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Recycling of Petrodollars in the Recent Oil Price Increase

This Briefing Note summarizes ongoing work that examines how oil export revenues are being recycled in the recent oil price increase (2002-present) as compared with the previous episode in 1979-81. Main messages are as follows:

- Deposits with BIS-reporting banks are the main identifiable destination of oil exporters' investable funds. Yet compared to previous episodes, the role of oil exporters as a net supplier of funds to the international banking system has diminished.

- US securities and other dollar-denominated assets constitute the second largest identifiable destination for recycled petrodollars in this round. Major oil exporters are now overtaking emerging Asia as the largest net exporters of capital to the rest of the world, particularly the US.

- The more diversified investment portfolios of oil exporters in this round may have provided opportunity to mitigate risk and generate longer-term revenue streams.

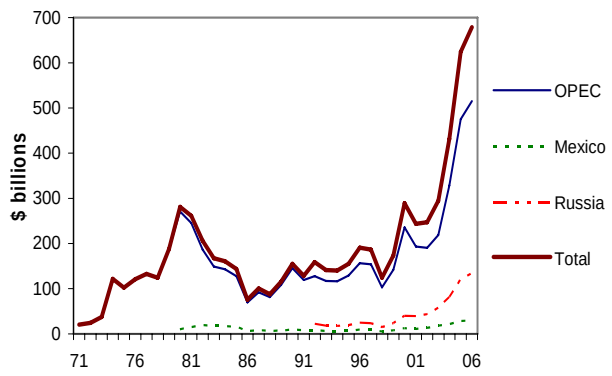
Introduction

The large surge in oil prices in recent years has generated large oil revenues for major oil exporting countries. Total oil export earnings of major oil exporters have risen sharply in nominal terms, to an estimated $624.2 billion in 2005 and a forecast $678.9 billion in 2006, up significantly from $243.7 billion in 2001 (Figure 1). For major OPEC oil exporters, total earnings have risen more than 75 percent in nominal terms, from $270.6 billion in 1980, the peak during the previous major oil price shock, to $475.1 billion in 2005. In real terms, the trend is somewhat less dramatic over the period, with OPEC oil export earnings in 2005 still 12 percent below the peak level in 1980. Nevertheless, major oil exporters' total oil export earnings rose nearly 140 percent in real terms over the 2002-05 period.

Oil exporters' investable funds have risen sharply since 2002

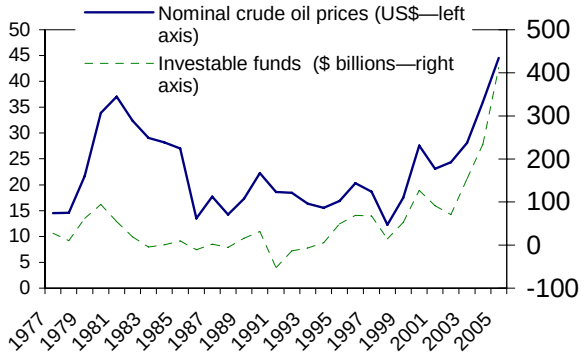
From the perspective of foreign asset allocation, a useful concept is that of "investable funds," which can be defined as the sum of a country's current account position plus financial inflows (FDI inflows, foreign portfolio investment inflows, and other foreign investment inflows).[1] Alternatively, investable funds can be estimated as the sum of the country's financial outflows and the change in its total foreign exchange reserves, in line with the balance of payments identity. Investable funds can be used to estimate the supply of foreign-currency resources available to a country for overseas investment (Table 1).

Figure 1. Oil export earnings of major oil exporters



Source: US Department of Energy, Energy Information Administration data estimates and forecast for 2006 as of July 2006.
Note: Major oil exporters (in this chart and throughout the Note) comprise OPEC members Saudi Arabia, Iran, UAE, Nigeria, Kuwait, Venezuela, Algeria, Libya, Iraq, and Qatar and non-OPEC oil exporters Russia and Mexico.

