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Review of the Experience with Oil Stabilization and Savings Funds in Selected Countries

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Middle Eastern Department

**Review of the Experience with Oil Stabilization
and Savings Funds in Selected Countries^{1 2}**

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Abstract

<p>The views expressed in this Working Paper are those of the author(s) and do not necessarily represent those of the IMF or IMF policy. Working Papers describe research in progress by the author(s) and are published to elicit comments and to further debate.</p>
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The main purposes of this paper are to review the operational modalities and experience of oil funds currently in place in Norway, Chile (copper), the State of Alaska, Venezuela, Kuwait, and Oman, and to draw some preliminary conclusions on their contribution to enhance fiscal management. The outcome so far of their experience has been mixed, with differences among countries reflecting the variety of objectives attached to the funds, the challenges in adhering to established rules, the institutional set-up, and the soundness of the overall fiscal discipline in each country (or state).

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I. INTRODUCTION

Policy makers in countries that derive substantial export and fiscal revenue from exhaustible resources, such as oil, gas, and copper, are confronted with two major issues. The first—related to the finite nature of these resources—is how much oil income to spend on the present generation and how much to save for future generations. The second is how to adjust government spending and cushion the domestic economy from the sharp and unpredictable variations in oil prices and revenue. A number of oil producing countries have attempted to address these issues either through savings schemes or oil stabilization funds, or both.³ These funds have been established despite the difficulty of determining a long-run equilibrium oil price and predicting whether price swings are temporary or permanent.⁴

The main objectives of this paper are to review the operational modalities and experience with oil and copper funds in selected countries (and states) and to draw some preliminary conclusions on their contribution to enhance fiscal management. The following funds are analyzed in the next section: Norway's State Petroleum Fund; Chile's Copper Stabilization Fund; Venezuela's Macroeconomic Stabilization Fund; the State of Alaska's Constitutional Oil Budget Fund and Permanent Fund; Kuwait's General Reserve Fund and Reserve Fund for Future Generations; and Oman's State General Reserve Fund and Contingency Fund.⁵ The importance of oil varies considerably across these countries and states; it currently accounts for about 20 percent of central government revenue in Norway and for more than 50 percent in the State of Alaska and other countries. In Chile, net receipts from the state copper company accounts on average for about 10 percent of government revenue. The experience of some of these funds is relatively recent, and their operation and results differ significantly. Section III contains a summary and conclusions.

³ See Engel and Meller (1993) and Varangis, Akiyama, Mitchel (1995), and Engel and Valdés (2000) for further discussion of stabilization funds and how countries have managed commodity booms and busts.

⁴ The price of oil usually follows a random walk process, i.e., the best predictor of tomorrow price is today's price.

⁵ The discussion is not exhaustive. Several other commodity funds exist in resource-rich countries. In 1956, Kiribati established a Revenue Equalization Fund as a trust for future generations in light of the foreseeable depletion of its phosphate deposits. In 1993, Colombia set up an oil stabilization fund on a decentralized basis, i.e., its resources are allocated according to a pre-established rule between the territorial entities and the oil public enterprise. In 1995, Nigeria created a Petroleum Trust Fund, financed by the revenues from the sale of domestic petroleum products, and earmarked its resources for health, education, and other mandated areas. Papua New Guinea and the province of Alberta (Canada) have also established oil and mineral resource funds. Resource-poor countries, such as Hong Kong SAR, Singapore, and Estonia, have also established fiscal reserve funds financed by fiscal surpluses and other public savings, including privatization proceeds.

II. REVIEW OF THE EXPERIENCE WITH OIL FUNDS

A. Norway's State Petroleum Fund

Norway—one of the world's largest oil exporter—established the State Petroleum Fund (SPF) in 1990. The increase in pension outlays due to the aging of the population and the decline in oil output galvanized the support to create an oil fund designed to promote a sustainable long-run fiscal position.⁶ In this context, the SPF—conceived as both a savings and stabilization fund—contributes to the build up of financial reserves during times of stable or rising oil prices and increasing economic activity. These reserves can be drawn upon either in the short run, as a financial buffer against revenue drops, or in the long run as oil production declines and social expenditure increases, thereby promoting intergenerational equity.⁷ Also, the fund contributes to increasing transparency in the use of oil revenue.⁸

The SPF accumulates resources only if the central government achieves an overall budget surplus.⁹ This surplus, in turn, depends mainly on oil prices and the size of the non-oil budget deficit—which is defined as overall fiscal balance excluding government oil revenue. Therefore, given that all the oil revenue accrues first to the budget, the decision about how much oil revenue to save is made every year through the budget process. In this context, the fund does not have specific rules for access to its resources, making its operation flexible. In contrast, the government has issued specific guidelines for the management and choice of investment assets of the SPF. The Ministry of Finance formulates both the overall investment guidelines and the benchmark portfolio against which the performance of the SPF investments are measured, while Norway's central bank is the operational manager of the fund.

The SPF can be considered a successful institutional arrangement. It has served as a tool for managing the resources needed in connection with the increase in pension outlays and helped enhance the effectiveness of fiscal policy by facilitating the adoption of a

⁶ Norway adopted in 1993 the “Solidarity Alternative,” under which labor unions agreed to accept relatively modest nominal wage increases in exchange for the authorities’ commitment to use monetary policy to stabilize the exchange rate and fiscal policy to insulate the non-oil economy from windfall oil revenues.

⁷ In 1995, the authorities started to produce generational accounts, which measure long run effects of alternative fiscal policies on different generations.

⁸ Information on the SPF, including flow and stock of assets, is readily available through the Internet at www.norges-bank.no/english/petroleum_fund.

⁹ See Alier and Kaufman (1999) for an analysis of sustaining a fiscal surplus in countries dependent on a nonrenewable resource.

countercyclical fiscal stance. During an upswing in oil prices, the fiscal stance is tightened to sterilize the impact of a surge in oil revenue on domestic demand, thereby dampening inflationary pressures and containing the potential appreciation of the exchange rate.¹⁰ If on the other hand there is a decline in oil prices, previously accumulated financial assets can be drawn down to prevent a disorderly adjustment in government expenditure with its negative implications for investment and growth. As a result of such a countercyclical policy, the relationship between budget expenditure and revenue availability has become negative (Figure 1).¹¹ In addition, the SPF operates within a conservative fiscal policy that has generally resulted in a central government's overall surplus, including in 1998 when oil prices dropped significantly.¹² Consequently, the fund has accumulated sizeable assets, which had reached the equivalent to US\$ 26 billion, or almost 18 percent of GDP by the end of 1999 (Table 1).

