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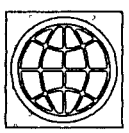
Azerbaijan
Public Expenditure Review

April 3, 2003

Poverty Reduction and Economic Management Unit (ECSPE)
Europe and Central Asia Region



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CURRENCY AND EQUIVALENT UNITS

(Exchange Rate Effective April 3, 2003)
Currency Unit = Manat (AZM)
US$1 = AZM 4,898

ACRONYMS AND ABBREVIATIONS

AIOC	Azerbaijan International Operating Company
ALMP	Active Labor Market Programs
ARWC	Abspheron Regional Water Company
BOP	Balance of Payments
BPMS	Basic Package of Medical Services
BSL	Budget System Law
BTC	Baku-Tbilisi-Cheyhan pipeline
CA	Chamber of Audits
CAB	Current Account Balance
CEEC	Central and Eastern European Countries
CFAA	Country Financial Accountability Assessment
CHCP	Committee for Housing and Communal Property
CIS	Commonwealth of Independent States
CPAR	Country Procurement Assessment Report
CPI	Consumer Price Index
DECDG	Development Economics Data Group
EBRD	European Bank for Reconstruction and Development
ECA	Europe and Central Asia
FDI	Foreign Direct Investment
FSU	Former Soviet Union
GDP	Gross Domestic Product
GNFS	Goods and Non-Factor Services
IAS	International Accounting Standards
IBTA	Institution Building Technical Assistance
IDA	International Development Association
IDPs	Internally Displaced Populations
IFS	International Financial Statistics
IMF	International Monetary Fund
I-PRSP	Interim Poverty Reduction Strategy Paper
MDPFC	Main Department of Public Finance Control
MED	Ministry of Economic Development
MICS	Multiple Indicator Cluster Survey
MOA	Ministry of Agriculture
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
MLSPP	Ministry of Labor and Social Protection of Population
MTEF	Medium-Term Expenditure Framework
MTPES	Medium-Term Public Expenditure Strategy
NBA	National Bank of Azerbaijan
NGO	Non-Governmental Organization
OECD	Organization for Economic Cooperation and Development
PER	Public Expenditure Review
PIH	Permanent Income Hypothesis
PIP	Public Investment Program
PPL	Public Procurement Law
PRS	Poverty Reduction Strategy
PRSP	Poverty Reduction Strategy Paper
PSA	Production Sharing Agreement
SAC	Structural Adjustment Credit
SME	Small and Medium Enterprises
SOCAR	State Oil Company of Azerbaijan Republic
SOF	State Oil Fund
SPA	State Procurement Agency
SPF	Social Protection Fund
SPL	State Procurement Law
SSC	State Statistical Committee
SWC	State Water Committee
TFP	Total Factor Productivity
TIMS	Treasury Information Management System
UNCITRAL	United Nations Commission for International Trade Law
UNICEF	United Nations International Children's Emergency Fund
WUAs	Water User Associations
VAT	Value-Added Tax

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Preface

Azerbaijan has experienced robust economic growth during the past seven years, aided by its oil sector development. Nevertheless, poverty is still pervasive and social indicators have deteriorated. The oil and gas windfall will be of undoubted benefit to the country and its citizens if combined with a very careful macroeconomic policy and fiscal stance, as well as steadfast implementation of the structural reform program and poverty reduction strategy. The experience of other resource rich countries has often been disappointing and left large strata of the population in continued poverty. *The main challenge for Azerbaijan is to design and implement a policy agenda that leads to poverty reduction and improves incomes as well as equity, while maintaining macroeconomic and financial stability.*

This Public Expenditure Review (PER) focuses on the public expenditure part of the overall policy agenda. Its main objective is to provide a framework for more efficient use of public resources and more effective poverty reduction efforts. This framework is designed to be consistent with the maintenance of overall macroeconomic stability and with sustainable economic growth in the non-oil sector.

The macroeconomic achievements over the past five years have been encouraging. Continuing these achievements, however, may present a greater challenge to the authorities in the coming decade. The relatively speedy accumulation of fiscal revenues related to the oil and gas windfall will create heavy spending pressures. Using these funds unwisely or out of the context of a sound vision of the country's sustainable economic development path will create macroeconomic instabilities, inefficient and non-competitive non-oil activities, or both. *The basic conclusion and simple recommendation of this PER is that Azerbaijan follow a fiscal strategy consistent with sustainable development of the non-oil sector, while over time mending institutional weaknesses and structural deficiencies, and investing in its people.*

This Public Expenditure Review is designed as a discussion document and guide for the authorities of the Government of Azerbaijan in weighing difficult policy and spending choices. In a wider political economy context, it is also intended to inform the broader civil society in the Republic of Azerbaijan of these important choices. Finally, this document is intended as an orientation for members of the external donor community.

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Acknowledgments

This study has been managed and prepared by a task team comprising of Nina Budina (ECSPE), Roger Robinson (ECCAR), and Christian Petersen (ECSPE). The PER mission also included Thilak Ranaweera (DECDG), who throughout has worked intensively on the development of the comprehensive modeling framework and projections. The original concept memorandum was drafted by Petersen and Beata Smarzynska (DECRG). Ulviya Ibrahimova (ECSPE) and Artur Radziwill (summer intern) provided able research assistance. Peter Thomson (ECSIE) supplied the detailed oil and gas sector projections model, which made possible the long-term analysis of the oil windfall. John Holsen (Consultant) offered comments during the process of designing projections. John Wakeman-Linn (IMF) and his team made valuable comments on macro/fiscal issues and provided the framework for calculation of the quasi-fiscal deficit for 2000-2001. Farid Mamedov (ECSIE) and Emin Huseynov (formerly ECSPE) had previously undertaken the quasi-fiscal estimates for 1998-1999, and offered valuable support during the mission. Ekaterine Vashakmadze (ECSPE) provided public expenditure cross-section data for FSU and CIS countries used in Chapter II of this report. A great number of colleagues contributed to Chapter V on sectoral issues: Michael Mills (ECSHD), Arvo Kuddo (ECSHD), Karin Fock (ECSSD), Ede Jorge Ijjasz-Vasquez (ECSIE), Halil Dundar (ECSHD), Jean-Jacques Soulacroup (ECSIE), and Julian Lampietti (ECSSD). The latter two also contributed with the drafting of the fiscal decentralization section of Chapter III. The Report has benefited from the analysis of the poverty assessment report. It was edited by Emily Evershed (Consultant). Virginia Sapinoso (ECSPE) and Rosario Hablero (ECSPE) provided invaluable assistance. Cevdet Denizer (ECSPE) reviewed the growth accounting methodology and macro policy framework. Brian Pinto (PRMEP) and Michael Lewin (DECDG) offered detailed comments as peer reviewers.

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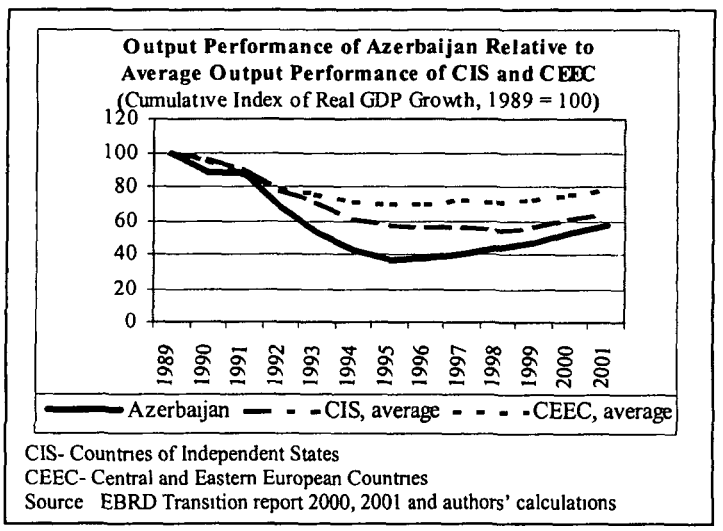
A. BACKGROUND

1. Azerbaijan has experienced robust economic growth during the past seven years, aided by its oil sector development. Nevertheless, poverty is still pervasive and social indicators have deteriorated. The oil and gas windfall will be of undoubted benefit to the country and its citizens if combined with a very careful macroeconomic policy and fiscal stance, as well as steadfast implementation of the structural reform program and poverty reduction strategy. The experience of other resource rich countries has often been disappointing and left large strata of the population in continued poverty. **The challenge for Azerbaijan is to design and implement a policy agenda that leads to poverty reduction and improves incomes as well as equity, while maintaining macroeconomic and financial stability.**

2. Since independence, Azerbaijan's economy has undergone serious stress and realignment and the process of structural change is ongoing. Macroeconomic stabilization required expenditure cuts in real terms. Coupled with less than efficient budgetary and quasi-fiscal expenditure allocations, as well as a large agenda of strengthening management and implementation capacity, the cuts have led to decline in social outcomes and quality of public services. **The main objective of this Public Expenditure Review (PER) is to inform policy choices toward lasting poverty reduction and increasing incomes, while maintaining sound macroeconomic management.** The availability of oil revenue resources jointed with the current state of transition to a market economy make the future public expenditure challenges for Azerbaijan unique. It is hoped the PER would be useful for defining a Medium-Term Expenditure Framework (MTEF) to address these issues, and promoting balanced growth so the non-oil sector is not left behind.

3. Few countries have experienced as volatile and precarious an economic performance as that of Azerbaijan during the 1990s. In the first half of the decade the country suffered the complex trauma and set of problems associated with the dissolution of the former Soviet Union (FSU), which was further aggravated by an armed conflict over Nagorno-Karabakh and the associated influx of refugees. The second half of the decade witnessed a surge in foreign investor interest in the country's oil and gas sector. Actual investment increased significantly, as did oil and gas output and prices. This, coupled with an array of sound



CIS- Countries of Independent States
CEEC- Central and Eastern European Countries
Source EBRD Transition report 2000, 2001 and authors' calculations

macroeconomic and structural adjustment policies from 1996, brought about rapid restoration in overall growth and monetary stabilization.

4. These macroeconomic achievements must be maintained, and in some respects may represent a greater challenge to the authorities in the coming decade. Both the transition process and the booming oil sector will lead to large restructuring of the economy. The economy is facing a dual macroeconomic challenge: to maintain macroeconomic and monetary stability while strengthening competitiveness of the non-oil sector, and to complete the transition agenda of structural reform, which may see some traditional activities disappear or stabilize at much lower levels of output and employment.

