% of the group's total population (465 million). Russia has by far the largest GDP of the ten countries (USD 979 billion), followed by Saudi Arabia (USD 349 billion) and Norway

(USD 334 billion), while Norway and the UAE have the highest per capita income. Nigeria, with a per capita income of about USD 1,200, is the only low-income country in the group.

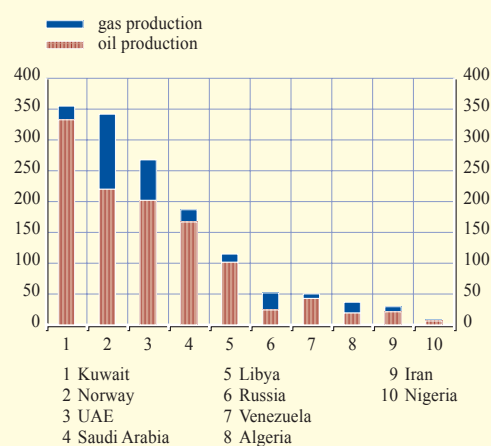
### ECONOMIC STRUCTURES AND THE ROLE OF OIL

In absolute terms, Russia and Saudi Arabia are the largest oil producers (and exporters), with an average production of crude oil in 2006 of 9.7 mb/d and 9.3 mb/d<sup>4</sup> respectively. This is more than twice the production of the third-largest oil producer, Iran, (3.9 mb/d) and more than three times the amount of oil produced by any of the other ten major oil exporters. Russia is also the world's largest gas producer. Saudi Arabia is the largest net oil exporter, with net exports of 9.1 mb/d in 2005, ahead of Russia with 6.7 mb/d, while the net oil exports of the other countries are in the range of 1.5 mb/d (Libya) to 2.7 mb/d (Norway). Saudi Arabia also holds by far the largest oil reserves, with 22% of proven global reserves, ahead of Iran, with 11.5% (2005 data).

4 The figure for Saudi Arabia includes half of the production in the Neutral Zone between Saudi Arabia and Kuwait. 2006 oil production figures are from the International Energy Agency (IEA).

Chart 1a Per capita oil and gas production in 2005

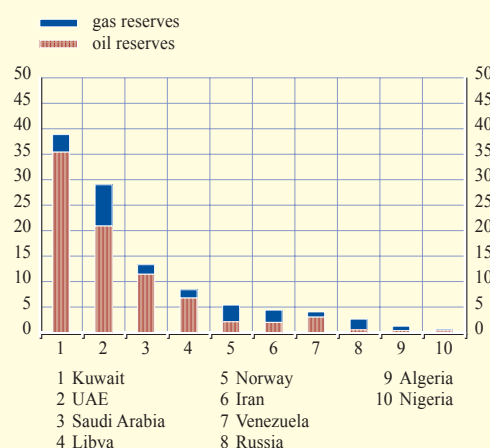
(barrels of oil equivalent)



Sources: BP Statistical Review of World Energy 2006, IMF and ECB calculations.

Chart 1b Per capita oil and gas reserves in 2005

(thousand barrels of oil equivalent)



Sources: BP Statistical Review of World Energy 2006, IMF and ECB calculations.

**Table 1 The role of oil and gas in government revenues, exports and GDP**

(percentages of total government revenues, exports and GDP)

	Algeria	Iran	Kuwait	Libya	Nigeria	Norway	Russia	Saudi Arabia	UAE	Venezuela
Government revenues	76.3	64.1	77.2	86.5	65.9	18.4	49.3	89.4	66.3	50.0
Exports	98.3	83.2	83.3	95.7	97.3	45.5	61.1	89.5	37.3	89.6
GDP	45.1	24.9	52.6	67.1	44.6	23.4	20	45.2	31.5	24.6

Sources: IMF, World Bank and national sources.

Notes: Data for Kuwait, Libya and the UAE refer to 2004. Iran: 2004/05. Algeria and Norway: 2005. Nigeria: 2003. Russia: government revenues (federal government) and exports: 2005; GDP: estimate for 2000. Saudi Arabia: government revenues and exports: 2005; GDP: 2004. Venezuela: government revenues and exports: 2006 (provisional data); GDP: 2003.