Figure 2. Oil prices and major oil exporters' investable funds



Source: IMF, World Bank, OPEC Annual Statistical Bulletin 2004 (for current account balances for UAE, 19771986; Iraq, 1977-1999; Qatar, 1977-1990); US Dept. of Energy EIA for nominal crude oil prices.
Note: Total investable funds are comprised of investable funds for OPEC only for 1977-1994 and OPEC, Mexico and Russia from 1995. See Table 1 for data availability limitations.

Table 1. Major oil exporters' estimated investable funds

($ billions)		2001	2002	2003	2004	2005
Major oil exporters	Total investable funds	91.7	71.1	154.0	234.2	412.2
OPEC	Current account position	46.7	43.0	86.5	123.0	248.3
	Financial inflows	3.4	-3.9	0.0	2.6	7.9
	Investable funds	50.1	39.1	86.5	125.6	256.2
Of which:						
Saudi Arabia	Current account position	9.4	11.9	28.0	51.9	87.1
	Financial inflows	-1.3	-5.0	-1.4	1.2	2.8
	Investable funds	8.1	6.8	26.7	53.1	89.9
Iran	Current account position	6.0	3.6	0.8	1.4	14.0
	Financial inflows	n.a.	n.a.	n.a.	n.a.	n.a.
	Investable funds	6.0	3.6	0.8	1.4	14.0
Kuwait	Current account position	8.3	4.3	9.4	18.9	32.3
	Financial inflows	0.9	1.9	0.0	0.0	n.a.
	Investable funds	9.2	6.1	9.4	18.9	32.3
Venezuela	Current account position	2.0	7.6	11.4	13.7	26.7
	Financial inflows	3.3	0.3	1.5	0.0	4.8
	Investable funds	5.3	7.9	13.0	13.8	31.5
Mexico	Current account position	-17.7	-13.5	-8.6	-6.9	-4.3
	Financial inflows	29.8	13.1	12.4	19.5	24.8
	Investable funds	12.2	-0.4	3.8	12.7	20.5
Russia	Current account position	33.9	29.1	35.5	58.4	79.5
	Financial inflows	-4.5	3.3	28.3	37.5	56.1
	Investable funds	29.4	32.5	63.8	95.9	135.5

Note: Major oil exporters (in this chart and throughout the Briefing Note) comprise OPEC members Saudi Arabia, Iran, UAE, Nigeria, Kuwait, Venezuela, Algeria, Libya, Iraq, and Qatar and non-OPEC oil exporters Russia and Mexico.
Source: U.S. Department of Energy, Energy Information Administration, July 2006. Forecast for 2006 as of July 2006.

Major oil exporters' investable funds have generally tended to rise during periods of high oil prices and fall during periods of collapsing oil prices (see Figure 2). In the current oil price shock, total estimated investable funds of OPEC members, Russia and Mexico more than quadrupled over the four year period through end-2005, from an estimated $91.7 billion to $412.2 billion. OPEC countries continue to account for the vast majority of major oil exporters' investable funds in the recent oil price shock: $256.2 billion in 2005, or 62 percent of the $412.2 billion in total investable funds last year for the 12 top oil exporters.

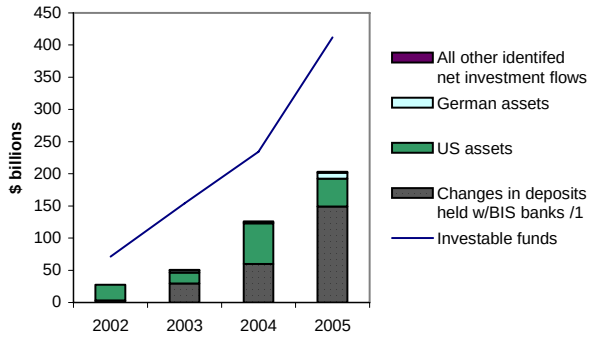
How are oil exporters' investable funds being allocated?