Table 1. Norway: Asset Accumulation in the State Petroleum Fund, 1996–99

	(In percent of GDP)				
	1996	1997	1998	1999	1996–99
Total accumulation 1/	4.8	6.0	3.9	3.2	17.7
Net transfers from the budget	4.7	5.6	3.0	2.1	15.4
Investment income	0.1	0.4	0.9	1.1	2.3

Source: National authorities.

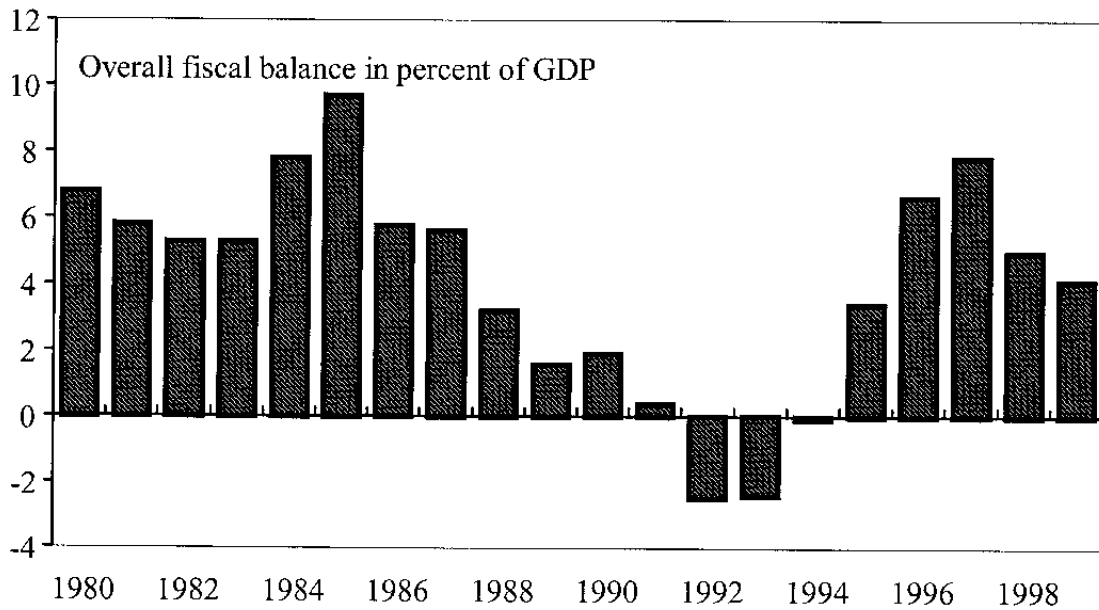
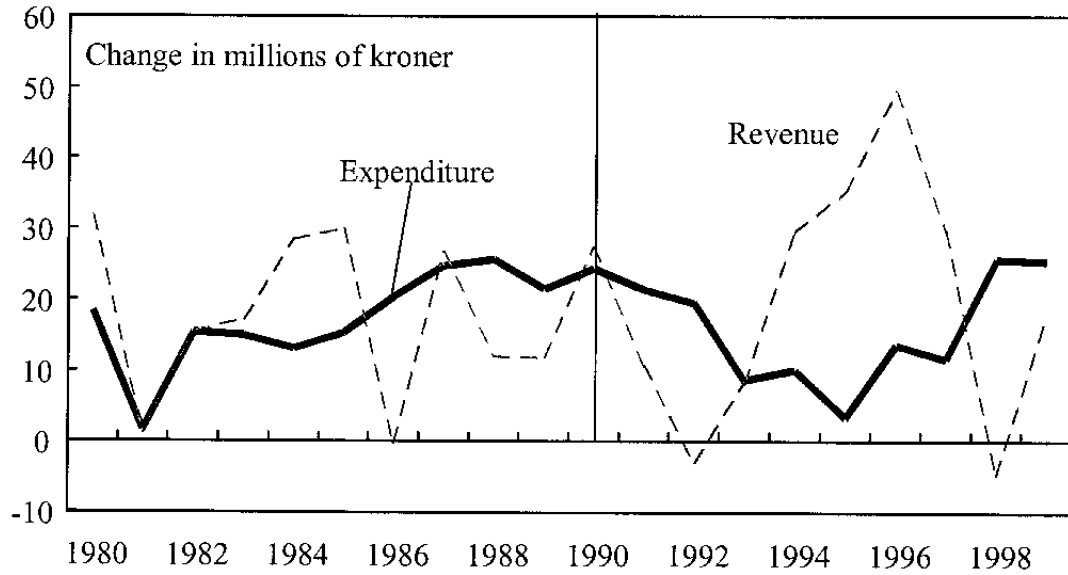
1/ No accumulation took place prior to 1996, as total revenue stagnated during the first half of the 1990s.

¹⁰ However, Norway uses fiscal policy for demand management in general; thereby, the fiscal stance would be also tightened to counteract a rapid increase in domestic demand arising from non-oil causes.

¹¹ In the 1980s, the correlation between the change in revenue and expenditure was positive.

¹² Norway has based its 2000 budget on a conservative oil price assumption (US\$16 per barrel), and long-term fiscal policy on an average price of US\$13 per barrel.

Figure 1. Norway: Central Government Fiscal Indicators, 1980-99



Source: World Economic Outlook (WEO) database.

All SPF assets are currently invested in a range of foreign financial assets, including fixed income instruments and equity in mature markets.¹³ The objective of this investment strategy is to help dampen the appreciation of the (real) exchange rate in the face of rising oil export revenues, thereby protecting the competitiveness of the non-oil sector and supporting the fund's stabilization objectives.¹⁴

B. Chile's Copper Stabilization Fund

The Copper Stabilization Fund (CSF) was established in 1985 to stabilize both the exchange rate and fiscal revenues from the effect of changes in copper receipts. As in the case of Norway, the Chilean fund has also operated within a sound fiscal policy that resulted in a central government's overall fiscal surplus from 1988 to 1997 (Figure 2). The fund's operations only apply to the revenues of the public copper company (CODELCO), while its resources are treated as international reserves and are managed by the central bank.