Expressed in per capita terms, the smaller countries are the biggest oil (and gas) producers and have the largest oil (and gas) reserves (Charts 1a and 1b). Norway stands out as the country with the most striking difference in ranking in terms of production versus reserves, indicating that reserve levels are small compared with current levels of production. Indeed, Norway's reserves are projected to be depleted within the next three decades at current levels of production. By contrast, the oil reserves of Kuwait, the UAE and Iran would last for around 100 years, and the gas reserves of all countries except Algeria, Norway and Russia for around 100 years or more, at current levels of production.<sup>5</sup>

The oil-exporting countries under review are hydrocarbon-centred economies (Table 1). Other than in Norway, oil-related revenues account for around 50% or more of total government revenues in all the countries, and in seven of the ten oil and gas exports make up more than 80% of total exports. The hydrocarbon sector accounts for an important share of GDP, particularly in Libya and Kuwait (around 67% and 53% respectively) and in countries with a relatively low GDP per capita, such as Algeria and Nigeria (around 45%). Larger economies such as Russia, Norway, Iran and Venezuela tend to be more diversified; there the oil and gas sector represents around or less than 25% of GDP. The larger the share of oil in government revenues, exports and GDP the more exposed countries are to volatile developments in international oil markets.

The oil sector is state-owned in most oil-exporting countries. Out of the ten under review, only in Norway and Russia do partially privatised oil sectors exist, with Russia seeing a trend towards (re-)nationalisation over recent years. Notwithstanding increasing privatisation efforts over the last few years, public sector companies also play an important role in the non-oil sector in many of the countries.

#### MONETARY POLICY STRATEGIES AND EXCHANGE RATE REGIMES

With the exception of Norway, the oil-exporting countries operate either exchange rate pegs or tightly managed floats, with the US dollar serving as the anchor currency (Table 2). Moreover, in most countries the orientation towards the US dollar has a long history. For example, in the countries of the Gulf Cooperation Council (GCC)<sup>6</sup> a US dollar peg or a US dollar orientation have been the (de facto) exchange rate regime since the 1970s. Norway, which operates an inflation-targeting framework, is the only country among the ten major oil exporters with an internal anchor for monetary policy.

The preference for an external anchor and orientation towards the US dollar can be explained by the fact that oil revenues, which constitute the main receipts from exports in

5 Given that depletion projections depend on various factors that are difficult to predict, such as the future state of technology and prices, they should be regarded as highly tentative.

6 The member states of the GCC are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE.

**Table 2 Exchange rate arrangements of oil-exporting countries**

	Exchange rate arrangement
Algeria	Managed float
Iran	Crawling peg <sup>1)</sup>
Kuwait	Fixed peg
Libya	Fixed peg
Nigeria	Managed float <sup>1)</sup>
Norway	Independent float
Russia	Managed float
Saudi Arabia	Fixed peg
UAE	Fixed peg
Venezuela	Fixed peg

Source: IMF.  
 Note: As at 31 July 2006.  
 1) The regime operating de facto in the country is different from its de jure regime.

major oil-exporting countries, are priced in US dollars. The pegs to the US dollar or tightly managed floats against it thus serve the aim of stabilising export and also fiscal revenues, given the prominent role of oil revenues in the government budget. A consequence of these exchange rate regimes is that the oil-exporting countries' terms of trade are exposed to fluctuations in the US dollar vis-à-vis other major currencies. The degree of exposure depends on the share of their imports coming from the United States and from countries whose currencies are pegged to the US dollar

(notably in Asia) compared with imports from other countries (see the next sub-section on trade patterns). Furthermore, the pegs and tightly managed floats imply that interest rates to a large extent follow US interest rates, even though the business cycles of the United States and the oil-exporting countries might diverge. This implication depends on the degree of capital account liberalisation in each country. At end-2005 restrictions on capital account transactions were most pronounced in Algeria, Libya and Iran, while Nigeria was still operating a multiple exchange rate regime. The GCC countries and most recently Russia have (relatively) liberalised capital account transactions, as does Norway.

#### TRADE PATTERNS

The oil-exporting countries form a heterogeneous group with regard to their major trading partners (Table 3). While the EU and the euro area are the major export markets of Norway, Russia and the oil-exporting countries in the Mediterranean region, Asia plays a key role for exports from the GCC countries and Iran. The United States is the main export destination for Nigeria and Venezuela. The EU is by far the largest source of imports for almost all countries under review, while on average imports from

**Table 3 Geographical patterns of exports and imports of oil-exporting countries**

(exports and imports as percentages of total exports and imports respectively)