5. Although the overall macroeconomic outlook for Azerbaijan is very favorable, driven by the rapid oil and gas sector development, the non-oil GDP will grow at a more modest pace. Because of substantial profit and capital repatriation outflows of the foreign oil companies, there is bound to be a significant divergence between the double-digit GDP growth rates on the one hand and on the other, the increase in resources available for domestic absorption. This will translate into more modest growth in private consumption per capita. Herein lies the crux of macroeconomic management over the coming decade: how to manage an increasing flow of resources to the public sector, large swings in the current account balance, and at the same time maintain financial and macroeconomic stability; and how to avoid the dreaded "Dutch disease"[1] and/or the misuse and waste of public resources that many countries with a resource-based windfall have experienced.

"The Resource Curse"

The well-documented impact of oil abundance on economic performance cannot be ignored: empirical evidence suggests that growth is systematically lower in countries with large natural resource endowments. Worse, small economies with mineral resources tend to be among the worst growth performers.[†] As the experience of other countries has shown, strengthening implementation capacity to spend the additional fiscal revenues wisely is the key factor. There is always the risk that public spending designed to spur growth or modernization will result in very low rates of return or will require continued subsidization in the future. In some other countries, a resource boom has lead to rent-seeking behavior to garner the windfall. This occurs in an environment of weak institutions.[‡] Strategic priority setting and sequencing of policy measures taking into account institutional capacities therefore becomes crucial.

[†] See for example Sachs and Warner, "Natural Resource Abundance and Economic Growth," 1995, and Auty, "Sustaining Development in Mineral Economies: the Resource Curse Thesis,", 1993.

[‡] See Phillip R. Lane and Aaron Tornell, "Power, Growth and the Volacity Effect," *Journal of Economic Growth*, Vol. 1(2), 1995, for further discussion of some of these issues.

6. Balanced growth between the new oil sector and the traditional non-oil sector is a major challenge – adapting to Azerbaijan's increasing integration into the world market, creating productive employment opportunities, and reducing poverty. Excess supply of foreign exchange may lead to appreciation of the exchange rate, and excessive fiscal spending may lead to inflation and inefficiency – Dutch disease symptoms that hamper competitiveness and growth

[1] "Dutch disease" refers to the tendency for large resource revenues to appreciate the real exchange rate, which then damages the non-oil tradable sector.

of the non-oil sector. To foster non-oil sector growth and job opportunities, the Government's agenda is to: (i) maintain financial stability and prudent fiscal policy; (ii) create an environment for enterprise restructuring based on hard budget constraints and elimination of quasi-fiscal subsidies, competition, a competitive real exchange rate and reasonable real interest rates; (iii) complete financial sector reforms to improve financial intermediation and access to credit; (iv) improve quality of social services to protect vulnerable segments of population from the perils of the transition process; and (v) improve human capital through education and health sector reforms.

7. **Rapid and sustainable reduction in poverty is the main objective over the coming decade. Turning Government oil revenues into sustainable jobs with more equity across the social strata is a most difficult task.** The 2002 Poverty Assessment on Azerbaijan estimates a poverty rate of 50 percent and extreme poverty at 17 percent in 2001.[2] While not directly comparable, the 1996 survey found a poverty rate of 68 percent, suggesting that **poverty may have declined during the last six years.** This is attributed mainly to a decline in income poverty in the rural areas as a result of successful farm privatization. Despite these encouraging results, it is clear that sustained non-oil sector growth, as well as targeted human development policies in education, health and social protection are required to bring the poor above the poverty line. The Government's poverty reduction strategy prioritizes public expenditures towards the following areas:

Gains in productivity are key to growth in the non-oil sector. Productivity accelerates as a result of resource shifts from less productive to more productive firms, largely due to a more liberal business environment, hard budget constraints, better financial intermediation, and governance under the rule of law. Moving rapidly on the Government's Privatization Program is likely to stimulate more efficient resource allocation and thus have positive impact on productivity and job creation. A service oriented public sector and the elimination of critical infrastructure bottlenecks also contribute to efficient resource allocation. Finally, besides investing in physical capital, human capital investment in entrepreneurial skills and transparent business practices is an important factor for strengthening the competitiveness of the non-oil sector.

8. **First, in urban areas poverty is associated with falling employment opportunities and earnings in the formal economy.** The key challenges here are to: (i) improve skills of urban workers; (ii) increase mobility of the urban labor market; and (iii) implement structural and administrative changes necessary to foster an environment conducive to investment, growth and job creation in the non-oil sectors of the economy.

9. **Second, in rural areas poverty is rather associated with lack of access to basic services and adequate infrastructure.** The rural poverty reduction strategy aims at: (i) improving extension services and availability of credit; (ii) improving access to energy, water, and other public services; and (iii) improving rural infrastructure, especially irrigation systems.

10. **Third, there is a need to address the growing extent of "capability" poverty.** Given past expenditure cuts, maintaining poor peoples' access to health and education services is a key objective. In the education sector the quality of the teaching process need to be improved and

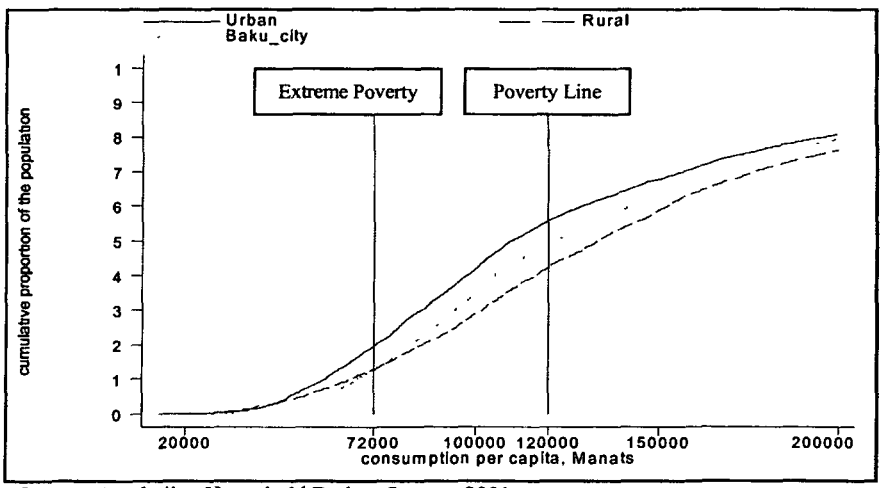
[2] For more information see Azerbaijan Poverty Assessment, World Bank 2002.

the system rationalized. In the health sector, the levels of infant and maternal mortality levels as well as the incidence of certain infectious diseases are of increasing concern, as is the extent of malnutrition among poor children.

11. **Fourth, the social safety net needs to better targeted and funded adequately, while in-kind implicit subsidies should be substituted with cash transfers. Furthermore, the internally displaced population (IDPs) needs to be integrated into the mainstream society.**

12. **And importantly, to better monitor the effectiveness of public expenditure and reforms, the effort to improve data collection for the Household Budget Survey (HBS) should continue.** The Government is taking steps to ensure that the collection of data on the labor market, education and health follow internationally accepted definitions to facilitate monitoring its progress towards the Millennium Development Goals (MDG), and allow better comparability between the living standards of Azeri people and other countries.

Poverty Comparisons
Rural, Baku City and other Urban Areas in 2000



Source: Azerbaijan Household Budget Survey, 2001.

13. **The national Poverty Reduction Strategy (PRS) is an important cornerstone for the future development of Azerbaijan.** The forthcoming MTEF and the associated Public Investment Program (PIP), consistent with and based on the PRS, will provide the main elements for defining how public expenditure can most effectively address poverty while continuing the good track record of fiscal sustainability within a stable macroeconomic and monetary framework.

B. The Role of the Public Expenditure Review

14. **This first PER attempts to set out the broad framework of issues that the Government of Azerbaijan would need to address in the next several years, to meet the challenge of managing the oil windfall to the benefit of the country and its citizens.** Given

the enormous developments to the Azerbaijan economy anticipated during the rest of the decade, the PER focuses on macroeconomic and fiscal policies to steer clear of the pitfalls ahead. Prudent budget management and strong institutions for effective and efficient public expenditure execution are key in order to avoid the disappointing experience of many natural resource rich countries. While Chapter I sets the stage, Chapters II and III document recent progress with fiscal consolidation and the building of institutions with accountable management, and then provide an agenda to address the challenges ahead. Chapter IV, a detailed examination of macroeconomic and fiscal management issues for the rest of the decade, proposes a public expenditure envelope consistent with the objectives described above.

15. **The sectoral agenda of poverty reduction is summarized in Chapter V from a public finance perspective. These programs are elaborated in more detail in the concomitant Poverty Assessment. Likewise, the fiduciary framework is addressed in detail in the parallel Country Procurement Assessment Review (CPAR) and Country Financial Accountability Assessment (CFAA).** All these activities are designed to support the development agenda of Azerbaijan. The Government's PRS is well advanced in its formulation, but more work is needed on costing and prioritization of the components of the agenda. In this respect, the Government's future PIP plays a crucial role, and the capacity to appraise and prioritize prospective projects should be supported. More analytical work on public expenditure is needed in order to advise on the design and execution of the commencing fiscal decentralization program, which would strengthen local government and give municipalities more fiscal responsibilities, especially in the social sectors. This could lead to better empowerment and voice for the poor, but it could also lead to local capture.

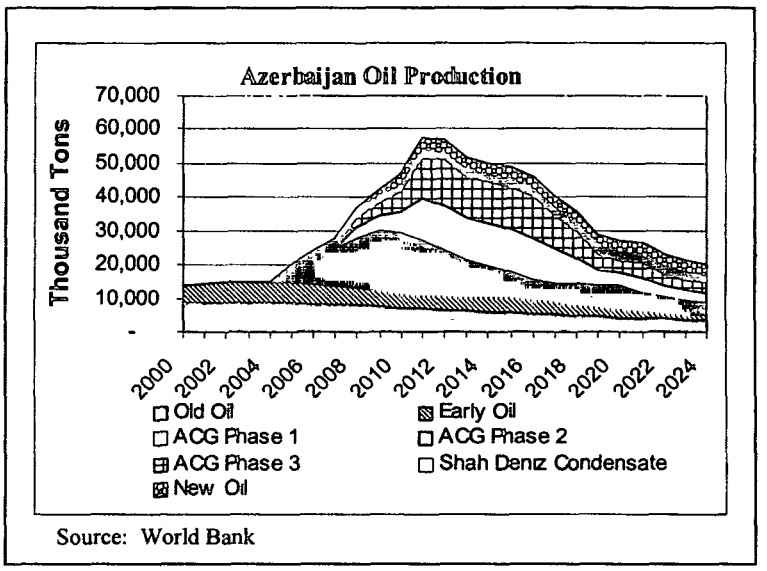
16. The PER does not analyze the PRS, the PIP, or sectoral allocations within the MTEF in detail. This is a natural next step of the public expenditure analysis process as these documents become available. **The PER is meant to inform the strategic agenda on the range of sound public revenue and expenditure management, within a carefully calibrated fiscally sustainable macro framework, that would avoid the pitfalls of Dutch disease and provide for a steady reduction in poverty during the decade.** The PER should be viewed as but one element in the continuous participatory dialogue between the World Bank and the Azeri Government and society. This dialogue includes the PRSP, an array of sector projects and economic and sector work (ESW), as well as the Second Structural Adjustment Credit (SAC-II) with the associated Second Institution Building and Technical Assistance program (IBTA-II).