The CSF's saving-spending rules are based on an estimated long-term copper price, which is determined annually by the authorities—albeit not in a transparent way. No explicit formula is used every time the benchmark copper price is calculated. The saving rule establishes transfers into the fund depending on the size of the positive gap between the benchmark and actual copper price.¹⁵ Thus, the larger the gap, the more resources are deposited into the fund. The spending rule establishes that the government can withdraw resources from the CSF if the price differential is negative—on a symmetric basis as when the price differential is positive—as long as there are resources in the fund. Though these rules might have dampened political pressure to increase expenditure by reducing available budget revenues, they do not take into account the available resources in the fund, which might be depleted during a prolonged period of declining copper price.¹⁶

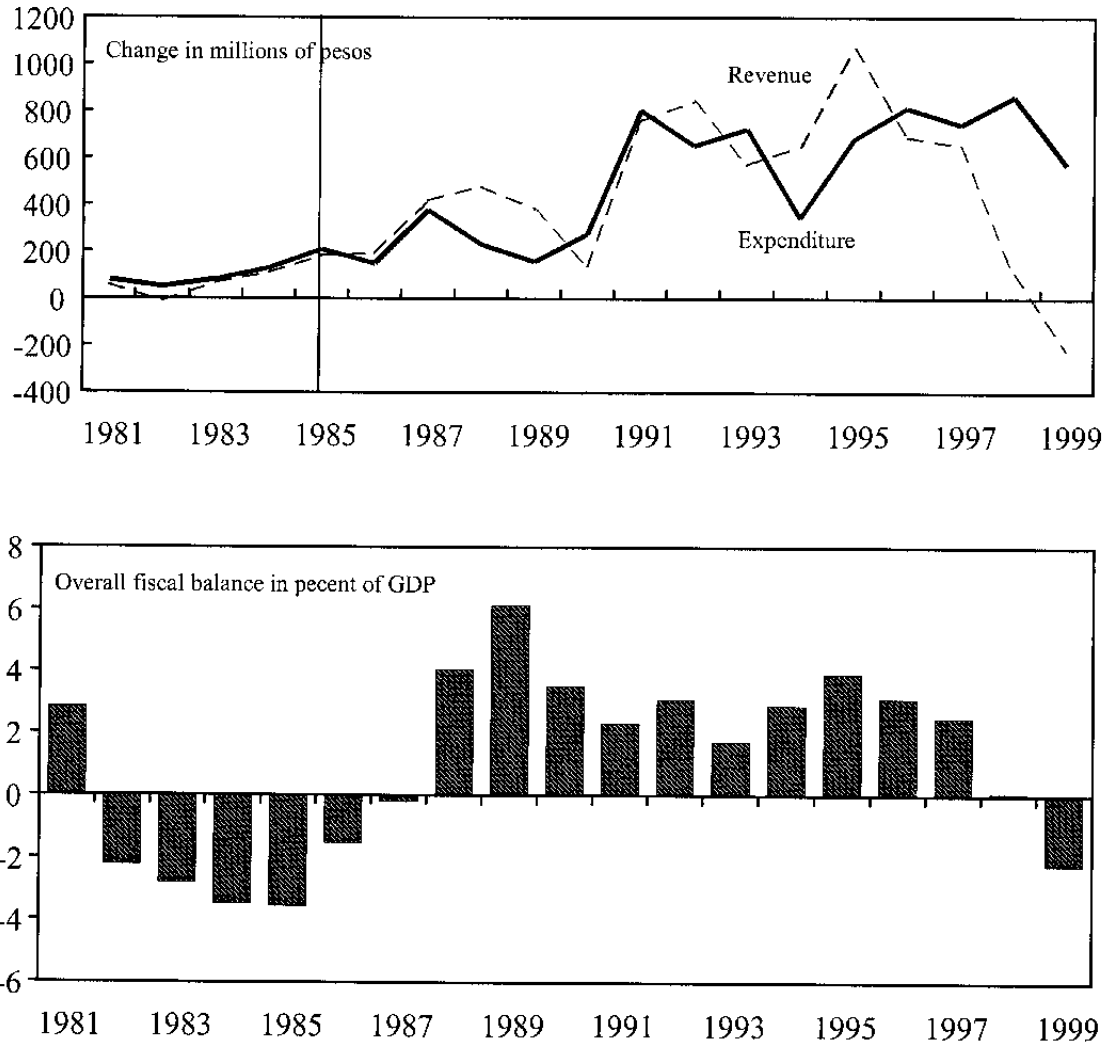
¹³ All SPF assets were initially invested in low-risk, interest bearing financial instruments, such as bonds, issued by foreign governments or highly rated international institutions. Equity investment is usually made in non-oil sectors to protect the fund against the vagaries of the oil market.

¹⁴ Investment in domestic assets would transmit oil volatility to the economy. In oil price downturns, large withdrawals of government domestic deposits could negatively affect the banking system, compounding the contractionary effect on the economy of lower oil prices.

¹⁵ The rules establish zero deposits for the first US\$0.04 per pound above the benchmark price relative to the actual copper price obtained by CODELCO, and mandatory deposits of 50 percent for the next US\$0.06 per pound, and 100 percent for any additional cent above the benchmark price.

¹⁶ See Basch and Engel (1993) for further discussion.

Figure 2. Chile: Central Government Fiscal Indicators, 1981-99



Sources: World Economic Outlook (WEO) database; and Fund staff estimates.

Chile's fund can be considered a successful arrangement. Budget expenditures have not closely followed revenue availability, as it was the case prior to the CSF's adoption, and the fund has accumulated substantial resources, particularly during the second half of the

1980s when copper prices were high.¹⁷ Cumulative gross deposits into the fund peaked at US\$ 3.9 billion in 1997, declining by about US\$900 million in the following years, as the Chilean authorities drew down these resources to offset the drop in copper revenue (Table 2). However, the fund's resources have been also used for other purposes in the past. In the late 1980s, they were used to repay foreign government debt to the central bank of Chile and, more recently, to subsidize domestic gasoline prices through a loan to Chile's oil stabilization fund.¹⁸ Therefore, the fund's available resources are not clear because the authorities only make public gross deposits into the fund.

Table 2. Chile: Evolution of Gross Deposits into the Copper Stabilization Fund, 1987–99

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
	(In millions of U.S. dollars)												
- Annual deposits	96.4	734.1	1,055.9	706.6	233.3	110.7	-87.1	86.2	702.5	189.1	104.4	-351.0	-459.5
- Cumulative deposits	96.4	830.5	1,886.4	2,593.0	2,826.3	2,937.0	2,849.9	2,936.1	3,638.6	3,827.7	3,932.1	3,581.1	3,121.6
Memorandum items:	(In U.S. cents per pound)												
Actual copper price	80.8	117.9	129.2	120.7	106.1	103.6	86.9	104.6	133.0	104.0	103.2	75.0	71.3

Sources: National Authorities; and World Economic Outlook WEO database.