	Exports				Imports			
	euro area	EU	United States	Asia (including Japan)	euro area	EU	United States	Asia (including Japan)
Algeria	52.1	54.1	22.6	1.8	56.3	61.3	5.4	13.6
Iran	22.9	23.6	0.3	45.3	34.6	41.0	0.2	25.7
Kuwait	8.4	10.4	11.9	72.3	26.5	34.6	14.1	25.1
Libya	74.1	76.5	5.2	3.3	47.1	56.0	1.1	15.1
Nigeria	21.0	21.7	52.5	6.4	23.9	33.3	7.3	25.5
Norway	43.5	80.8	6.7	4.2	36.0	69.5	4.9	13.5
Russia	37.4	58.0	3.1	11.0	32.2	45.1	4.7	21.2
Saudi Arabia	14.1	16.1	16.8	51.6	23.3	31.7	14.8	29.0
UAE	7.8	11.2	9.4	56.4	21.6	34.1	1.5	40.9
Venezuela	5.1	6.8	50.9	2.8	11.6	13.8	31.6	11.3
Average	27.4	38.7	13.9	25.6	29.2	41.9	6.8	25.4

Source: IMF.  
 Notes: Data refer to exports/imports of goods in 2005. Averages weighted by total exports/imports.

Asia account for around one-quarter of their total imports. Other than for Venezuela, the share of the United States in the oil-exporting countries' imports is relatively small.

### 3 RECENT MACROECONOMIC DEVELOPMENTS

#### GROWTH AND EMPLOYMENT

Since 2003 real GDP growth has risen strongly in the oil-exporting countries, reaching on average 6% or more over the last four years (Table 4). In parallel, the dispersion of growth rates has declined substantially. In the period 2003-06, all the oil-exporting countries under review – with the exception of Norway, Venezuela in 2003 and Algeria in 2006 – achieved a minimum of 4% real GDP growth per annum.

Export growth was the main driver of real GDP growth in 2003 following the rise in oil prices. Domestic demand, in particular private consumption and gross capital formation, has picked up only since 2004. Global factors, such as strong global growth, ample liquidity and low interest rates, have also contributed to the above-average growth performance. Growth in public consumption has been relatively moderate, pointing to a cautious use of higher oil revenues (see also the sub-section on fiscal

and current account balances). Nevertheless, public consumption grew at rates of more than 7% per annum on average between 2004 and 2006 in countries such as Venezuela, Saudi Arabia, Algeria and Nigeria.

Strong economic growth over recent years has contributed to an – albeit modest – decline in unemployment in the group of oil-exporting countries. The most pronounced drop has been observed in Algeria and Venezuela. In terms of unemployment levels, three out of the eight countries for which data are available have unemployment rates close to or (in the case of Algeria) substantially above 10%. The limited decline in unemployment despite relatively strong growth is partly explained by the high capital intensity of the oil and gas industry. Accordingly, growth concentrated in this sector does not provide significant additional employment opportunities, pointing to the need to develop the private non-oil sector. This applies in particular to the economies that are least diversified and where employment in the public sector is already high, for example GCC countries such as Kuwait and Saudi Arabia.<sup>7</sup>

7 See M. Sturm and N. Siegfried, "Regional monetary integration in the member states of the Gulf Cooperation Council", ECB Occasional Paper No 31, 2005.

**Table 4 Oil-exporting countries: selected economic indicators**

(annual percentage changes, unless otherwise indicated)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
Real GDP	-0.7	3.1	7.0	3.7	3.5	6.7	6.9	6.2	6.0
Private consumption	3.1	0.3	4.6	7.2	9.4	4.8	10.3	11.8	10.7
Public consumption	1.4	1.4	10.7	3.8	1.1	4.1	3.8	5.2	3.9
Gross fixed capital formation	-4.0	5.3	9.7	9.5	7.1	6.9	13.4	11.7	14.7
Exports (goods and services)	1.2	4.7	8.9	1.1	7.3	11.5	7.6	6.0	5.1
Unemployment (% of labour force)	8.8	10.7	10.6	10.2	10.1	10.2	9.1	8.6	7.9
General government fiscal balance <sup>1)</sup> (% of GDP)	-6.1	-1.8	5.4	2.0	0.9	2.8	6.3	10.1	10.5
Current account balance (% of GDP)	-2.2	5.4	15.2	9.4	7.2	9.7	12.3	16.7	16.3
Price of Brent crude oil (annual averages in USD)	12.7	17.9	28.5	24.4	25.0	28.9	38.3	54.5	65.4

Sources: IMF; price of Brent: Bloomberg.