Much of the available data on asset allocation by the major oil exporters must be assembled from various counterparty sources, due to the lack of disaggregated balance of payments data for the oil exporters. These identifiable allocations of oil exporters' investable funds, as provided by the available counterparty data, are comprised of oil exporters' net changes in deposits held with BIS-reporting banks and other liabilities of BIS-reporting banks to these countries; oil exporters' net foreign direct investment outflows; and their net foreign portfolio investment outflows.

In terms of the *identifiable* investable funds, major oil exporters' deposits held with BIS-reporting banks have become the main destination over the current episode (Figure 3), with net additions to these deposits accounting for a combined estimated $149.2 billion in 2005 (36 percent of their total investable funds). Investment in US long-term securities and foreign direct investment in US companies and real estate assets also remained an important destination for oil exporters' investable funds, attracting a total estimated $43.3 billion in 2005.[2]

There is evidence that the major oil exporters, particularly OPEC countries, have been diversifying their investments into other countries' productive and financial assets. For instance, the share of oil exporters' identifiable investable funds going into German productive and financial assets (albeit still relatively small, at a total $9 billion in 2005) increased from nil to 4 percent, respectively, over 2002-05—and far outstripped the share of all other trackable EU financial and productive assets combined. Pakistan is notable as a relatively significant new destination for oil exporters' identifiable investable funds, accounting for 1 percent of the total in 2005 (sourced entirely from Middle East OPEC countries, particularly the UAE).

Figure 3. Identifiable allocations of oil exporters' investable funds



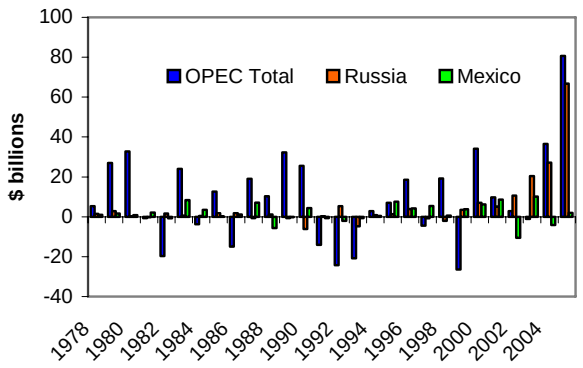
Source: Estimates based on data from BIS; national central banks and statistical authorities; and DECPG, IMF, OPEC Statistical Bulletin for current account data.

/1 Includes all liabilities of BIS-reporting banks to countries (ie, this is mainly comprised of oil exporters' deposits held with BIS-reporting banks).

Deposits with BIS-reporting banks are main identifiable destination of investable funds…

Net additions to major oil exporters' deposits held with BIS-reporting banks totaled a combined estimated $149.2 billion for the 12 major oil exporters in 2005 (see Figure 4)—an amount that accounted for 36 percent of these countries' estimated investable funds in 2005, little changed from the share of investable funds in 1980 during the previous oil shock. OPEC members' increase in net deposits as a share of their investable funds was 31 percent in 2005, down from 35 percent in 1980. Russia's share of new deposits has increased particularly significantly and steadily over the past several years, accounting for an estimated 49 percent of its investable funds in 2005—exceeding the corresponding figure for all of OPEC.

Figure 4. Annual changes in BIS reporting banks' liabilities to major oil exporters



Source: Estimates based on June 2006 BIS data. *Note*: Liabilities mainly comprise deposits held with BIS-reporting banks.

…although major oil exporters' role as a net supplier of funds to the banking system has diminished

Looking at the total outstanding liabilities of BIS-reporting banks, the major oil exporters' accounted for an estimated 3 percent of the total deposits held in BIS reporting banks in Q4 2005-Q1 2006, down from 9 percent in Q4 1981 (see Table 2). That is, major oil exporter's role as a net supplier of funds to the international banking system has diminished in the current oil price shock as compared with the previous one. This decline in the importance of petrodollars as a source of funds for BIS banks is noteworthy, given that OPEC deposits during the 1979-81 oil price shock deposited in international banks were on-loaned to oil importing developing countries, particularly in Latin America, paving the way for the early 1980s' Latin American debt crisis.