C. Venezuela's Macroeconomic Stabilization Fund

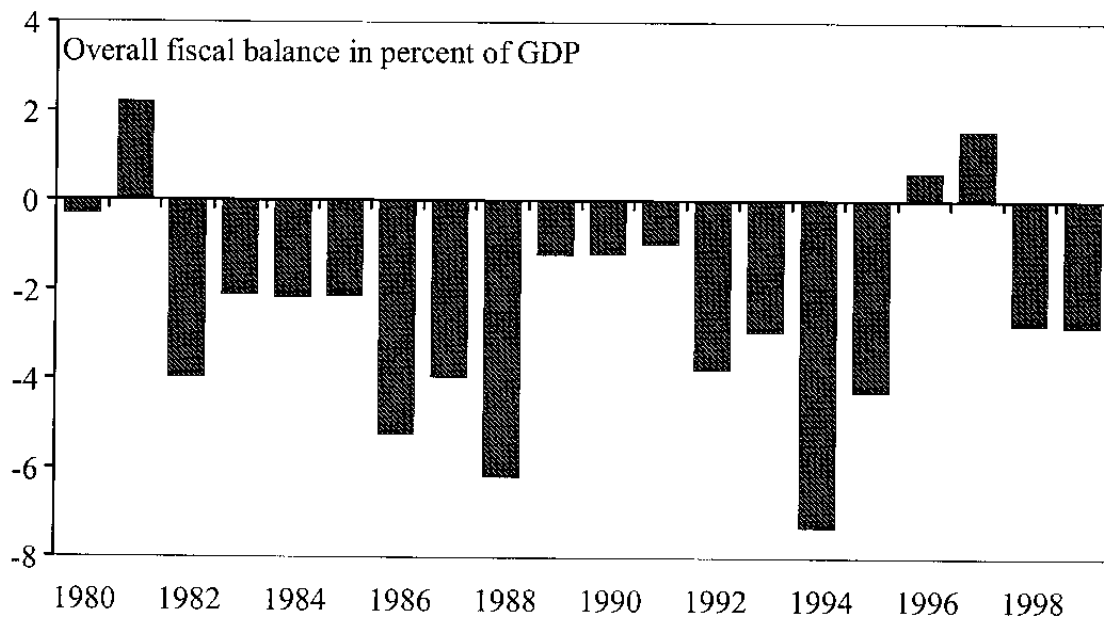
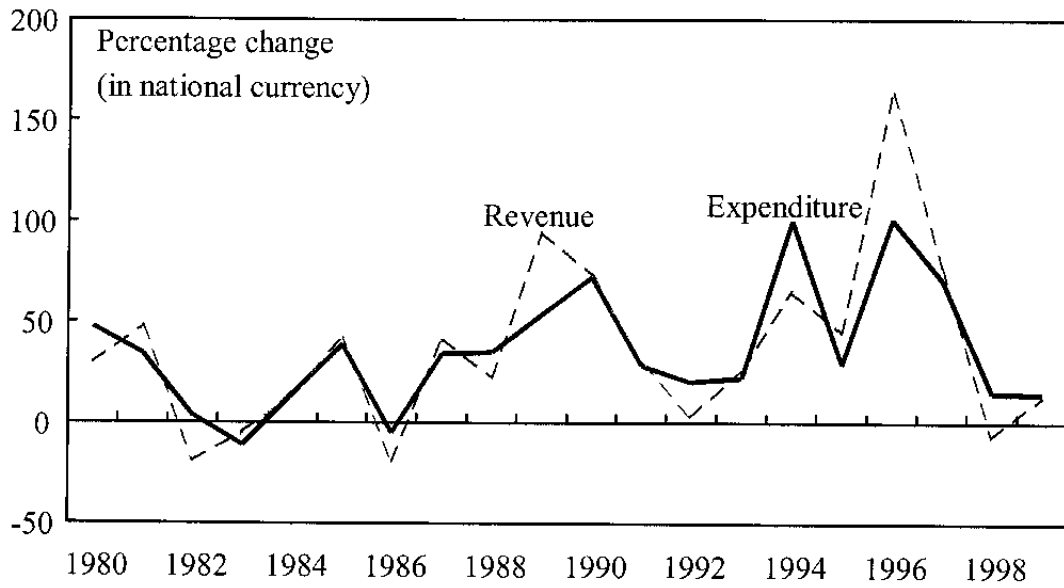
In November 1998, Venezuela established a Macroeconomic Stabilization Fund (MSF) to insulate the budget and the economy from fluctuations in oil prices. The fund was adopted a part of the government effort to improve oil management after several decades of weak fiscal performance (Figure 3). The fund seeks to stabilize oil revenues accruing to the central government, regional governments, and the state-owned petroleum company (Petroleos de Venezuela, PDVSA). The Venezuelan fund focuses on short-term stabilization objectives; part of oil receipts are saved when oil revenue (or price) is higher than a reference value, and withdrawals are made when it is below this value. In addition, the fund invests its resources in foreign assets, which are managed by Venezuela's central bank.¹⁹

¹⁷ The correlation between expenditure and revenue growth declined from 0.92 in the first half of the 1980s to 0.25 in 1987–99.

¹⁸ This fund was created in the early 1990s to limit fluctuations in the domestic price of gasoline due to the changes in world oil prices.

¹⁹ The MSF is not authorized to engage in any financial operation, including loans, guarantees, and issuance of debt securities, that may create liabilities to the fund.

Figure 3. Venezuela: Central Government Fiscal Indicators, 1980-99



Sources: World Economic Outlook (WEO) database; and Fund staff estimates.

The fund had initially transparent saving-spending rules. Every dollar over the reference value had to be deposited in the MSF and credited to the account of each of the three beneficiaries.²⁰ Resources could be withdrawn from the fund—following approval by Congress—if (a) oil revenues in a given year were lower than the reference values or (b) the resources in the fund exceed 80 percent of the annual average oil revenues in the preceding five years. Excess funds withdrawn by the central government under alternative (b) were earmarked for repayment of debt and for capital expenditure by the regional governments. Moreover, the fund balance at the end of a fiscal year must never be less than a third of the resources at the end of the preceding year.

Important modifications to the rules were introduced in early 1999. These included changes to the reference values and presidential discretion for withdrawals, while earmarking the use of resources to social and investment expenditures, and repayment of debt. The new reference values were fixed at a very low level by decree for the period 1999–2004.²¹ In addition, the fund now receives only half of every dollar over the new reference values.

These recent modifications may have considerably weakened the fund's stabilization objectives. In addition, although the authorities set very low reference values for the next five years in an effort to tighten fiscal policy, this strategy could severely compromise the feasibility and viability of the MSF if the fiscal deficit is not effectively eliminated over the medium-term. Furthermore, while the authorities managed to accumulate resources into the fund consistent with the rules governing the fund, such an accumulation was actually financed through government borrowing as the overall fiscal position remained in deficit in 1999.²²

²⁰ The reference value for (a) the central government was given by a 5-year moving average of oil sector income taxes, oil royalties, and PDVSA's dividends, all net of obligatory transfers to the regional governments and to the debt redemption fund; (b) the regional government, by a 5-year average of obligatory transfers from oil revenue received from the central government, and (c) PDVSA, by using a 5-year average of oil prices, net of taxes.