C. Macro–Fiscal Framework

17. **The Government of Azerbaijan has adopted a pragmatic and measured approach to the development of the country's oil and gas resources, which has brought international technical and marketing expertise to bear on oil and gas development and exploitation.** The establishment of the State Oil Fund (SOFAR) provides a financial mechanism for separating commercial decisions on oil extraction from public spending decisions. It grants the Authorities considerable flexibility to "smooth" public expenditures over time in a manner that can maintain monetary stability. It also allows the Government to maintain a degree of continuity in fiscal programs, especially with regard to the implementation of committed investment projects and

programs. Public expenditure decisions, the real exchange rate, competitiveness, and growth in the non-oil sector are all intimately linked. This section depicts a possible macroeconomic framework for the rest of the decade, from which some policy rules for maintaining sustainable balanced growth can be derived.

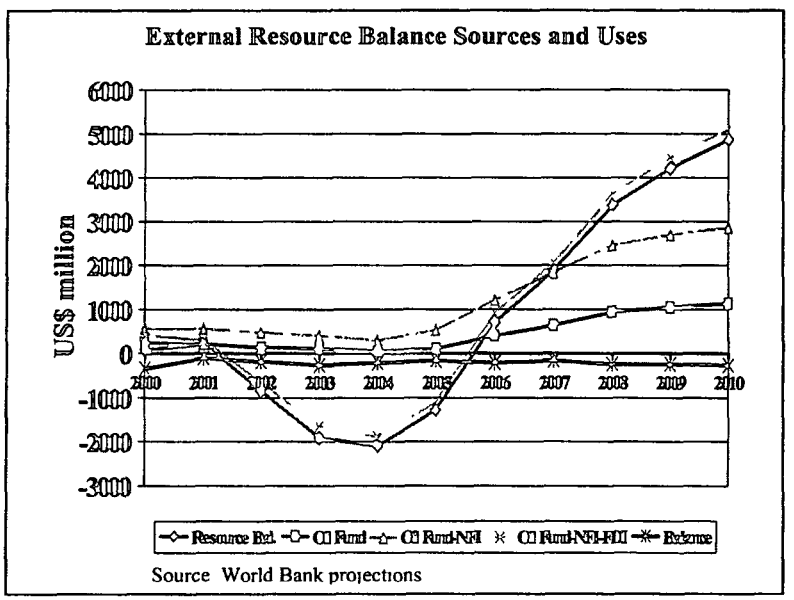
18. The hump-shaped profile of the oil windfall will lead to a concomitant fiscal gain, which is expected to last for a relatively short time span (about two decades), if new oil fields are not found. This fiscal gain, however, is a result of the depletion of the country's oil and gas reserves. **Since oil rents are to a large extent concentrated in the public sector, the question of how the oil and gas revenue should be spent and distributed across present and future generations becomes a cornerstone to successful economic development.**



Source: World Bank

19. During 2002-2005 it is anticipated that approximately US$13 billion (or twice current GDP) will be invested in the Azerbaijan oil and gas sectors. This includes the Baku-Tbilisi-Ceyhan (BTC) oil pipeline and upstream oil extraction structures plus development of the huge Shah-Deniz gas field with a possible gas pipeline to Turkey. By 2005 oil and gas exports start picking up seriously. The enormous swings in the external resource balance of Azerbaijan are due to these prospects.

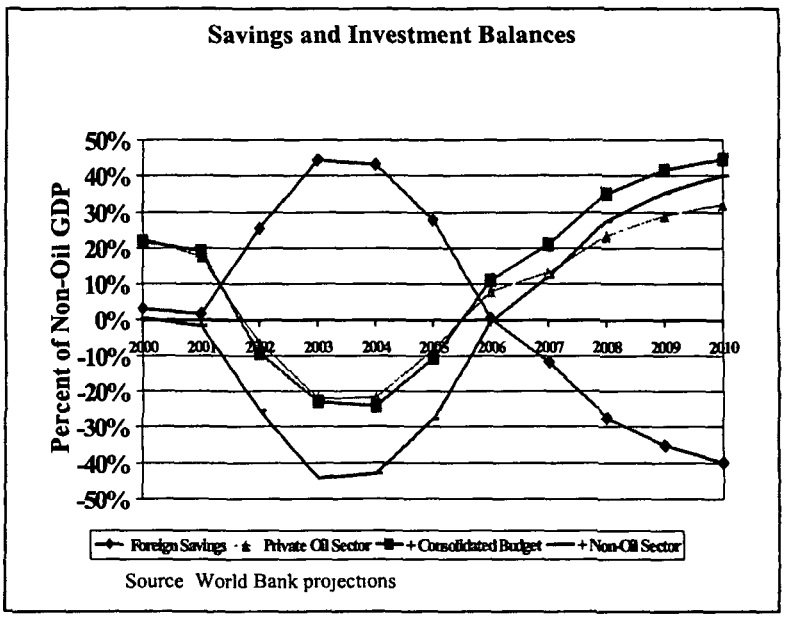
20. **What are the sources and uses of these resources during the rest of the decade?** Most of the oil and gas investments during 2002-2005 will be financed by foreign direct investment (FDI) of the oil companies and partners. Net factor income (NFI), which is primarily outflows in terms of profit repatriation, as well as the accumulation of oil profits in the State Oil Fund are expected to be relatively modest during the investment period. Once the oil and gas from the new investments start to flow, the



Source World Bank projections

resource balance turns sharply positive. However, even by 2010 only about one fifth of the profits will go to the Oil Fund. The lion's share of the revenues will leave Azerbaijan in the form of oil companies' profit repatriation and capital repatriation of the investments, i.e., negative FDI. Resources left for other uses of the economy are little affected by the oil and gas sector developments.

21. Of course the trajectory for net inflows to the Oil Fund depends of the public expenditure strategy for the rest of the decade. **Although there may be ample room for public expenditure increases, capacity and Dutch disease concerns call for an expenditure envelope that is not overly expansionary.** Foreign net savings inflows to Azerbaijan are, as noted above, expected to swing from massively positive to massively negative during the decade. The foreign savings are by definition mirrored in the net savings of the domestic economy. Private oil and gas sector net savings are negative during 2002-2005, followed by large positive savings. The consolidated government balance[3] is expected to be in deficit during the next three years but increasing surpluses are projected thereafter. Given the exhaustible nature of oil-related revenues, the uncertainties surrounding future discoveries, and the volatility of oil prices, it is only appropriate here to assess the fiscal stance by looking at the non-oil deficit. The non-oil sector has, and is expected during the investment boom to continue substantial saving-investment deficits in the order of 20 percent of non-oil GDP. Nevertheless, this situation is not sustainable forever. Despite the coming oil boom, the non-oil sector should bring its resource drain to a five percent range in order for macroeconomic stability to be maintained.



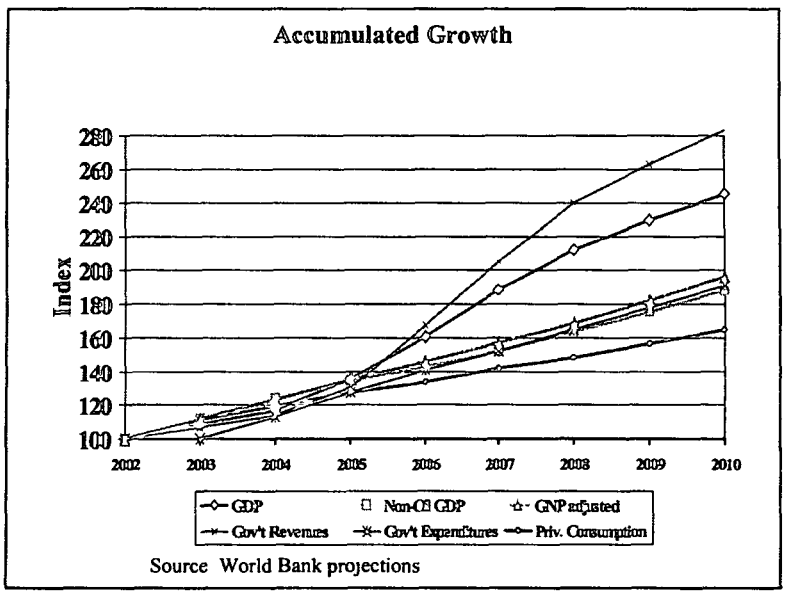
Source World Bank projections

22. **Slowing net accumulation to the Oil Fund would release more resources to the economy. The question is of how much resources can be absorbed** without leading to an appreciation of the manat, and at the same time to internal inflationary pressures, especially given the development state of institutions. Keeping the resource balance left for the rest of the economy relatively constant over time contributes to monetary and price stability, and mitigates the risk of Dutch disease. **This is accomplished by gearing the fiscal stance to support sustainable development of the non-oil sector.** At the same time, though, the monetary stance may stay reasonably accommodating. As monetary instruments currently are limited, the fiscal

[3] In the chart the lines are cumulative, that is, the consolidated budget balance is added to the private oil sector balance to show the cumulative balance of the two sectors together. The difference between the two lines is the budget balance. Likewise, the non-oil sector balance is added on top, and the balance is read as the difference.

expansion translates into a gradual increase in the monetization ratio and drop in velocity, so that by the end of the decade the M^2 to non-oil GDP ratio would reach 27 percent. It assumes that the financial sector is strengthened considerably and the public's confidence in the system increases so that money demand starts developing to more normal levels. Given the path of international reserves, this would imply that the credit to the economy relative to non-oil GDP will increase from 10 percent in 2001 to 15 percent by 2010. This increase in access to credit is a vital precondition for non-oil sector growth to materialize, given the prospects of fairly limited FDI inflows in the non-oil sector.