U.S. securities remain a major identified destination for recycled petrodollars…

In 2005, major oil exporters invested a combined estimated $43.3 billion in US long-term securities and productive assets (FDI). Of this, an estimated $39.5 billion was in the form of portfolio investment in US long-term securities (Treasury bonds and notes, US government agency bonds, US corporate bonds, and US stocks). US financial and productive assets remained a major destination for recycled petrodollars, despite its estimated share of the $203 billion in total *identifiable* investable funds in 2005 declining to around 20 percent, from just above 90 percent in 2002. At the same time, oil exporters in search of yield and taking a somewhat more diversified approach have been investing increasing amounts of petrodollars in non-US assets in the past few years (see Figure 5).

US securities are likely to be a still more important destination for oil exporters recycled petrodollars than the data indicate, taking into account that a sizeable portion of US government securities' purchases by oil exporting countries are believed to be channeled through financial centers and other offshore locations outside the United States (UK, Switzerland, Luxembourg, Belgium, Hong Kong, the Cayman Islands). Moreover, the true size of these flows are further underestimated by the lack of periodic data on net investment flows in US short-term securities.

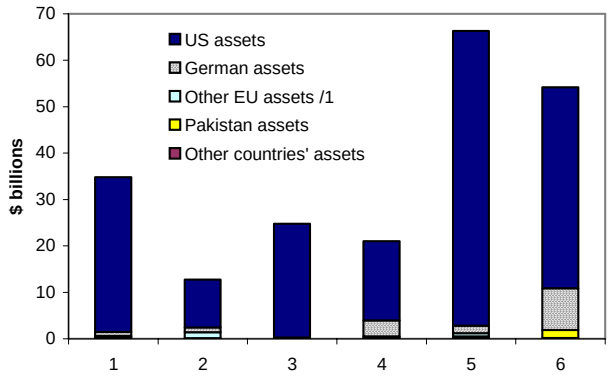
There was a sizeable increase in FDI flows to the U.S. in 2005 sourced from OPEC countries.[3] Direct investment capital flows from OPEC countries to the US exceeded a record $3.4 billion in 2005, with the second highest annual FDI inflows from this grouping recorded during the previous oil price shock (nearly $2.7 billion in 1981). This trend of rising FDI flows originating

Table 2. BIS reporting banks' liabilities outstanding to major oil exporters

($ billions, unless otherwise specified)	Q4 1978	Q4 1981	Q4 2002	Q4 2005	Q1 2006
OPEC aggregate	60.6	119.6	209.3	325.2	343.3
Russia	-	-	39	153.3	199.9
Mexico	-	-	52	60.1	65.5
Major oil exporters' share of total [/1]	8%	9%	2%	3%	3%

[/1] As a share of total liabilities of BIS reporting banks to all countries. Liabilities mainly comprise major oil exporters' deposits held with BIS-reporting banks. Data for Q1 2006 are provisional. Major oil exporters comprise OPEC for 1978, 1981; OPEC, Russia and Mexico for 2002, 2005, 2006.

Figure 5. Identifiable foreign portfolio investment and FDI outflows of major oil exporters