²¹ In 1999, according to the original rules, the reference value for the central and regional governments would have added up to about US\$7.9 billion (8 percent of GDP) and for the petroleum company, US\$14.7 per barrel. Under the new values (following the modifications), the central and regional governments reference value was reduced to US\$3.7 billion (3.8 percent of GDP) and that for PDVSA to US\$9 per barrel.

²² Total deposits into the fund have added up to around US\$1.7 billion by early 2000 (US\$0.7 billion from the central government, US\$0.4 billion from regional, and US\$0.6 billion from the state oil company).

D. State of Alaska Oil Funds

The State of Alaska has two separate funds to achieve saving and stabilization goals. The savings fund (Alaska Permanent Fund—APF) has been in operation since 1976, while the stabilization fund (the Constitutional Budget Reserve Fund—CBR) was adopted in 1990, following a sharp decline in oil revenue in the second half of the 1980s that led to cuts in expenditure and contraction in economic activity. Both funds were approved as an amendment to the state constitution, and information about their operations and resources are made public regularly.²³

The Alaska Permanent Fund

The APF is basically a trust for future generations. Its main objective is to establish a financial investment base that would generate future income in the face of dwindling oil production. In this respect, the fund's assets have grown rapidly since its creation. At the end of 1999, its resources reached US\$27.1 billion, with an average annual real rate of return of over 7 percent in 1978–99.²⁴ Also, the APF earned a record income in 1996, exceeding regular oil revenues.

The fund has transparent and specific saving-spending rules. A constitutional obligation requires that at least 25 percent of all mineral lease rentals, royalties, royalty sale proceeds, federal mineral revenue sharing payments, and bonuses received by the State of Alaska be placed into the fund. This type of funding channels a significant portion of the oil revenues away from the government budget. As a result of this rigid saving rule, transfers to the APF have to be made independently of oil market and overall fiscal developments. The APF principal is invested permanently and cannot be spent without amending the State's constitution with a majority vote of the Alaskan population.

There is, however, some flexibility on how to spend the fund's earnings, based on annual decisions by Alaska's State Legislature and Governor. Earnings have been usually used to distribute a portion of the fund income to eligible Alaskans (the permanent fund dividend program); to provide for automatic reinvestment of income to compensate for the effect of inflation; and to increase the capital of the fund. The dividend program was enacted in 1982 and was conceived as a way to provide Alaskans a personal interest in protecting the fund. Since the program's inception, 42 percent of the APF income has been paid out to current generations and the rest was saved for future generations. In 1999, every Alaskan resident received US\$1,770 through the dividend program.

²³ Information on the APF can be accessed via the Internet at www.apfc.org. Information on the CBR can be found at www.revenue.state.ak.us/treasury/index.htm and oga/index.htm.

²⁴ The APF's management and investment strategy is in the hands of the Alaska Permanent Fund Corporation. The fund has gradually diversified its investment assets from fixed-income instruments to equity investments.

The Constitutional Budget Reserve Fund

The CBR's main objective is to supplement government revenue shortfalls.²⁵ The Alaskan legislature limits the government borrowing capacity from the fund by setting up an annual cap on the amount that can be drawn from the fund. However, the legislature can review the cap, if necessary. Indeed, in fiscal year 1999, the US\$700 million cap was revised upward when it was obvious that the fiscal deficit would be higher due to lower oil prices and production. CBR resources represent a loan to the budget that has to be repaid in years of fiscal surpluses.

The CBR presents several operational shortcomings that weaken its ability to act as an oil stabilization fund. Its resources are not related to oil market developments, but are made up of proceeds from yearly settlements dealing primarily with disputed tax and royalty sale proceeds. During 1991–99 (on a fiscal year basis), about US\$6.1 billion were collected from these proceeds (including investment income). The fund's assets can be appropriated for any public purpose by a vote of three-fourths of the members of each house of the legislature. Nevertheless, most of the fund's resources have been borrowed to finance deficits (Figure 4). Thus, through the end of fiscal year 1999, about half of the fund's resources have been used for this purpose.²⁶ Furthermore, the fund does not have a built-in mechanism that would encourage savings in periods of rising oil revenue. Despite these shortcomings, it is noteworthy that budget expenditure has not closely followed revenue availability during the 1990s (Figure 4).

E. Kuwait's Oil Funds

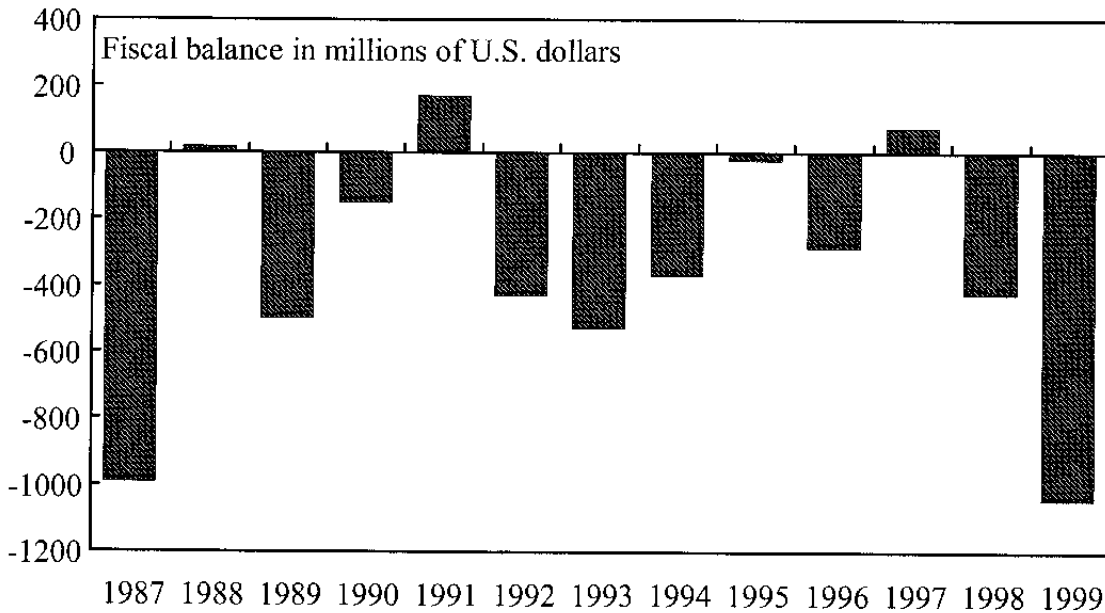
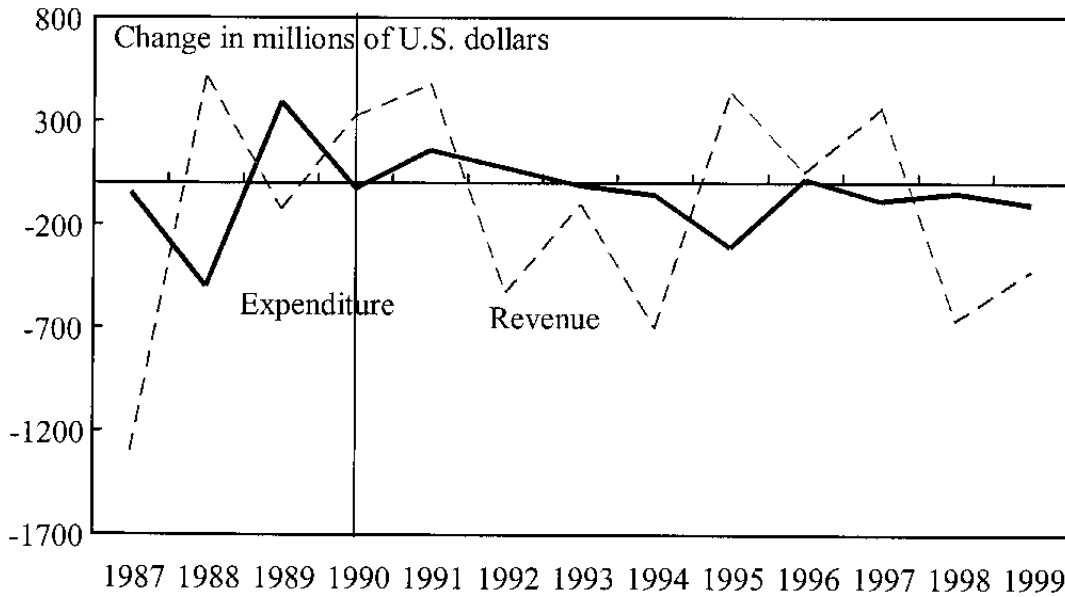
In 1960, the Kuwaiti authorities created the General Reserve Fund (GRF), which was financed from the rising budget surpluses that followed the discovery and export of oil in the previous decade.²⁷ While the purpose and operating rules were not initially specified, the fund encompassed all government investments, including foreign assets and equity participation in various domestic companies.