23. In this baseline scenario GDP is projected to increase almost 2½ times between 2002 and 2010. However, in terms of resources available to the domestic economy, this figure can be misleading. A better indicator is "adjusted GNP" in which profit and capital repatriation is subtracted from GDP. $GNP_{adjusted}$ will grow with only 95 percent during the period, and non-oil GDP about the same –or about 6.3 percent average annual growth. Rapid growth fueled by the oil investment boom is expected to be followed by non-oil GDP growth of about five percent during the second half of the decade.[4] What is striking is that private consumption per capita is expected to grow by only three percent per annum on average for the rest of the decade due to the consolidation of the non-oil sector net savings balance.



Source World Bank projections

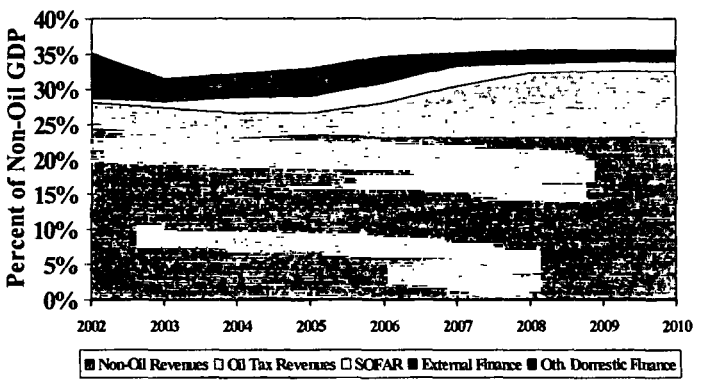
24. While Government revenues (including Oil Fund inflows) are projected to increase by 180 percent in 2010 relative to 2002, a pragmatic formulation of the medium-term public expenditure envelope follows the trajectory on non-oil GDP. A constraint on the maximum speed of growth of public expenditures is also imposed by public institutional capacity. This base case scenario envisages a gradual increase in public expenditure to 35.6 percent of non-oil GDP, as compared with 28.4 percent in 2001. Current expenditure is projected to increase to 26.7 percent of non-oil GDP in 2010, as compared with 23.4 percent in 2001. Capital expenditure is projected to reach 8.8 percent of non-oil GDP, up from five percent in 2001. Long-run analysis and simulations indicate that such a fiscal stance would be sustainable for several generations into the future.

[4] The rationale for a potential growth rate of the non-oil sector averaging 5 percent is elaborated in Chapter IV and Annex 3.

25. **Given the huge social and infrastructure needs of Azerbaijan, why could public expenditures not grow even faster?** The depicted policy stance implies a fiscal stimulus to the non-oil sector in the order of 13 percent, calculated as the fiscal deficit between non-oil government revenues and expenditures relative to non-oil GDP. In all experience that is a very large stimulus at the limit of the absorptive capacity on non-oil sector development. As noted, sustainability depends crucially on the rapid progress in structural reform and institutional capacity building. Otherwise this large fiscal stimulus may well result in real exchange rate appreciation, loss of efficiency, competitiveness and growth, and subsequent unviable public and private investment projects. International experience has shown that repeatedly.

26. Given this projection scenario, **the potential public expenditure envelope increases more than twofold in 10 years, from AZM 5,403 billion in 2001 to AZM 14,185 billion in 2010**. The non-oil sector would maintain its current tax contribution with no erosion of the taxable base. Until oil-related tax revenues pick up, the Oil Fund would play a role of smoothing out the expenditure path. Other sources are derived from identified foreign financing while there would be no borrowing on the domestic market in the medium term. Based on these assumptions, the external debt to non-oil GDP ratio will decline to 26 percent from 30 percent in 2001. The gross assets of the Oil Fund are projected to reach US$5.1 billion in 2010, as compared with US$491 million in 2001.

Public Expenditures to Non-Oil GDP and its Financing



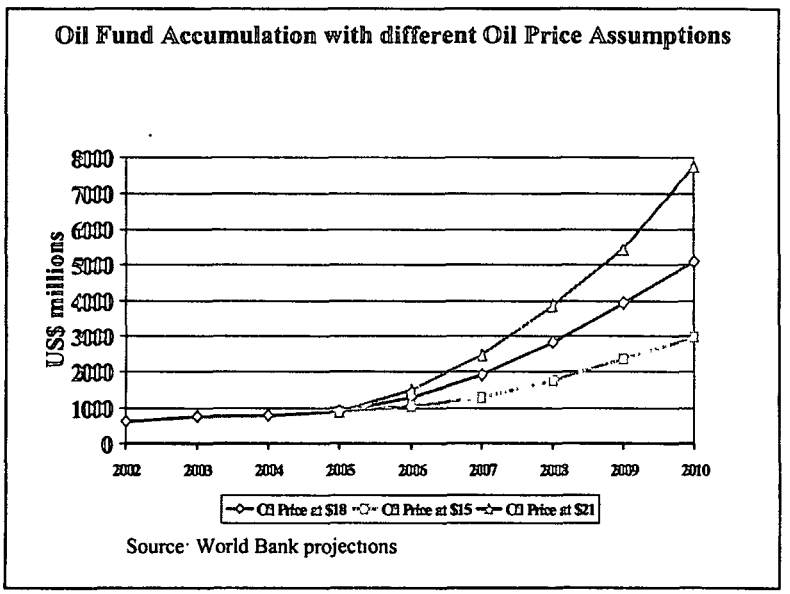
Source: World Bank projections

27. According to the current Oil Fund regulations, only interest revenues earned on the Fund's investments can be used for public expenditures. This rule may be overly restrictive. During the next five years the non-oil private sector has great opportunities to take advantage of the investment boom in the oil sector. This requires rapid investments in the sector in order to catch up after many years of deterioration in the physical capital base. Given the savings/investment resource constraints, such investments could lead to zero or negative growth in private consumption per capita, a situation difficult to sustain given the promise of the oil riches. **Not constraining the accommodating fiscal stance explained above by arbitrary rules on Oil Fund expenditures may be warranted.** Consequently it is suggested to relax this rule. Later in the decade, oil and gas related tax revenues are expected to grow substantially. At that point, in this scenario, Oil Fund financing of the deficit would be less than interest revenues.

28. The baseline projections elaborated above, of course, depend crucially on the assumptions made for the developments in oil and gas prices on the world market. **What the PER is suggesting is not to deviate from the rule of gearing the fiscal stance to the development of the non-oil sector.** Rather, the Oil Fund would act as a buffer to absorb oil

price shocks, while short-term corrections in the medium-term PIP and MTEF underpinning poverty reduction and balanced growth of the non-oil sector should be avoided. Again, this would help to mitigate the risk of Dutch disease. According to the scenario, the oil price could drop to $15/barrel without necessitating a major correction in the medium-term fiscal stance. On the other hand, to the extent that a five percent annual growth potential in the non-oil sector is about right, incremental revenues from oil prices higher than $18/barrel on average should be saved in the Oil Fund, and the public expenditure path should not be altered in the short-run. Nevertheless, macroeconomic conditions may unravel substantially differently from the scenario depicted here, in which case the proposed fiscal stance needs to reassessed. Regular reviews of the long-term strategy are advisable and necessary.

29. From a political economy perspective, the recommendation is to de-link oil revenue flows, dictated by commercial extraction decisions and world oil prices, from the annual budget debates. These are typically short-run exercises, focused on political and economic pressures over the next year (or the next three years). Planning for sound use of oil and gas revenues to support sustainable development of the non-oil sector requires a longer horizon, one that is well beyond normal political horizons. The Oil Fund provides a long-term political compact on how oil and gas related revenues are to be used not just this year, but for years to come. It can protect some portion of oil revenues for future generations by allowing larger fiscal surpluses in the short run, and a more desirable path of expenditures over the medium to long run than may otherwise be politically feasible.[6] De-linking improves coordination between monetary and fiscal policy, since this fiscal sterilization of oil revenues means that the monetary authority has less of a sterilization task confronting it (and its limited intervention tools).[7]



[5] The rationale for a potential growth rate of the non-oil sector averaging 5 percent is elaborated in Chapter IV and Annex 3.

[6] The Norwegian Petroleum Fund, for example, is designed as a "tool for coping with the financial challenges connected to an aging population and the eventual decline in oil revenues, by transferring wealth to future generations," (Norwegian Ministry of Finance).

[7] See Wakeman-Linn, J., P. Mathieu and B. van Selm, "Oil Funds in Transition Economies: Azerbaijan and Kazakhstan", IMF 2002, mimeo.

D. Institutional Framework for Fiscal Policies and Efficient Expenditure Management

State Oil Fund

30. **Perhaps the most significant development in public finance in recent years in Azerbaijan has been the establishment of the Oil Fund.** The Government is committed to exercise considerable caution over the use of the expected oil and gas windfall and to ensure that the benefits resulting from the exploitation of this natural asset would accrue to all citizens and to future generations. This cautious approach of the Government is deemed even more essential given the fiscal institutional reforms presently underway and the need to implement an appropriate PRS and an integrated PIP.

31. **The Oil Fund asset management and budget rules would be strengthened by having the force of law**, with the clarification of the role of the Oil Fund as solely a vehicle for managing part of the liquidity generated by the exploitation of oil and gas resources. As such the Fund would be financing the consolidated budget only under the unified control of fiscal policy. Investment of the Oil Fund's assets should be limited to investment-grade assets, as defined by internationally reputable rating companies, and placed with the use of contracted professional portfolio managers. Oil Fund assets would not be invested in domestic projects of purely commercial nature. **An important challenge for the Government and SOCAR is how to finance equity shares in future very large oil and gas projects such as Shah Deniz, without resorting to the Oil Fund.**

Budget Preparation and Execution

32. **The Government has recognized the need for a radical overhaul of the institutional arrangements affecting public expenditure management**. The Treasury system introduced in 1998 is functioning well and represents a significant advance. Its full computerization should be accelerated. There is a **need for a comprehensive and integrated financial system**, and the Treasury Information Management System (TIMS) is a central element of this. The new Budget Systems Law (BSL) approved by the Parliament will address many of the deficiencies of the past, including the incorporation of off-budget expenditures as well as monitoring and reporting requirements, as this law is fully implemented. The external audit framework in the form of the Chamber of Accounts has been established with appropriate legislation and an independent institutional structure. The legal framework for the State Procurement Agency (SPA) has been strengthened.