Note: Averages of the ten countries under review weighted by GDP in purchasing power parity terms, with the exception of unemployment (non-weighted average of eight countries – excluding Libya and the UAE).

1) Algeria: central government balance.

## INFLATION AND EXCHANGE RATE DEVELOPMENTS

On average, inflation in the oil-exporting countries remains at elevated levels, hovering between 8% and 13% since the beginning of this decade. Iran, Nigeria, Russia and Venezuela have recorded inflation rates close to or above 10% per annum over the last few years. All the other countries – with the exception of the UAE since 2004 – have in general seen inflation rates of less than 5% (Table 5). Official CPI figures might understate inflation and inflationary pressures in several countries. This is suggested by, among other things, a large proportion of administered prices as a tool of governments' non-monetary anti-inflationary policy (e.g. Russia), the subsidisation of a wide range of products, in particular energy, as a tool of social policy (e.g. Iran), and outdated CPI baskets (the UAE).

In general, inflationary pressures have increased over the last few years, particularly in countries with so far relatively low inflation rates, reflecting strong domestic demand accompanied by rapid money and credit growth. Sharp increases in asset prices also point to inflationary pressures. The stock markets of oil-exporting countries have seen substantial increases, even though a correction took place in Gulf markets in early 2006. There is also anecdotal evidence of sharply rising real estate prices, in particular in Gulf countries.

Several factors have helped to keep inflation in check in countries with relatively low inflation rates (or prevented it from rising further in countries with elevated inflation rates), such as strong productivity gains, slack in domestic labour markets (as evidenced by high unemployment rates) and, most prominently in the GCC countries, labour inflows. The inflation performance in some oil-exporting countries, such as the GCC countries and Norway, has also benefited from a high degree of trade openness and increasing imports from low-cost countries.

Other than in Norway, the role of monetary policy in containing inflationary pressure has been limited as a result of the prevailing exchange rate regimes (see Section 2). In view of the pegs to the US dollar or tightly managed floats against it, central banks have been constrained in their ability to use domestic interest rates to control inflation. Furthermore, the depreciation of the US dollar over recent years has added to inflationary pressures via import prices, particularly in those countries where a large share of imports comes from the euro area. A number of oil-exporting countries – such as Algeria, Kuwait and Saudi Arabia – have experienced a depreciation of their real effective exchange rate since 2002 (Chart 2). The appreciation of the real effective exchange rate observable in Russia, Nigeria and Iran is mainly the result of higher inflation.

**Table 5 Inflation in oil-exporting countries**

(annual percentage changes)

	1998	1999	2000	2001	2002	2003	2004	2005	2006
Algeria	5.0	2.6	0.3	4.2	1.4	2.6	3.6	1.6	2.5
Iran	18.1	20.1	12.6	11.4	15.8	15.6	15.2	12.1	14.6
Kuwait	0.6	3.1	1.6	1.4	0.8	1.0	1.3	4.1	3.0
Libya	3.7	2.6	-2.9	-8.8	-9.9	-2.1	-2.2	2.0	3.4
Nigeria	10.0	6.6	6.9	18.0	13.7	14.0	15.0	17.8	8.3
Norway	2.3	2.3	3.1	3.0	1.3	2.5	0.4	1.6	2.3
Russia	27.7	85.7	20.8	21.5	15.8	13.7	10.9	12.7	9.7
Saudi Arabia	-0.2	-1.3	-1.1	-1.1	0.2	0.6	0.4	0.7	2.3
UAE	2.0	2.1	1.4	2.8	2.9	3.1	5.0	7.8	10.1
Venezuela	35.8	23.6	16.2	12.5	22.4	31.1	21.7	15.9	13.6
Average	17.5	41.0	12.2	13.0	11.4	11.1	9.5	9.9	8.7

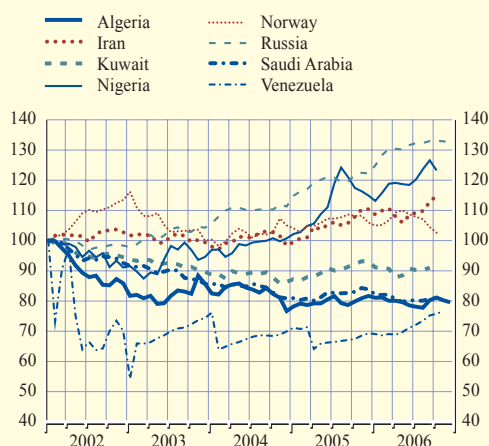
Source: IMF.