²⁵ Given the seasonality of revenues in the state, the fund's resources are also used for cash flow purposes within the fiscal year.

²⁶ In the early 1990s, the authorities exhausted the resources available in a statutory budget reserve before turning to the CBR for deficit financing.

²⁷ In the Cooperation Council of the Arab States of the Gulf (GCC) region, only Kuwait and Oman have adopted oil funds whose objectives and operational rules are clearly specified. Other GCC countries have relied on informal mechanisms and the capital market to soften the impact of sharp fluctuations in oil revenues.

Figure 4. Alaska: Fiscal Indicators, 1987-99 1/



Source: Alaskan Authorities.

1/ Based on general funds on a fiscal year basis (June-July).

In 1976, the authorities established a savings fund, the Reserve Fund for Future Generations (RFFG), aimed at providing a stream of income for future generations. This fund consisted initially of 50 percent of the GRF resources at that time, and 10 percent of annual oil and non-oil revenue, in addition to the income from its assets. Like Alaska's Permanent Fund, transfers to the RFFG are made independently of budget or oil market developments. Nearly all of the fund's holdings are kept in foreign assets, mostly invested in the major foreign capital markets. In an effort to insulate the fund from political interference and protect its assets, provision to the public of information on the funds' assets is prohibited by law. It is clear, however, that because of the sheer size of oil revenue and the fiscal surpluses that have been recorded over many years, the RFFG accumulated sizable assets. In fact, its resources helped cover government expenditure during the 1990–91 regional crisis when oil facilities were damaged, and helped finance a large part of the reconstruction effort. With regard to the objective of transferring resources to future generations, the current accumulation policy—10 percent of total government revenue in addition to the fund's investment income—seems sufficient, even under conservative assumptions, to maintain a stable per capita oil wealth for the generations to come.

Since the establishment of the RFFG, the GRF has encompassed stabilization functions.²⁸ In addition, it manages government cash flow operations including servicing the public debt and government domestic equity investments. However, the GRF does not have a clearly defined mechanism to accumulate savings in periods of rising oil revenue, while its funding is primarily derived from the sale of assets, and the transfer of profits and income from public entities, after deduction of the 10 percent that accrues to the RFFG. The GRF operations seem to provide enough flexibility to meet short-run financing needs, whereas the stricter rules of accumulation and withdrawal that are attached to the RFFG aim at protecting long-term government savings.²⁹

The significant increase in the amount of funds allocated for investment led to the establishment in 1982 of an independent legal entity, the Kuwait Investment Authority (KIA), to improve the quality of investment operations and processes. The KIA replaced the Ministry of Finance in managing and developing all financial reserves of the country.