33. Formulation and implementation of a sustainable public expenditure envelope requires an institutional framework that would allow for integrated and coordinated fiscal management based on macroeconomic, sectoral, and budgetary information. While coordination of key Government agencies – Cabinet of Ministers, MOF, MED and the Central Bank – has been strengthened, there is a **need to empower key line ministries to effectively participate in the budget preparation process**. Investment spending must be a part of the overall public expenditure planning process that encompasses both a multi-year time horizon and the recurrent cost implications of these investments. The BSL should enforce the consistency with PRS, PIP

and MTEF, with the latter two approved by the Parliament every year, together with the annual Budget Law.

34. **Stronger links should be made between budgetary finance allocation decisions and operational outcomes. Moving away from allocating resources based on norms to a "program/performance" based budget model is key.** This requires strengthened financial analysis capabilities in the line ministries and the Public Investment Appraisal Department of the MED. State budgets should be much more explicit in defining the responsibilities and accountabilities of spending units in the implementation of the budget. This will improve clarity in the delineation of responsibilities for budget execution between the MOF and the line ministries. Output indicators of performance and the quality of service delivery should be defined and monitored.

Quasi-Fiscal Operations

35. One of the most important requirements for efficient fiscal policy is reduction and **elimination of quasi fiscal operations**, i.e., the reduction of implicit subsidies in the electricity, gas, and water sectors through a combination of improved cash collection, increased tariffs, and/or gains in efficiency. The Government is addressing this issue. A firm commitment to a phased program was made in 2002, with a targeted elimination within five years. This will require: (i) establishing financial discipline in the utility sectors through enforcing the right of energy and water companies to discontinue service to non-paying customers, with the Government monitoring the disconnection program; (ii) delivering services to enterprises with a history of delinquency only on the basis of advance payments; and (iii) bringing subsidies from SOCAR to the energy and water companies explicitly into the budget, while compensating SOCAR through a corresponding tax credit.

36. To eliminate the quasi-fiscal deficit the Government has allocated in the budget appropriate funds to budget organizations to pay their utility fees. At the same time it is instituting strict supervision of the payment of these fees and disconnecting or taking remedial actions for institutions that consume in excess of the budgeted limits. Likewise **corporate governance and accountability** of SOCAR, Azerenergy, Azerigaz, and the ARWC need to be improved.

37. Private management contracts for electricity distribution have already led to improvements of collections in the household sector. In order to, over time, increase utility tariffs to cost recovery levels, there is an urgent need to decide on the relevant **cash transfer scheme to alleviate the impact of these reform measures on the poor.**

Accountability

38. **Azerbaijan has made considerable progress in the legal framework surrounding public procurement.** The new Public Procurement Law (PPL) developed by the State Procurement Agency (SPA) and based on UNCITRAL[8] was enacted in December 2001 with implementing regulations promulgated by Presidential Decree No. 668 in January 2002. It is the

[8] United Nations Commission for International Trade Law.

view of the recently completed CPAR that "in terms of substance and degree of development, the PPL is one of the better such laws in the region."[9]

39. The SPA is staffed at the highest levels with able and committed staff and despite the absence of a sufficiently systematic and appropriate reporting system, has been effective in identifying and correcting breaches of procurement rules. **Significant capacity building of the institution is now underway. It should include establishing an appropriate review department, separate from functional departments. This would create more transparent and formalized review procedures.** Furthermore, as the concept of procurement based on market economy principles is relatively new in Azerbaijan, a countrywide training program should aim at building a modern corps of procurement officers covering all districts.

40. **The supreme audit institution reporting to Parliament was properly established in 2001 with the enactment of the amended Law and Charter on the Chamber of Accounts.** This Chamber is now vested with the necessary authority and rights to enable it to audit all public sector entities, including all budgetary and extrabudgetary organizations and funds, and to publish its results. The issue is to support the Chamber to become fully functioning as speedily as possible.[10] It is planned to have its 2003 work plan and related financial plan presented to the Parliament before the end of 2002.

41. The old inspection/central departments were abolished as they represented obstacles to development. Probity and integrity of public expenditures is gradually being strengthened. The CFAA as a principle recommends to establish over a longer term the proper internal audit departments within all budget organizations, including ministries, local governments, and state enterprises.[11]

Fiscal Decentralization

42. **The local public expenditure role of municipalities and districts will be important to ensure that the objectives and goals set out in the MTEF, the PIP, and the PRS are not undermined by confusion about the responsibilities for the achievement of their objectives.** This would be particularly dangerous with regard to future public investment activities, which may involve capital expenditure from a line ministry but a maintenance and operational expenditure commitment from a different level of public administration.

43. Successful implementation of the public expenditure envelope is possible only with an appropriately decentralized fiscal system that is transparent and accountable. **A Government body in charge of municipal issues should define the governmental policy on decentralization and to coordinate and address local matters. A policy and administrative action plan for municipalities would address:** (i) clarification of the functions and responsibilities between the local branches of the state administration and the municipalities; (ii) the issues of adequate and homogeneous budgeting systems for municipalities; and (iii) the establishment of transparent safeguards and controls for municipal budget execution.

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[9] See "Azerbaijan: Country Procurement Assessment Report," World Bank, 2002.

[10] This institution is being supported under the recently approved IBTA-II technical assistance.

[11] See "Azerbaijan: Country Financial Accountability Assessment," World Bank, forthcoming.

44. The intergovernmental fiscal framework between the central Government and the municipalities would include the creation of a transparent fiscal transfer mechanism and the finalization of the transfer of state properties to municipalities. Financial, technical, and managerial capacity of the newly created municipalities needs strengthening, allowing them: (i) to preserve and invest in local infrastructure and facilities; (ii) to provide reliable access to basic infrastructure and services; (iii) to foster economic development by removing the barriers to private sector development; and in the longer run (iv) to have the ability to raise revenue and apply cost recovery principles to investment.

Civil Service

45. A overarching issue in need of attention on the institutional agenda is the structure, administration, and remuneration of the civil service. Not surprisingly, reform in this area has been somewhat slow, as comprehensive civil service reform takes time to implement. Progress has been made with the merger of some central ministries and some initial legislative steps for the regulatory framework of public employment. What has not been fully articulated is a concept of the type of central government structure that would be suitable for a market economy in the context of Azerbaijan. This involves setting up the criteria and principles for existing ministries and state committees and the Cabinet of Ministers on what should guide a civil service reform strategy that encompasses all aspects of a professional and modern civil service. While it is recognized that the structure of public administration in the country as a whole and its institutional capacities cannot be transformed in a short time frame, there ought to be a guiding blueprint for change with time bound targets. This should include: (i) rationalization of public sector employment; (ii) a unified and decompressed public sector pay scale; (iii) avoidance of across the board cuts in the wage bill; and (iv) monetization of in-kind supplements through integration with the pay scale.

E. Sectoral Agenda

46. In terms of overall fiscal management, significant progress has been made in recent years. However, the main focus of fiscal adjustment has been on public expenditures, and fiscal compression has affected certain parts of public service much more than others. During the early years of transition, output contraction and the consequent collapse in fiscal revenues squeezed public expenditure on education and health as a share of GDP and also in real terms.[12] As prospects for growth improved, educational expenditure grew from US$11.1 to US$25.1 per capita during 1995-2000, whereas health expenditure remained relatively unchanged at an average US$5.7 per capita during 1997-2000. During the same period, the share of public investment in GDP fell sharply. In defining a medium-term expenditure framework, social aspects of public spending should be given priority, and, in the context of public investment, rural infrastructure should be addressed.

[12] The share of education expenditure in GDP was halved from 7 percent in 1992 to 3.5 percent in 1995. The share of health expenditure in GDP dropped from 2.9 percent in 1990 to 1.2 percent in 1997.

Selected ECA Countries, Consolidated General Government Spending by Functional Classification, 2000

Per Capita US$	*GPS*	*Defense*	*Education*	*Health*	*SS&W*	*Housing*	*Agro*
Armenia	14 8	22 7	19 2	6 0	33 3	9 6	10.4
Azerbaijan	**7.3**	**13.5**	**25.1**	**5.7**	**34.3**	**2.6**	**4.7**
Belarus	19 0	12 9	62.9	47.3	116.3	27.8	44.8
Estonia	116.6	58 9	233 3	195 3	395.8	47.7	30.8
Georgia	9.9	3.4	15.0	4.4	29 8	5.7	1 6
Kazakhstan	15 3	8.9	36.8	23.6	74.4	9 6	5.0
Kyrgyz Republic	7.9	4.8	9 1	5.6	17.2	3.1	4.8
Latvia	84.2	25.9	197.3	107.8	431.3	65 3	44.9
Lithuania	45 7	39 9	179 2	133.5	342.3	15 7	49 6
Moldova	6 8	1.4	15.9	10 4	43.3	1.1	3 7
Russian Federation	43.3	51.1	52.4	35 5	144 1	52.2	13.6
Tajikistan	4.5	1 9	3 7	1.5	3.7	1 5	0 7
Turkmenistan	7.6	0 0	62.6	30.9	42 8	16 4	14 8
Ukraine	17.9	9.6	25 4	18 3	91.3	5.2	3.4
Uzbekistan	3 9	0 0	50.4	14 3	53 4	0 0	17 9

Source: Kyrgyz Public Expenditure Review

Education

47. **Azerbaijan has been endowed with an impressive educational basis.** However, this has weakened over the past decade. Real expenditures in the sector have declined and the physical infrastructure and necessary supplies of teaching materials have deteriorated. Furthermore, it has become apparent over time that the system has evolved in a manner that adversely affects the poorest. Internal operating deficiencies affect the quality of the education provided and the efficiency of the public resources expended.

48. The essence of the reform agenda is contained in the Ministry of Education's (MOE) plan approved by the President and Parliament in 1999. This plan needs to be more explicit in defining appropriate management accountability within the system, particularly as it is planned to increase decentralization and allow more autonomy to reallocate resources across budget items. The policies and procedures of the MOE, the MOF, and the Cabinet of Ministers should be reviewed to clarify authority of the MOE regarding educational policy.

49. **Budget funds should be reallocated across expenditure lines to realize cost-savings:** (i) resources for non-wage allocations should be increased in general, with the focus on providing basic education materials and supplies to primary school students in particular; (ii) the quality of textbooks can be improved through demonopolization and the promotion of competition in textbook development and publishing; (iii) there is a need to reduce excess staff by gradually raising the student/teacher ratio and average class sizes, increasing the teaching load, and introducing targeted reductions in school admissions; (iv) there is considerable scope for rationalization of specialized and tertiary educational institutions as some of these are under-utilised, as well as for consolidation in vocational and technical schools; and (v) budgetary funds should be allocated on the basis of actual student numbers. On the other hand, proposals to exempt educational institutions and their suppliers from tax and customs payments would be

counterproductive, as they would create opportunities for tax evasion and would counter efforts at simplifying and enforcing tax procedures throughout the economy.