Notes: Averages weighted by GDP in purchasing power parity terms. Data refer to consumer price inflation.



Chart 2 Real effective exchange rates

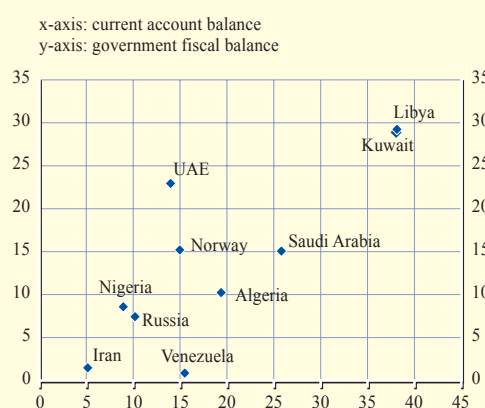
(index: January 2002 = 100)



Sources: IMF and ECB calculations.  
Notes: Data are CPI-deflated. No comparable data are available for Libya or the UAE.

Chart 3 Current account and general government fiscal balances

(percentages of GDP)



Source: IMF.  
Note: Data refer to the averages for the period 2004-06.

## FISCAL AND CURRENT ACCOUNT BALANCES

The rise in oil prices and the associated increase in government revenues led to a sharp turnaround in the general government fiscal balances of oil-exporting countries. The average balance (as a share of GDP) of the ten oil-exporting countries under review moved from a deficit of 6.1% in 1998 to a surplus of 10.5% in 2006 (Table 4). While surpluses were already being recorded in 2000, they have sharply increased since 2004. Most oil-exporting countries have been relatively cautious in expanding public expenditure so far. This may reflect the experience of the second half of the 1980s when, after a fall in oil prices, countries found it difficult to rein in expenditure that had sharply increased when oil prices were high in the 1970s/early 1980s. Moreover, there is uncertainty as to whether the higher oil prices of recent years are of a temporary or permanent nature. Libya, Kuwait and the UAE have recorded the largest fiscal surpluses in recent years. By contrast, Iran exhibits only relatively small surpluses and Venezuela moved into deficit in 2006, pointing to a much more expansionary fiscal policy in these two

countries. Surpluses may decline in other oil-exporting countries in the future, given that many of them have plans to increase expenditure, in particular on infrastructure projects.

The average current account surplus of the oil-exporting countries increased to above 16% of GDP in 2005 and 2006 (Table 4). Due to the nationalised oil sectors, there is a strong link between oil prices, the current account and the government budget. Thus, the cross-country pattern of current account developments is similar to that seen in the general government balance (Chart 3).

## 4 THE USE OF HIGHER OIL REVENUES AND OIL REVENUE RECYCLING

Oil-exporting countries face the principal choice of either spending or saving the revenue generated by oil exports. As the oil industry in most countries is nationalised, oil revenues accrue to governments; thus determining the use of oil revenues is primarily a fiscal policy decision. If oil revenues are spent, they can be used for the purchase of either domestic goods

and services or foreign goods and services (imports). Both domestic and foreign spending can be on consumption or investment. If oil revenues are saved, this may occur via either the accumulation of financial assets or the reduction of public debt. Spending on investment is considered as an equivalent to saving insofar as physical assets are substitutes for financial assets.

The accumulation of financial and physical assets financed by oil revenues does not increase the net wealth of an oil-exporting country, as such assets replace oil wealth, which is a non-renewable resource in the country's national balance sheet.

The remainder of this section examines the use of oil revenues for the reduction of public debt, for imports and for the accumulation of financial assets, as these aspects are most relevant from a global perspective. Oil revenue recycling was a feature of periods of high oil prices in the 1970s and early 1980s as well as of the recent period of increasing prices. It takes place via the trade channel, i.e. increased imports, and via the financial channel, i.e. capital outflows from the oil-exporting countries.

## REDUCTION OF PUBLIC DEBT

On average, the public debt of the ten oil-exporting countries under review has been reduced by more than half since 2001 (Table 6). For the authorities of the countries which had a particularly high level of debt in the late 1990s, i.e. Saudi Arabia, Russia, Nigeria, Algeria and Libya, debt reduction has been a high priority as regards the use of the additional revenues resulting from increased oil prices. The debt repaid by Saudi Arabia has been domestic, whereas the other four countries have repaid mainly external debt. Libya has almost completely eliminated its public debt. Norway stands out as the country that has not used the recent period of high oil prices for a sharp reduction of gross public debt.