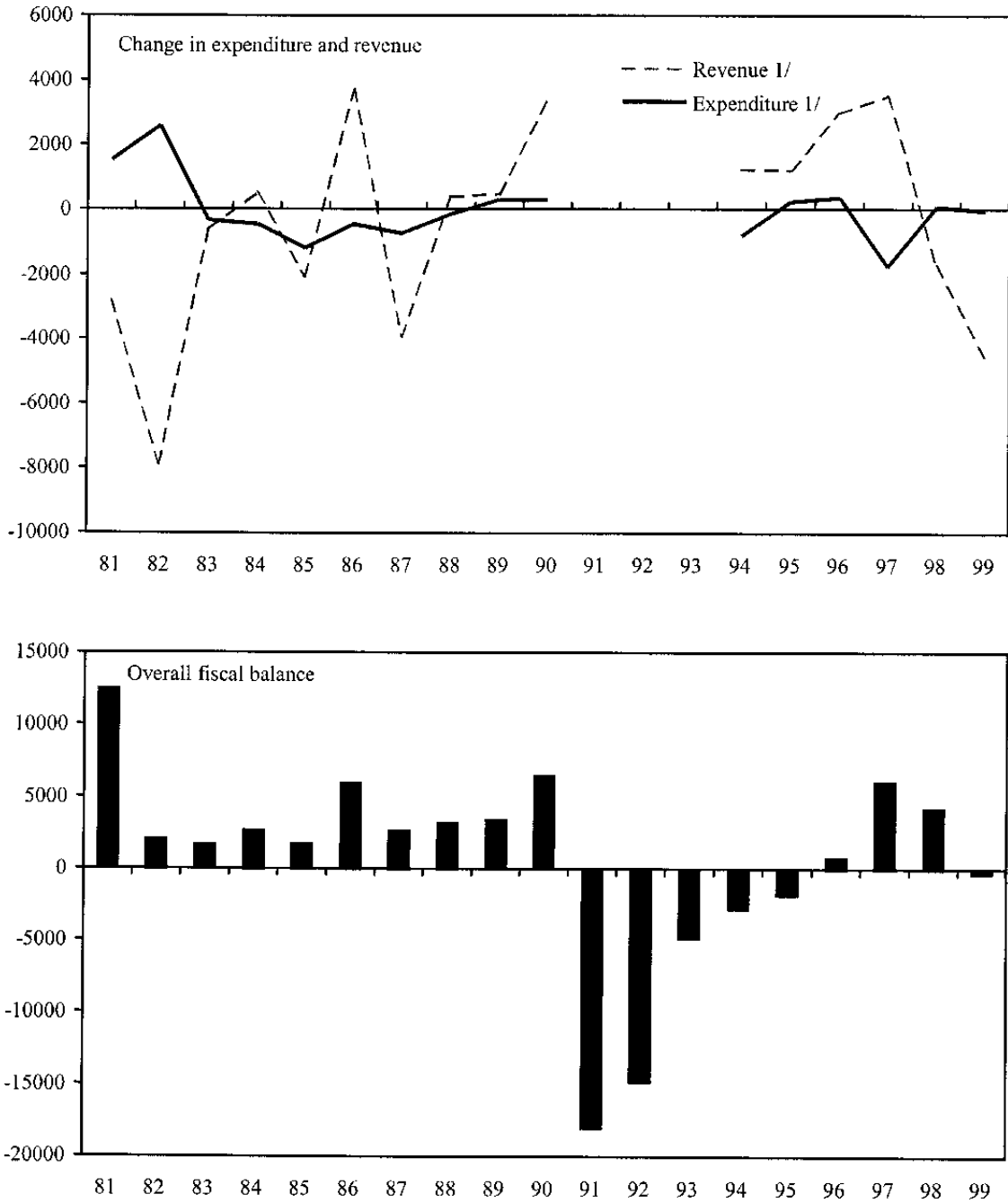
The establishment of oil funds in Kuwait has been supported by relatively conservative fiscal policies. Over the last two decades, the consolidated fiscal position was generally in surplus of more than 10 percent of GDP—excluding the reconstruction period following the regional conflict in the early 1990s (Figure 5).³⁰ Also, oil revenue has been, in general, budgeted based on relatively conservative oil price assumptions, and government expenditure has been kept within the budgeted amount. Thus, government spending has not

²⁸ The Kuwaiti dinar is pegged to a currency basket. Thus, the GRF does not aim at stabilizing the exchange rate.

²⁹ Government withdrawal from the RFFG requires approval by the national assembly.

³⁰ This fiscal outcome is based on a consolidated presentation of the fiscal accounts that include the operations of the oil funds.

Figure 5. Kuwait: Central Government Fiscal Indicators, 1981–99
(In millions of U.S. dollars)



Sources: National authorities; and Fund staff estimates.

1/ Excludes information for 1991–1993 due to regional conflict and subsequent reconstruction period.

been usually driven by revenue availability. In fact, to some extent, fiscal policy in Kuwait has played a countercyclical role over the years. In addition, the investment income from Kuwait's funds is the primary source of government income after oil, accounting for about 35 percent of total revenue in the past few years.

F. Oman's Oil Funds

Given the relatively shorter horizon of oil reserves in Oman (about 15–20 years) the State General Reserve Fund (SGRF) was created in 1980 to replace over time the dwindling oil revenues. Notwithstanding the stated objective of building assets for future generations, SGRF resources have been frequently used for budget support in the face of external shocks.³¹ In addition, since its establishment, the modus operandi of the SGRF has gone through several modifications. The share of oil receipts allocated to the fund, which was initially established at 15 percent of total oil receipts, was reduced to 5 percent beginning in 1986. In 1989, under a new funding system, all oil proceeds exceeding US\$15 per barrel were transferred to the fund.

Oman switched to a new funding system following the creation in 1990 of the Contingency Fund and its replacement in 1993 by the Oil Fund. The Contingency Fund was designed as a stabilization fund, with financing coming from the budgeted oil revenue in excess of the transfers to the SGRF.^{32 33} Nevertheless, the experience with the Contingency Fund was short lived, as it was replaced in 1993 by an Oil Fund intended to finance investments in the oil sector. A new allocation of oil earnings was then introduced providing for transfers to the budget of oil revenue up to US\$15 per barrel, with the next US\$2 per barrel being allocated to the SGRF, the next US\$0.5 per barrel to the Oil Fund, and the remainder (any amount above US\$17.5 per barrel) to the budget. While this allocation was intended to provide a stable flow of income to the SGRF, the fund's assets have declined since 1992, reflecting the government's withdrawals to finance budget deficits.³⁴ Also, like in Kuwait, government spending in Oman has not been entirely driven by revenue availability (Figure 6). In addition, the Ministry of Finance manages SGRF assets, which are mostly invested abroad, while a small portion is held as foreign currency deposits mainly with the central bank of Oman.