50. **Given the limited resources, higher and upper secondary education could rely less on the state and instead introduce elements of cost recovery via user charges, such as student fees.** Targeting of public assistance to the poor should be improved. It may be considered to provide student loans to all qualified students. Furthermore, the Government would promote private sector involvement in the education sector by removing the existing barriers to entry, such as Article 28 of the 1992 Educational Law, which prohibits for-profit private schools.

Health

51. **The Health sector requires immediate attention.** Undoubtedly, there is a need to progressively increase the budgetary proportions devoted to health care. But what is more critical is a fundamental realignment of the approach toward the delivery of health services. More emphasis is needed on primary health care—a basic health care package for all and improvements in overall public health programs such as immunizations.

52. **There is also a clear need to increase governmental spending on the health sector.** The collapse of public health spending during the last ten years has had a negative effect on equity in access to services and has impacted health standards. Although the health sector provides only a fraction of the inputs that affect health outcomes, public expenditure in health is potentially an important source of equity-enhancing interventions. Without further Government expenditure in the sector, health service utilization across income groups will become even more skewed toward the better off.

53. **A move toward an outpatient-oriented approach with emphasis on primary health care would improve efficiency.** For this purpose, a reallocation of staff within the sector is needed, with a substantial retraining program and a reduction in the number of hospital personnel. There is scope for reduction in the number of facilities and hospital beds, as well as better integration of specialist and general hospitals. Based on demand analysis, clear targets for the number of hospitals and hospital beds should be set, as well as targets for reductions in length of stay. This would facilitate a move away from the current allocation of funds based on the number of hospital beds toward output-based allocations according to actual services rendered.

54. **The development of private sector participation in health care should be encouraged through the introduction of a carefully designed regulatory framework.** Current plans propose privatizing only unprofitable institutions, but consideration could also be given to privatizing other institutions in order to improve service delivery and to limit the size of informal payments. Indeed, the Government may consider not building new hospitals and leaving developments of specialized hospitals to the private sector. In many countries governments buy services from such private institutions as needed, thereby avoiding the need to take on large investment commitments.

55. **It is essential to improve the access of the poor to primary health care services.** One way to accomplish this would be to provide a basic package of medical services free to all citizens and to charge for other services. This program would need to be combined with a more

systematic monitoring of user charges and wages in the public health care system. This would involve: (i) a merit-based pay scheme for doctors; (ii) a review of the structure of formal fees to ensure that they do not distort service supply; (iii) a review of the application of fees to ensure that proper controls are in place to limit informal payments; and (iv) a review of the existing regulations in order to reform those that encourage informal payments.

56. **Accountability of health providers to the Azeri citizens and communities should be strengthened.** This could be advanced by: (i) enhancing the self-regulation of providers through establishing professional associations and technical standards, rules of ethics, and systems of accreditation and quality assurance; (ii) strengthening the involvement of clients in monitoring performance through patients' associations, community-based services, and participatory approaches; and (iii) providing collective action of monitoring through public expenditure tracking surveys, and information and media campaigns. Unless such steps are taken, the poor, in particular, will continue to suffer from the lack of essential services of an acceptable standard.

Social Safety Net

57. **The current social safety net system is in need of a serious overhaul.** At present, the multitude of programs are not well targeted, with the result that benefit levels are very low and those most in need are not being adequately cared for. No real account is taken of family needs. Furthermore, there is a co-mingling of social insurance and social assistance, again with little regard to real need. Reforms should focus on the rationalization of the many programs, perhaps into a single-family benefit system, with explicit targeting to the poorest. It may also be beneficial to eliminate one-time benefit payments, which are regressive insofar as no allowance is taken of income levels in determining eligibility for these benefits.

58. **The present social insurance system faces some serious sustainability problems, given the collapse of the contribution base.** Labor pensions have become relatively flat and de-linked from wages. The Government recognizes the need to distinguish between labor and social pensions. A new pension law is being drafted, and the guiding principle is to remove existing inequities in the system (e.g., early retirement provisions) and ensure financial sustainability on the basis of actuarial assessments.

59. **The basic principle guiding social assistance reform should be that eligibility is based on poverty criteria.** The social safety net could become better targeted assistance by: (i) replacing the income-tested child allowance, the nonworking pensioner allowance, and the allowance for the single elderly by a unified cash benefit for families with children and pensioners; (ii) replacing social pensions by budget-financed social assistance and reviewing the minimum pension; and (iii) restructuring the sick leave to include an increase in the cost sharing of employees and employers.

60. **In January 2002, Azerbaijan abolished many non-targeted social privileges, including on housing and public transport, and replaced these with targeted compensation.** Using the experience of the countries in Central and Eastern Europe and in the FSU,[13]

[13] *"Maintaining Utility Services for the Poor. Policies and Practices in Central and Eastern Europe and the Former Soviet Union,"* World Bank, 2000.

Azerbaijan may introduce one of several mitigating mechanisms to compensate for the elimination of utility subsidies. Life-line tariffs can be one of the policy options for utility services with metered or easily estimated consumption (i.e., for electricity, gas, district heat, and water supply especially as metering becomes more widespread). This would restrict the price subsidy to the initial block of consumption, i.e., the basic need level. Covering that part of the utility bill that exceeds a given share of income through earmarked cash transfers is another form of utility subsidy mechanism that provides selected households with cash earmarked to pay part of their utility bills. A number of countries in Central and Eastern Europe and the FSU have introduced general cash benefits targeting poor households. These non-earmarked cash transfer mechanisms give complete freedom to households in deciding how to use the money received to compensate for utility tariff increases. It is important to make a strategic decision on which mechanism would be appropriate for Azerbaijan and develop the detailed design accordingly.

61. The cost effectiveness of active labor market programs (ALMPs) needs to be re-assessed, and funds redirected from costly job creation programs to other programs. In areas with frictional unemployment, counseling and job search assistance are more promising options. Workers often lack information and confidence about how to look for a job. Also counseling can be crucial in helping individual job seekers obtain information about education, training, and alternative job opportunities, in making other employment services more demand-oriented, and in better targeting expenditures for other employment services. In areas with structural unemployment, displaced workers need to be re-skilled to compete and re-enter the labor market. Different types of retraining, including on-the-job training and/or institutional training is needed in these circumstances. In areas of high unemployment and in mono-enterprise communities where many workers are laid off, different small business assistance services, as well as public works programs can assist the workers and their families. However, based on an international experience, there is a general consensus is that even under best scenarios, payoffs to ALMPs are modest. It is difficult to address problems of large scale unemployment through these programs. A better approach is to focus on labor market policies that eliminate obstacles to private job creation.

Agriculture

62. The agriculture sector in Azerbaijan has experienced significant deterioration over the past decade and a large proportion of the country's population has become more vulnerable to economic hardship. In the context of the MTEF, the PIP, and the PRS, future public expenditures should give proper attention to rural environments. The country's irrigation systems are in urgent need of rehabilitation and repair. That will require both investment and a system for financing ongoing maintenance. The Government has stated its intent to do this, but complementary reforms are needed to ensure that over time the ownership and management structures for these systems provide for better cost recovery and meet maintenance requirements. The development of rural finance cooperatives should be encouraged, as should the Government's programs to develop alternative models of agricultural extension services that are more relevant and financially sustainable.

F. CONCLUSIONS

63. Three overarching issues need to be carefully addressed in order to determine a future sustainable stance of public expenditures in Azerbaijan: (i) aggregate fiscal discipline; (ii) allocative efficiency; and (iii) operational efficiency. In common sense terms the main messages of the PER analysis are:

Aggregate fiscal discipline

- Manage the public expectations of the so-called "wall of money" very carefully. For the foreseeable future most of the oil revenues will leave the country in the form of profit and capital repatriation or, under the current rules, be accumulated in the Oil Fund. The increase in private consumption per capita is projected to be rather modest for the rest of the decade.
- Calibrate the fiscal stance of public expenditures towards sustainable development of the non-oil sector, realizing that the potential long-run growth rate for the sector may be in the order of 5 percent or less. Total GDP including the oil sector is less useful as a policy indicator.
- Base the public expenditure envelope on the PRS, MTEF, and PIP and de-link the annual budget cycle from short-term fluctuations in oil and gas related revenues. Think medium to long-term instead of just one year ahead.
- Monitor carefully: (i) that the macro-policy stance does not lead to a nominal exchange rate appreciation–stability is feasible as most resources are placed outside the country through the Oil Fund; (ii) that the fiscal stance does not lead to upward pressure on the real exchange rate–this is crucially dependent on continuing implementation of structural reforms at the current pace; and (iii) that the accommodating monetary stance does not lead to inflation, but slowly brings velocity down to a, from a cross-country perspective, more reasonable level.

Allocative efficiency

- Bring the house in order in the utility sectors, eliminating quasi-fiscal subsidies, as detailed in the SAC-II program. Making utility services reliable will alleviate major constraints to private non-oil sector growth and improve public health. Select the social safety net mechanism to mitigate the impact on the poorest of the population.
- Prioritize fiscal expenditures in a non-distortionary way in the social sectors and infrastructure according to the PRS, and make the PIP and MTEF consistent with the PRS–more analysis needs to be done in this area in terms of costing and prioritization of the various programs, and the capacity strengthened in order to appraise prospective public investment projects.
- Be careful with increases in sectoral allocation until institutional and operational efficiency is strengthened. Allocate resources for this institutional agenda, including the whole issue of fiscal decentralization and the new role of municipalities, as well as for civil service reform.

- Ensure better financial discipline through the strengthening of public audit and procurement functions.

Operational efficiency

- While public expenditure allocation should be prioritizing education, health, the social safety net, and rural infrastructure, rationalization and performance improvements may have a bigger impact on poverty reduction in the first instance. Move away from norms to activity based budgeting and performance monitoring/auditing.
- Strengthen the MOE plan of 1999 for the education sector by explicitly defining implementation and management accountabilities to allow more autonomy to reallocate resources across budget items, establish clearer authority of the MOE regarding educational policy, modernize the public school system, and allow more private participation.
- Move away from centralized hospital care and toward an outpatient system for primary health care, and establish a regulatory framework for private hospitals and health care providers. Render a basic package of immunizations and medical services free of charge, and strengthen measures to limit informal payments. Reinforce accountability by enhancing self-regulation of providers through professional associations, organized patient feedback, and public expenditure tracking surveys, information and media campaigns.
- Consolidate the current multitude of social safety net programs into a single-family benefit system based on well-targeted cash transfers with eligibility anchored in poverty criteria, and allow for compensation to the poor for the elimination of utility subsidies. Accelerate pension reform on the basis of the adopted concept paper and draft law, and remove existing inequities. Redesign unemployment insurance and formulate labor redeployment schemes.
- Rehabilitate rural infrastructure and irrigation system and establish local management structures for sustainable maintenance and cost recovery. Encourage rural cooperatives and financing, and strengthen training and extension services.