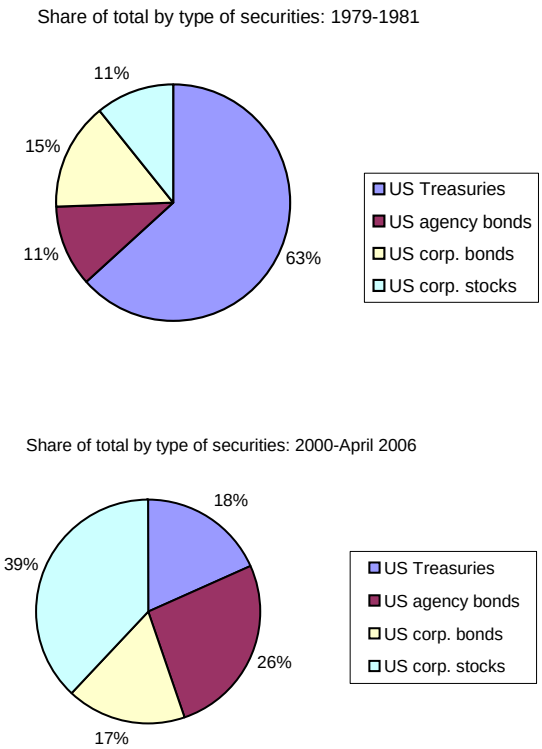
Source: Estimates based on data from national central banks and statistical authorities.
Note: Country assets inflows data include net portfolio investment inflows for Austria, Belgium, Denmark (2005), Estonia (2003-05), Finland (2004-05), Germany, Japan(2005), Pakistan (FY2001-05), and the US (long-term securities only); disaggregated portfolio investment flows data unavailable in other cases/for other countries across time series. Because Pakistan's FY runs from July-June, net foreign portfolio and FDI inflows in Pakistan for FY2001-02 are shown above in 2001 (and so forth); data above for 2005 covers July 2005-May 2006. Country asset inflows data are confidential in a number of cases.
/1 Comprised of assets of EU members other than Germany.

from OPEC countries continued into 2006 (based on numerous anecodotal reports of major deals), and was driven particularly by FDI sourced from the UAE, mainly in the form of acquisitions of stakes in US businesses including in the real estate, tourism and hospitality, and retail sectors.[4]

...within this trend, there has been more diversified investment in US securities, particularly for OPEC— At the same time, there has been diversification in the past several years away from Treasuries and into other US securities. Since the late 1990s many major oil producers, particularly OPEC members, have increasingly invested in US stocks and corporate bonds, as well as US federally-sponsored agency bonds—a trend that gained momentum with the onset of the recent oil price increase in 2002.[5] Nevertheless, US treasuries and government agency bonds continued to attract around three quarters (30 percent and 45 percent, respectively) of the major oil exporters' total net flows that were invested in long-term US securities over the 2002-April 2006 period.

For OPEC countries, this trend of greater financial asset diversification in the current oil price increase as compared with the late 1970s episode has been particularly significant (Figure 6). OPEC net investment flows into US corporate stocks and US corporate bonds for the 2000-April 2006 period reached $25.6 billion and $11.5 billion, respectively, together exceeding the amounts for long-term US treasuries ($12.4 billion) and US agency bonds ($17.6 billion). This contrasts markedly with the previous episode (1979-81), when US treasuries accounted for 63 percent ($18 billion) of OPEC's total net investment flows in US long-term securities. In early 2006, however, there was a renewed surge of net investment into US long-term securities by OPEC, particularly US treasury bonds and US corporate stocks, with net investment for the first four months already exceeding the total for all of 2005.

Figure 6. Changing patterns in OPEC net investment flows into long-term US securities



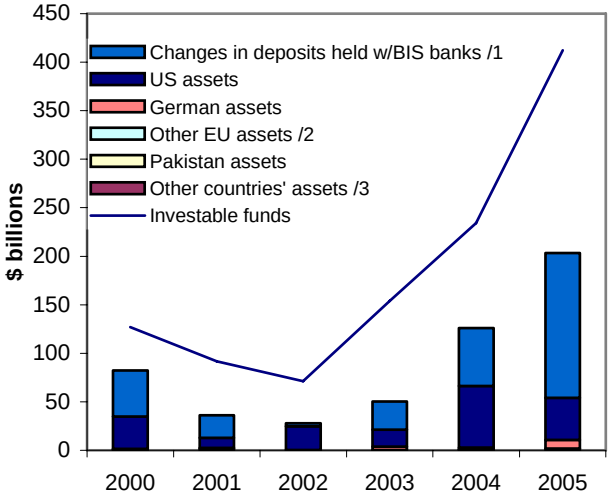
Source: Estimates based on U.S. Treasury Data.
Note: The U.S. Treasury does not provide periodic data for investment flows into short-term securities.U.S. TIC transactions data do not include investment in U.S. short-term securities.