## IMPORTS

The imports of oil-exporting countries have increased substantially over the last few years. In absolute terms, imports of goods and services by the ten oil-exporting countries under review increased from USD 275 billion in 1998 to USD 752 billion in 2006 (Chart 4). Russia, the UAE and Saudi Arabia together account for almost two-thirds of the additional amount of imports over the period 1998-2006. As a share of GDP,

**Table 6 General government gross debt in oil-exporting countries**

(percentages of GDP)

	2001	2002	2003	2004	2005	2006
Algeria <sup>1)</sup>	63.0	53.5	43.8	36.6	28.4	22.6*
Iran	13.7	25.4	26.4	26.3	22.4	19.6
Kuwait	35.1	29.9	23.0	17.4	11.8	7.6
Libya	43.0	32.7	26.7	1.6	1.1	0.9
Nigeria	81.3	87.9	74.6	65.4	52.4*	50.8*
Norway	29.0	35.8	44.0	45.6	43.8	43.8
Russia <sup>1)</sup>	42.0	35.4	29.6	22.3	14.8	10.5
Saudi Arabia	93.7	96.9	82.0	65.0	39.6	28.0
UAE	4.0	5.2	6.6	8.4	9.5	8.1
Venezuela <sup>2)</sup>	31.7	44.3	47.4	38.8	33.3	23.9
Average	43.7	43.2	38.4	31.5	23.3	18.6

Sources: IMF (\* projections); Venezuela: ECB calculations based on Ministry of Finance data (2006: preliminary data).

Note: Averages weighted by GDP in purchasing power parity terms.

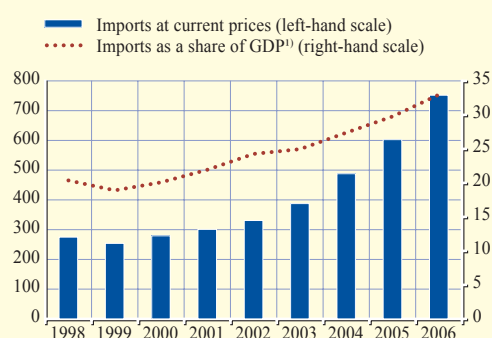
1) Central government debt.

2) Total public debt, according to national definition.



**Chart 4 Oil-exporting countries' imports of goods and services**

(USD billions; percentages)

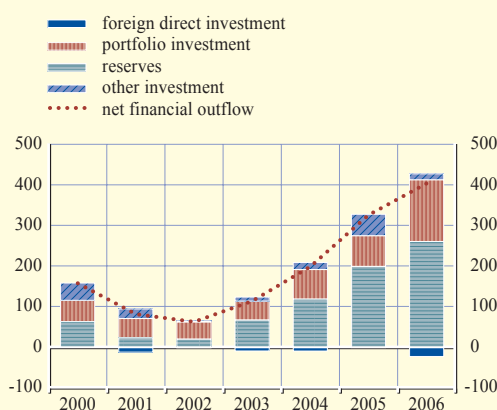


Source: IMF.

1) Average weighted by GDP in purchasing power parity terms.

**Chart 5 Oil-exporting countries' financial outflows**

(USD billions)



Sources: IMF and ECB calculations.

imports have increased on average by almost 13 percentage points since 1998. Increases as a share of GDP have been particularly high in Libya (68 percentage points), the UAE (35 percentage points) and Nigeria (27 percentage points). Increases in imports have also been significant in countries which have seen a substantial rise in their current account surpluses, suggesting that the expansion in spending has not kept pace with the increase in oil revenues and GDP.

Asian countries seem to have benefited more from oil revenue recycling via the trade channel than other regions in the world, while the impact for the euro area may also have been somewhat more favourable than for some of its major competitors, notably the United States.<sup>8</sup>

Comparisons between the development of imports in the recent period of high oil prices and earlier episodes in the 1970s and early 1980s show different results for the marginal propensity to import out of oil revenues depending on the group of countries under review and the benchmarks used. The IMF estimated in April 2006 that, in absolute terms, the increase in imports accounted for about one-half of the additional revenues since 2002

as compared with three-quarters in the early 1970s, although with significant differences across countries. The OECD found in 2005 that re-spending was “broadly on track” for the Africa and Middle East region, suggesting that 60-65% of extra oil revenue was spent after two years. In 2005 the Bundesbank pointed to an acceleration in the recycling of oil revenues via the trade channel, having compared the reactions in the periods 1980-90 and 1991-2004 of exports and imports in countries belonging to the Organization of the Petroleum Exporting Countries (OPEC) following an oil price rise.