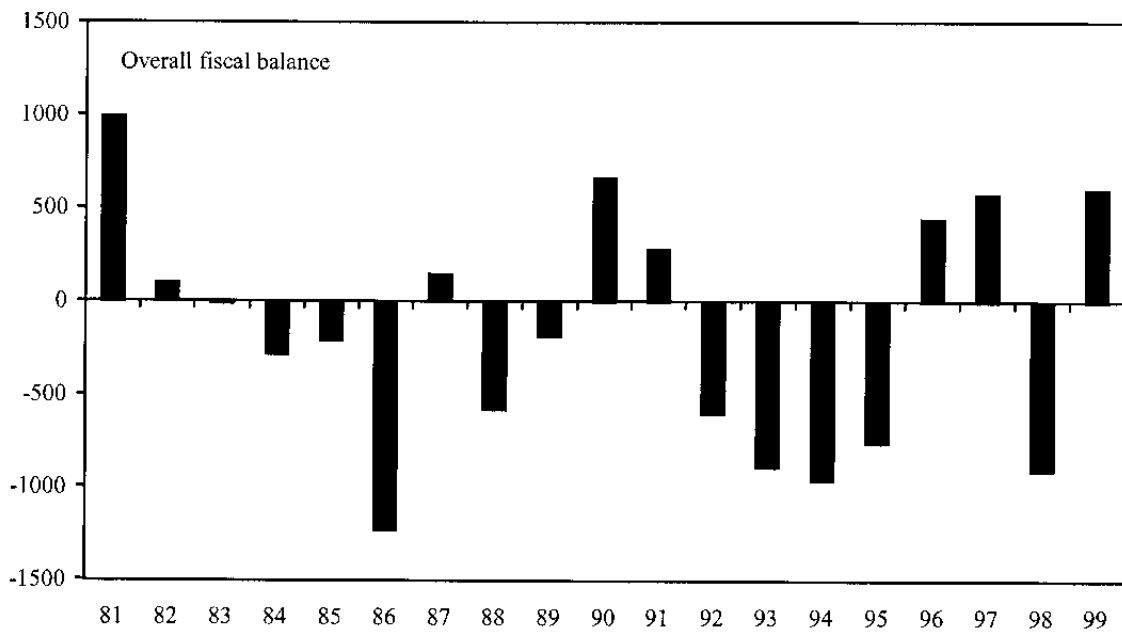
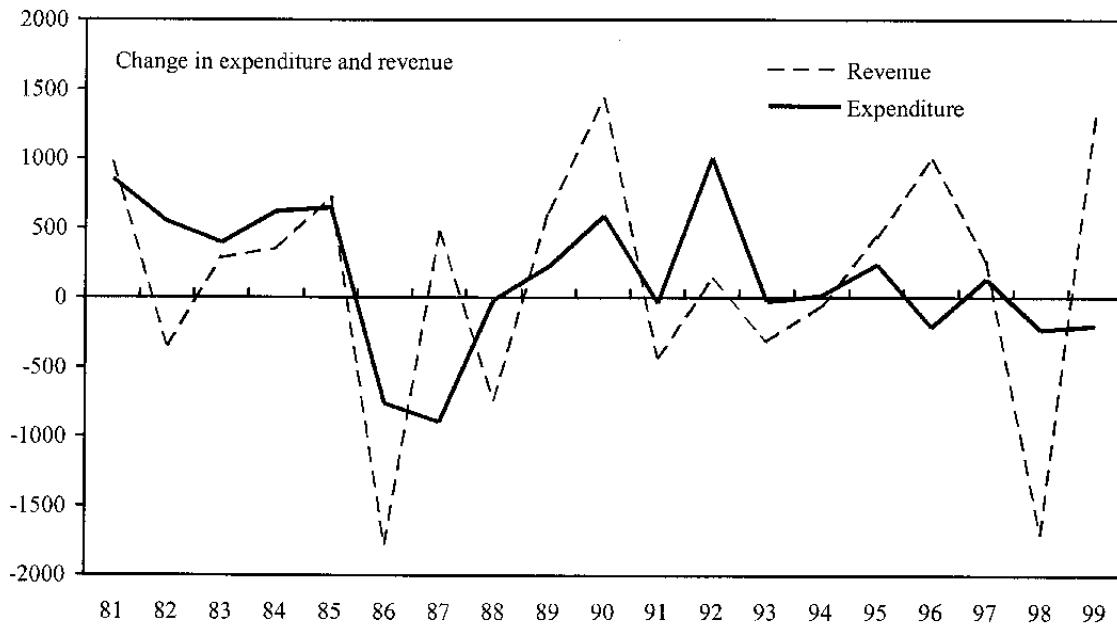
³¹ The use of SGRF resources to finance the budget requires the approval of the Council of Ministers on the recommendation of the Financial Affairs and Energy Resources Council.

³² Oil revenues were first assigned to the budget as specified in the Fourth Development Plan (1991–95), then to the SGRF at either the rate of 15 percent of net oil revenues or the amount allocated to it in the Fourth Plan, whichever was lower. The rest, if any, was allocated to the Contingency Fund.

³³ The Omani rial has been pegged to the U.S. dollar since January 1986. Thus, the Contingency Fund did not aim at stabilizing the exchange rate.

³⁴ During the early 1990s, the accumulation of assets in the fund took place while the central government's debt was increasing. However, it is not clear whether this reflected a portfolio decision and/or government liquidity preference.

Figure 6. Oman: Central Government Fiscal Indicators, 1981-99
(In millions of U.S. dollars)



Sources: National authorities; and Fund staff estimates.

III. SUMMARY AND CONCLUSIONS

The oil funds in Norway, Chile (copper), Venezuela, the State of Alaska, Kuwait, and Oman have been established to ensure intergenerational equity, strengthen demand management, and/or maintain competitiveness. The outcome of their experience has been so far mixed, with differences among countries reflecting the variety of objectives attached to the funds, the challenges in adhering to the operational rules, the institutional set-up, and the soundness of the overall fiscal policy.

What have the funds reviewed helped achieve? Savings funds in Kuwait, Norway and the State of Alaska have helped build sizable assets to meet future needs in connection with a projected decline in petroleum earnings and/or an increase in social outlays in the case of Norway. In most cases, stabilization funds have contributed to enhancing the effectiveness of fiscal policy by making budget expenditure less driven by revenue availability. Some of these funds may have also helped to defuse spending pressures by channeling a significant portion of oil revenue away from the budget, particularly when oil (copper) prices were high. Also, investing the funds' resources abroad might have contributed to dampening real exchange rate appreciation in periods of rising oil (copper) revenue in Norway and Chile. In Venezuela and Oman, however, the experience with stabilization funds has been less successful because of frequent changes to the fund's rules and the deviation from its intended purposes.

It is clear from the experience of these countries (and state) that an oil revenue stabilization fund cannot be a substitute for sound fiscal management, and its success or failure can be attributed as much as to fiscal discipline as to the fund's management. It is, therefore, not surprising that stabilization schemes have been more successful in countries with a strong commitment to fiscal discipline and sound macroeconomic management.

References

- Alier, Max and Martin Kaufman, 1999, "Nonrenewable Resources: A Case for Persistent Fiscal Surpluses," IMF Working Paper No. 99/44 (Washington: International Monetary Fund).
- Basch, Miguel, and Eduardo Engel, 1993, "Temporary Shocks and Stabilization Mechanisms: The Chilean Case," in *External Shocks and Stabilization Mechanisms*, Eduardo Engel and Patricio Meller (editors), Chapter two, (Washington: Inter-American Development Bank, John Hopkins University Press).
- Engel, Eduardo, and Patricio Meller, 1993, "Review of Stabilization Mechanisms for Primary Commodity Exporters," in *External Shocks and Stabilization Mechanisms*, Eduardo Engel and Patricio Meller (editors), Chapter one, (Washington: Inter-American Development Bank, John Hopkins University Press).
- Engel, Eduardo and Rodrigo Valdés, 2000, "Optimal Fiscal Strategy for Oil Exporting Countries," unpublished manuscript.
- Hausmann, Ricardo, Andrew Powell, and Roberto Rigobon, 1993, "An Optimal Spending Rule Facing Oil Income Uncertainty (Venezuela)," in *External Shocks and Stabilization Mechanisms*, Eduardo Engel and Patricio Meller (editors), Chapter three, (Washington: Inter-American Development Bank, John Hopkins University Press).
- Varangis, Panayotis, Takamasa Akiyama, and Donald Mitchel, 1995, *Managing Commodity Booms—and Busts*, (Washington: The World Bank).