A shift into a more diversified range of assets, regions, countries…

While it is clear that US assets and deposits with BIS-reporting banks remain the main *identified* destinations for recycled petrodollars, it is less clear where major oil exporters' "unidentifiable" investable funds are going. Just over half (or an estimated $208.9 billion) of the total estimated investable funds sourced from these major oil exporters in 2005 (see Figure 7) was unaccountable via publicly available oil exporters' and counterparty balance of payments' data.[6]

While comprehensive data are not available, anecodotal evidence indicates that oil exporting countries are investing these petrodollars across a broader, more diversified range of assets, regions and currencies in the current oil price increase as compared with the previous episode in the 1970s. There is an emerging trend of diversification into asset classes denominated in other currencies, with a rising share channeled to emerging economies, particularly in Asia. Oil exporters also are investing large amounts within their own regions and investing in their own local economies—targeting local infrastructure and real estate development, as well as diversifying into new sectors such as tourism, financial services and healthcare. Large amounts in recent years are believed to have gone into securities traded on local stock exchanges, and private equity funds active in the Middel East and South Asia regions. Moreover, oil stabilization funds and other government investment arms have been managing a large share of the oil exporters' savings, which in contrast to central banks, tend to place more emphasis on active investment, and returns maximization.

Figure 7. The gap between major oil exporters' identifiable crossborder net investment flows and total investable funds



Source: Estimates based on data from BIS; national central banks and statistical authorities; and DECPG, IMF, OPEC Statistical Bulletin for current account data.

Note: OPEC total comprises all members with the exception of Indonesia. Country assets inflows data include net portfolio investment inflows for Austria, Belgium, Denmark (2005), Estonia (2003-2005), Finland (2004-2005), Japan(2005), and Pakistan (2001-2005). Disaggregated portfolio investment flows data unavailable in other cases/for other countries across time series. Country asset inflows are confidential in a number of cases.

/1 Includes all liabilities of BIS-reporting banks to countries (ie, this is mainly comprised of oil exporters' deposits held with BIS-reporting banks).

/2 Comprised of assets of EU members other than Germany.

/3 Identifiable net investment flows in combined assets of Brazil, Japan and Turkey, which totaled an estimated $145 million in 2005.

Notes

1. The available data used to estimate investable funds for these countries are, in many instances, fragmentary: There are fragmentary financial inflows data for Iran, Iraq, Kuwait, and UAE across the time series; no financial inflows data for Qatar across the entire series; no portfolio investment inflows data for Libya and Saudi Arabia across the time series; fragmentary portfolio investment data for Nigeria and Algeria.

2. Data for the first four months of 2006 show a significant pickup in OPEC interest in this asset class, with OPEC estimated net purchases of US securities already exceeding the total net purchases for all of 2005 by $5.5 billion, while the US BEA also reported a significant pickup in FDI flows originating from OPEC countries (see also below). Although transactions data for foreign investment in short-term US securities is unavailable, the US Treasury Report on Foreign Portfolio Holdings of US Securities (June 2006) indicates that there was a $20.5 billion increase in major oil exporters' net holdings of US short-term securities over the one-year period through June 2005.

3. U.S. BEA, Survey of Current Business, June 2006.

4. As one prominent recent example, the UAE's Emaar Properties paid more than $1 billion in May 2006 to acquire U.S.construction group WL Homes.

5. The origin of the investment flows is not always accurately captured in the US Treasury data. The US Treasury only provides periodic transactions data on US resident transactions in long-term securities.

6. This is despite the improved availability of disaggregated balance of payments' counterparty data in the past several years for many countries, particularly in Europe. A similar exercise conducted by the BIS, as presented in its December 2005 Quarterly Review (although focusing solely on the OPEC countries and based on estimates of their cumulative investable funds and outbound investment flows), found that nearly 70 percent of OPEC's estimated $700 billion in cumulative investable funds generated in 1999-05 was unaccountable (BIS, Quarterly Review, December 2005).