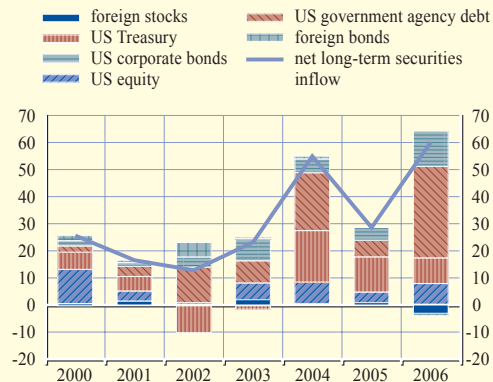
#### ACCUMULATION OF FINANCIAL ASSETS

The accumulation of financial assets can take the form of foreign exchange reserves (held by central banks) or of assets accumulated by other public bodies (sovereign wealth funds) or by the private sector. Given the level of financial market development and limited investment opportunities in most oil-exporting countries, also reflecting the low degree of economic diversification, not only foreign exchange reserves but also a large share of the assets of

<sup>8</sup> See the box entitled “Oil-bill recycling and extra-euro area exports” in the April 2007 issue of the Monthly Bulletin.

**Chart 6 Oil-exporting countries' purchases of long-term securities from US residents**

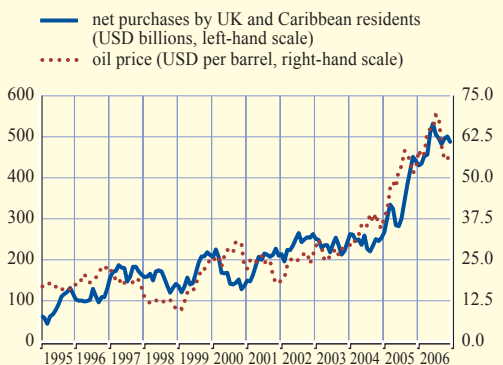
(USD billions)



Sources: US Treasury and ECB calculations.  
Note: Data include Bahrain, Iraq, Gabon, Oman and Qatar, and exclude Kuwait.

**Chart 7 UK and Caribbean purchases of long-term securities from US residents**

(USD billions; USD/barrel)



Sources: US Treasury, BIS and ECB calculations.  
Notes: Net purchases are cumulated over 12 months. The oil price refers to Arabian Light oil.

other public bodies and private agents is invested abroad. These assets are likely to be in a broader range of asset classes than the foreign exchange reserves, i.e. in addition to government bonds they may also include, for example, corporate bonds, stocks, real estate or foreign direct investment.

Against this background, oil-exporting economies have recorded large capital outflows, which doubled over the last two years, reaching more than USD 400 billion in 2006. The bulk of the outflows takes the form of reserve accumulation and portfolio investment (Chart 5), and a substantial part of the reported portfolio investment may actually originate from the public sector, i.e. from sovereign wealth funds.

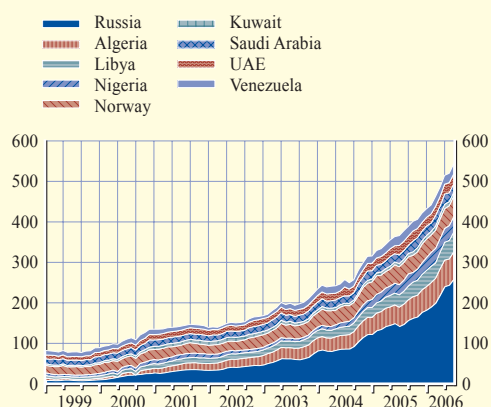
Although it is difficult to track the geographical destinations of these financial flows, the United States seems to be a main recipient. In 2006 the US Treasury recorded net inflows of around USD 60 billion into long-term securities (primarily US Treasury and US government agency debt, but also corporate bonds) from private and public sector residents of oil-exporting countries (Chart 6).

While the officially reported capital flows from oil-exporting countries to the United States are far lower than these countries' current account surpluses and corresponding net financial outflows, they do not include transactions carried out through international financial centres such as London or Caribbean offshore centres. In 2006 the United Kingdom and Caribbean offshore centres accounted for USD 506 billion or more than half of the total foreign purchases of long-term securities from US residents (Chart 7), suggesting that oil exporters channel a significant share of their foreign portfolio investment through these international financial centres.