64. For these developments to succeed, they should be coupled with steadfast implementation of the general structural reform program of the non-oil sector. That agenda depends on macroeconomic stability and a sound overall fiscal stance, and is supported by a wide array of activities of the IMF, the World Bank, other IFIs and donors, including the PRGF, SAC-II, institutional capacity building, private and financial sector technical assistance, development of trade and trade facilitation, as well as sector projects.

I. THE MACROECONOMIC FRAMEWORK FOR PUBLIC EXPENDITURE

A. INTRODUCTION

1.1 **Few countries have experienced as volatile and precarious an economic performance as that of Azerbaijan during the 1990s.** In the first half of the decade the country suffered the complex trauma and set of problems associated with the dissolution of the former Soviet Union (FSU), which was further aggravated by an armed conflict with Armenia and the associated influx of about one million Azeri refugees. The second half of the decade witnessed a surge in foreign investor interest in the country's oil and gas sector, with large increases in actual investment, in oil and gas prices, and in output. This, coupled with an array of sound macroeconomic and structural adjustment policies from 1996, brought about a rapid restoration in overall growth and monetary stabilization.

1.2 **Following independence in 1991, Azerbaijan experienced massive terms of trade shocks, a disintegration of marketing and trading systems, and an end of Soviet era fiscal transfers and subsidies.** The economy inherited by the Government of Azerbaijan (Government) was riddled with distorted relative prices, multiple exchange rates, and patterns of production that were soon revealed to be unsustainable in a more competitive world market. Furthermore, the Government's institutional and administrative framework was either nonexistent or was ill suited to the needs of both sound macroeconomic management and speedy structural adjustment to a market economy. For example, at independence Azerbaijan experienced severe repressed inflation as manifested in a large monetary overhang and widespread supply shortages.[1] This monetary overhang created excess demand for goods and foreign exchange which could not be satisfied, given the rigid exchange rate restrictions in place to support or protect an overvalued currency.[2]

1.3 **Output declines were massive and on average were greater than those experienced by other transition economies over the same period** (see Figure 1.1). Real gross domestic product (GDP) cumulatively declined by over 60 percent during the period 1989-1995. This decline in output, together with the collapse of other fiscal mechanisms, resulted in immediate fiscal pressures, which were met by monetization. The fiscal deficits of the State Budget quickly moved out of control, reaching a peak of about 12.1 percent of GDP in 1994.[3] This excess money creation coupled with extensive price liberalization during 1992 resulted in a rapid surge in

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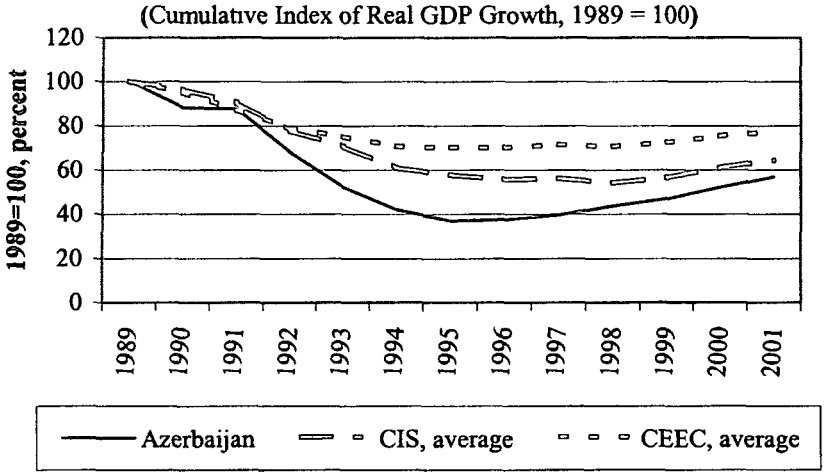
[1] For further information on the extent of repressed inflation in the former Soviet Union, see *IMF World Economic Outlook: Focus on Transition Economies, October 2000*, Chapter 3. In this particular case, repressed inflation is measured as the difference between the percentage change in the average real wage less the percentage change in real GDP.

[2] The parallel currency market in Azerbaijan in 1990 recorded a black market premium over the official exchange rate of 1,828 percent.

[3] IMF Country Report No. 98/83, Table 23, p.75.

prices reaching hyperinflation levels by 1994.[4] Despite a rapid depreciation of the exchange rate (about 1,471 percent in 1994) the balance of payments (BOP) was not stabilized and foreign reserves had dwindled to almost nil by the end of 1994. Clearly, pervasive action was needed.

Fig. 1.1 Output Performance of Azerbaijan Relative to Average Output Performance of CIS and CEEC
(Cumulative Index of Real GDP Growth, 1989 = 100)



CIS - Commonwealth of Independent States.
CEEC - Central and Eastern European Countries.
Sources: EBRD Transition Report 2000, 2001, and authors' calculations

1.4 **In 1995 the Government embarked on a comprehensive stabilization and structural reform program supported by the International Monetary Fund (IMF) and the International Development Association (IDA).** The key component of this stabilization effort was a stringent fiscal control program, supported by restrictive monetary policies. These efforts were complemented by a wide array of structural reforms designed to accelerate the progress toward a market-driven economy, attractive to both foreign and domestic investment.

1.5 Just prior to the launching of this stabilization effort, the country's prospects for growth improved significantly with the successful conclusion of a number of Production Sharing Agreements (PSAs) with foreign oil companies involving investment to develop offshore oil and gas deposits in the Caspian Sea. These PSAs have been complemented by further agreements for the construction of new pipeline transportation facilities to Turkey.

1.6 **These efforts have brought considerable success.** Macroeconomic and financial stability have been restored and maintained despite some external shocks, such as the Russian financial crisis in 1998 and the large drops in oil prices in 1998 and 1999. Overall growth has been restored, with the economy growing at an annual average of more than seven percent over the period 1996-2001. Impressive success was also achieved through quickly addressing the country's hyperinflation. As measured by the consumer price index (CPI), the average annual

[4] Prices as measured by the consumer price index, increased by over 20,000 times between 1990 and 1995. The worst year was 1994, where in December prices rose by nearly 1,800 percent compared to the same month in the previous year.

inflation rate was reduced from over 800 percent during 1991-1995 to only 2.9 percent per annum during 1996-2001. This was achieved through stringent fiscal controls and a tight domestic monetary policy that saw the abolition of directed credit by the central bank to commercial banks and state enterprises. The fiscal deficit was reduced from nearly 12.1 percent of GDP in 1994 to an annual average of three percent of GDP during 1995-2000, reaching a level of less than 1 percent in 2000.[5]

Table 1.1 Macroeconomic Trends, 1991–2001
(Growth rates in real terms)

	1991-94	1995-2001	1999	2000	2001
GDP [1/]	-16.5	4.7	7.4	11.1	9.0
non-oil GDP [2/]	N/A	6.1[3/]	2.1	12.8	9.1
oil GDP [2/]	N/A	14.1[3/]	30.6	2.3	8.5
Agriculture [4/]	-14.2[5/]	5.5	7.0	12.1	11.1
Manufacturing [6/]	-22.6	-4.9	-9.1	15.0	2.8
Services [7/]	-16.3	1.7	8.0	8.4	--
Inflation (CPI), % change [8/]	1,235[9/]	61.3	-8.5	1.8	1.5
Export FOB, mln USD [10/]	762.0	1,126.0	1,025.0	1,877.0	2,025.0
Oil Export, as % of total export FOB [11/]	30.4[12/]	73.1	78.1	85.1	90.1
Fiscal Deficit, as % of GDP [13/]	-13.7[14/]	-2.4	-4.7	-0.6	1.5
M1, % change [15/]	724.2[16/]	30.4	17.5	12.9	7.6
Real Exchange Rate (index, 1995=100)[17/]	85.8[18/]	104.5[19/]	109.0	97.6	--

[1/] Sources: 1991-2000 State Statistical Committee, 2001 IMF Country Report No. 02/40.
[2/] Sources: 1995-1999. IMF Staff Calculations, 2000-2001: IMF Country Report No. 02/40.
[3/] Average for 1996-2001.
[4/] Sources: 1993-1996:IMF Country Report No. 00/121; 1997-2000: IMF Country Report No. 02 40; 2001: State Statistical Committee (SSC).
[5/] Average for 1993-1994.
[6/] Sources: 1991-2000.Statistical Yearbook 2001, 2001: Statistical Bulletin (appendix) Q-IV '01.
[7/]Calculated as a residual from GDP by sector numbers of the SSC
[8/] Sources: 1992-2001 IMF Country Reports Nos. 00/121 and 02/41.
[9/] Average for 1992-1994.
[10/] Sources: 1991-1992: WB Azerbaijan Country Economic Memorandum,1993; 1993· EBRD Transition Report; 1994-1999. IMF Country Report 00/121; 2000-2001: IMF Country Report No 02/40.
[11/] Sources: 1994-1999: IMF Country Report 00/121, 2000-2001: IMF Country Report No 02/40
[12/] For 1994 only.
[13/] Consolidated deficit (including Oil Fund). Sources. 1993-1994 IMF Country Report No. 98/83; 1995-1996: IMF Country Report No. 00/121; 1997-1999: IMF Country Report No. 02/41; 2000-2001: IMF Country Report No 02/40
[14/] Average for 1993-1994
[15/] International Financial Statistics.
[16/] Average for 1993-1994.
[17/] Source 1994-2000: IMF Staff calculations.
[18/] For 1994 only.
[19/] Average for 1995-2000.

[5] There are a number of measures of the State Budget deficit, all of which have their uses. For the purposes of this PER, we have excluded the inflows from the oil sector into the Oil Fund as we regard this Fund (as do the authorities) as a separate funding mechanism. However, the activities and public investments that are funded by the Oil Fund will pass through the annual State Budget. This could inflate the deficit measure unless these funds are also shown as budgetary revenue. This will be elaborated upon further in Chapter 4.