The foreign exchange reserves of the major oil-exporting countries under review have risen by about USD 430 billion since end-1998, reaching USD 519 billion in July 2006 (Chart 8). Thus their share in global foreign exchange reserves rose from about 5% at end-1998 to over 11% by mid-2006. If, however, the absolute increase in the foreign exchange reserves of oil-exporting countries is compared with the increase in foreign exchange reserves held by all developing and emerging market countries, the oil exporters account for only 14% of the total increase from January 1999 to July 2006.

**Chart 8 Foreign exchange reserves of oil-exporting countries**

(USD billions)



Source: IMF.

Notes: Latest observation relates to July 2006. No comparable data are available for Iran.

There are substantial cross-country differences with regard to foreign exchange reserve developments. Reserve accumulation by the Bank of Russia has been the main driving force behind foreign exchange reserve developments within the group of oil-exporting countries, partly reflecting the fact that the Russian oil stabilisation fund – only established in early 2004 and accounting for around 30% of Russian foreign exchange reserves at end-2006 – has deposited all its funds at an account with the central bank. A substantial foreign exchange reserve build-up, albeit less pronounced than in Russia, has also been observed in Algeria and Libya, and since 2004 Nigeria has also boosted its reserve holdings from low levels.

The foreign exchange reserve holdings of the GCC countries and Norway show a high degree of stability over time, indicating that in these countries the sovereign wealth funds have been the main accumulators of foreign assets. The Norwegian fund increased from USD 22.7 billion in 1998 to USD 285.6 billion in 2006, while funds managed by the Abu Dhabi Investment Authority (ADIA) and the Kuwait Investment Authority (KIA) are estimated to have reached USD 250-500 billion and USD 160-250 billion respectively in 2006.<sup>9</sup>

There appear to be some differences between the pattern of oil revenue recycling via the financial channel in the 1970s and early 1980s and the most recent episode of high oil prices. In the former period official foreign exchange reserves and deposits with international banks were the main financial instruments used to recycle oil revenue. Banks took advantage of these increased resources to expand their lending to emerging market economies, particularly in Latin America, which later contributed to the debt crisis in the early 1980s. The accumulation of bank deposits of oil-exporting countries over the last few years has been more limited, while portfolio investment has been more sizeable. External debt reduction has also played a greater role. Furthermore, while data on the allocation of assets of oil-exporting countries by asset class, currency or region are very limited,<sup>10</sup> anecdotal evidence points to more investment, in particular by the GCC countries, in Asia or in the broader Middle East region compared with earlier periods of high oil prices. The latter is reflected in, among other things, the dynamic development of stock and real estate markets in a number of Middle Eastern and North African countries over recent years. As pointed out above, however, the United States seems to have been the main destination for oil revenue recycling via the financial channel in the last few years, as in previous periods of high oil prices.

## 5 CONCLUSIONS

The ten oil-exporting countries under review – while differing with regard to many structural features – have hydrocarbon-centred economies and have benefited from high oil prices over

<sup>9</sup> ADIA and KIA do not disclose information about the total amount of assets under management or the composition of assets. The amounts indicated are private sector estimates, and are surrounded by a high degree of uncertainty.

<sup>10</sup> BIS data suggest that Russia and OPEC economies have increased the share of euro-denominated net deposits in total deposits with BIS-reporting banks since the start of Economic and Monetary Union, with the rise being much more pronounced in the case of Russia. For a detailed analysis, see the box entitled “The role of the euro in the recycling of oil revenues in the international banking system: an update” in the ECB’s 2007 Review of the international role of the euro.

recent years. This is reflected in higher real GDP growth rates since 2003 and large fiscal and current account surpluses. At the same time, inflationary pressures have emerged in some countries, while they have remained subdued in others. Higher oil revenues have led to an increase in imports, an accumulation of financial assets and a reduction of public debt, and are increasingly also used for more public spending, in particular on infrastructure.

The high oil prices of recent years have per se tended to dampen growth and increase inflation in oil-importing countries, although the oil dependency of advanced economies, in particular the euro area, has been reduced compared with the 1970s and early 1980s. The adverse economic impact of high oil prices is mitigated, however, by oil revenue recycling via the trade channel, which seems to benefit mainly Asia and to a lesser extent the euro area through higher exports to oil-exporting countries, and via the financial channel, which benefits mainly the United States through higher capital inflows from oil-exporting countries. As a result, oil-exporting countries have become more important for the global economy in recent years, both as trade partners and as investors.