1.7 This fiscal adjustment required both increased revenue efforts and expenditure cuts. There was a change in the structure of taxation and its administration, which helped improved state revenues (by about one percent of GDP over the period 1995-2000). However, the main effort was concentrated on public expenditures, which showed a decline of more than two percent of GDP from 1995 onward. Nevertheless, aided by the steep economic recovery, this adjustment did not result in expenditure cuts in absolute terms. On the contrary, total expenditure increased by 38 percent in dollar terms during 1997-2001. Another key element of this fiscal stabilization was that the bulk of the deficit in the State Budget was funded from external sources,[6] thereby simplifying domestic monetary and credit policies and assisting in squeezing inflationary pressures out of the domestic economy. For all this however the joint achievement of stabilization and resumption of growth would have been much more difficult without the large oil sector expansion during the last five years.

1.8 During 1995–2000, the oil sector was expanding rapidly as its value added increased from about 15 percent of GDP in 1995 to over 26 percent in 2000. There was also a massive surge in oil-related investments in 1996-98, reaching about 19 percent of GDP, as the first stages of the oil development programs were undertaken. As a result, exports of goods and services grew rapidly with oil and petroleum exports increasing by almost 300 percent over the last five years of the 1990s. The trade balance became positive in 2000, or, in national accounting terms, the resource balance moved from a deficit of 20.9 percent of GDP in 1995 to a surplus of seven percent of GDP in 2000.[7] Furthermore, despite profit and capital repatriation, the current account progressively improved and international reserves reached a much more comfortable 3.8 months' equivalent of imports by the end of the decade. Throughout this recovery period the manat money supply remained almost constant as a proportion of GDP with the sole increase in total money supply originating from foreign assets, which were accumulated as foreign reserves in the central bank.

1.9 To summarize, Azerbaijan has experienced robust economic growth for the last five years, aided by its oil sector development. During this decade Azerbaijan is poised to become an oil-rich economy, provided that its oil potential materializes. The main question, therefore, is how to utilize this potential successfully, taking into account the three main challenges that the economy is facing: (i) the macroeconomic management challenge; (ii) the poverty challenge; and (iii) the balanced growth challenge. Herein lies the crux of the main macroeconomic management challenge over the coming decade: how to manage an increasing flow of resources to the public sector, positive current account balances, and continued overall growth increases to maintain the hard-won financial and macroeconomic stability; and how to avoid the dreaded "Dutch disease" and/or the misuse and waste of public resources that many countries with a resource-based windfall have experienced.

[6] Using external sources for deficit financing did not result in fast external debt accumulation, as oil bonuses were the predominant source of deficit financing.

[7] From: State Statistical Committee, "National Accounts of Azerbaijan 2001."

B. THE MACROECONOMIC MANAGEMENT CHALLENGE

1.10 It must be remembered that Azerbaijan faces the dual challenge of the continued transition toward a market economy (which is still incomplete) coupled with the structural changes associated with a booming oil sector and the concomitant revenue windfalls. Both the transition process and the booming oil sector may challenge the competitiveness of the economy, as there may be strong pressures toward exchange rate appreciation. Thus structural and oil-related pressures need to be managed appropriately, to allow for sustained productivity gains and economic recovery. **The economy is facing a dual macroeconomic challenge: to maintain macroeconomic and monetary stability and avoid an excessive appreciation of the real exchange rate above its long-run equilibrium level to the detriment of the non-oil sectors, and to move aggressively forward with a continued structural adjustment which may see some traditional activities disappear or stabilize at much lower levels of output and employment.**

1.11 **As the countries in transition, including Azerbaijan, move toward a market system with price and foreign exchange liberalization, theory suggests and empirical evidence verifies a strong nominal depreciation of the domestic currency and, hence, the real exchange rate.** The demand for foreign assets exceeds the supply, and the overall macroeconomic imbalances combine to create this effect. However, after the initial liberalization and stabilization efforts, the tendencies start to move in the opposite direction with a progressive appreciation of the real exchange rate toward a true equilibrium. This occurs for a number of reasons. First, productivity in the traded sectors improves as capital accumulation proceeds. Second, liberalization of administered prices for nontradables, such as utilities and transport, increases their prices relative to tradable goods. Third, relatively high returns on capital investment attract foreign capital inflows. Finally, constrained demand pressures accelerate the growth of private consumption, which again tends to bid up the relative price of non-traded goods and services.[8]

1.12 **Maintaining macroeconomic stability may be difficult in the presence of large, petroleum-related foreign exchange inflows.** The main problems resulting from a large and volatile oil windfall are typically manifested in excessive real appreciation, rising real wages, and a structural shift toward non-tradable sectors.[9] Box 1.1 summarizes the problems related to the natural resource (oil) boom and provides lessons from the experiences of other countries. There are two important channels through which these problems will occur: *spending effect* and *resource movement effect*. The first channel operates through a rapid spending of the oil windfall, which would increase the price of nontradables relative to non-oil tradables, therefore leading to real exchange rate appreciation. The second channel would draw resources (capital and labor) to

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[8] For an excellent discussion of these issues, see Christoph B. Rosenberg and Tapio O. Saavalainen, "How to Deal With Azerbaijan's Oil Boom? Policy Strategies in a Resource-Rich Transition Economy," IMF Working Papers (WP/98/6), January 1998.

[9] The classic references that analyze and discuss this phenomenon are R. K. Eastwood and A.J. Venables, "The Macroeconomic Implications of a Resource Discovery in an Open Economy," *Economics Journal*, vol. 92, 1982; Max W. Corden, "Booming Sector and Dutch Disease Economics: Survey and Consolidation," *Oxford Economic Papers*, November, 1984;, and Alan H. Gelb, et al. *Windfall Gains:Blessing or Curse?*, Oxford University Press, 1988.

non-tradable sector and away from the non-oil tradable sector, which may lead to higher domestic inflation, and unemployment, underdevelopment of the non-oil tradable sectors, and may undermine external sustainability.[10] Finally, rapid spending of the oil windfall may also lead to a "waste" of petroleum wealth through unproductive public expenditure.

Box 1.1 Managing the Oil Windfall: Lessons from Other Countries' Experience

There are a number of problems facing macroeconomic management in the presence of sizable natural resource (e.g., oil) windfalls:

- Fiscal management is complicated because revenue from natural resources is volatile and exhaustible.
- "Dutch disease" types of problems are manifested in excessive real appreciation of the exchange rate and structural shifts toward non-tradable sectors. These problems originate from two important channels: *spending effect*, which can result in overvalued currency, and *resource movement effect*, which can lead to underdevelopment of other economic sectors.
- An important additional by-product is political pressures to misspend revenues from natural resources (ill-conceived domestic investments, subsidies, price controls). Therefore, poor governance and corruption are also associated with the misuse of natural resource revenues.

Policy lessons regarding the use of natural resource rents are listed below:

- The use of oil rents to fund subsidies and price controls is harmful to efficiency and economic growth.
- Inadequate accounting for future risks gives rise to problems – the costs of overoptimistic projections are greater than the costs of overly conservative projections.
- There is a constraint on the absorption capacity – thus a substantial increase in public investment is likely to lower its efficiency.
- Permanent income out of the government's net wealth (including natural resource wealth) can be used to derive the upper limit of the sustainable non-resource deficit of the government.
- This upper limit then can be corrected by a number of factors, such as population growth, uncertainty, economic cycles, and financing constraints and their implications for domestic financial sectors, and should be frequently revisited.
- Excessive investment in large complex macro projects in the natural resource sphere or in infrastructure is risky, as it could imply significant costs and time overruns and would not mitigate the risk of falling commodity prices.
- Public investment in human and social capital is a successful strategy for the utilization of oil rents as it increases future labor productivity and will therefore have a positive impact on long-term economic growth. The key again is to ensure that there is a positive relationship between higher allocations for social expenditures and social outcomes.

Note: This box is based on a number of studies of other countries' experiences with managing natural resource windfalls, such as Eastwood and Venables. (1982), Corden (1984), van Wijnbergen (1984), Gelb, et al. (1988), and Ossowski, et al. (2001).

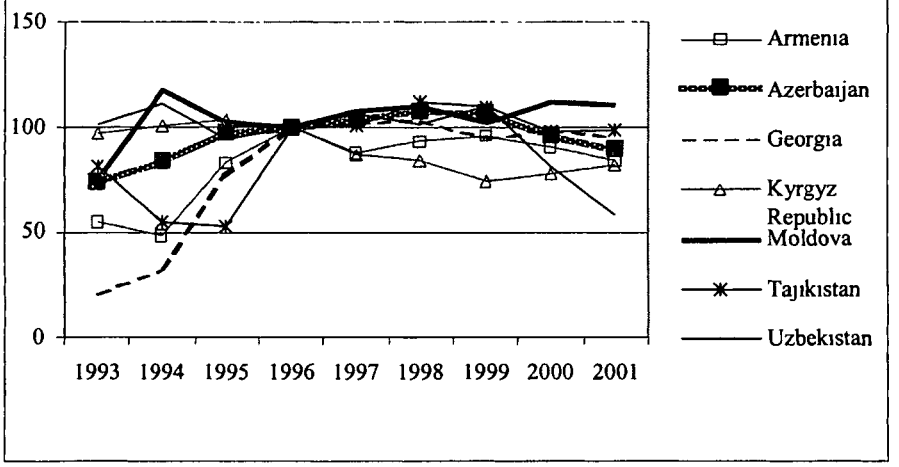
1.13 The empirical evidence for Azerbaijan over the past decade also conforms to the stylized facts of transition economies. Following an initial decline in the real exchange rate, there has been an appreciation and then a stabilization over the past three years. Any evidence for real exchange appreciation is not necessarily bad, and cannot be directly attributed to Dutch disease.[11] Some appreciation was warranted and even further appreciation is to be expected,

[10] It should be noted that this channel assumes that the economy is at its full employment level. However, if a substantial degree of slack is present, this channel is not likely to be so important.

[11] At the time of the "price shock" or revenue windfall, most of the analyses of the effects on the rest of the economy, and as a result of the appropriate macroeconomic policy response to mitigate this shock, assumes that the

taking into account the stylized path of the exchange in transition economies (see para. 1.9). Figure 1.2 compares the effective exchange rate for seven CIS countries. Real exchange rate appreciation in Azerbaijan was much more modest than in other (including the resource-poor) CIS countries.. There was even some real exchange depreciation during the last three years. What is not clear, however, is whether this real exchange rate is due to equilibrium or whether it is undervalued or overvalued.

Fig. 1.2 Real Effective Exchange Rates, year avg.



Source: IMF staff calculations.

1.14 **It is also far from clear whether the appreciation that has occurred has undermined competitiveness in the non-oil sectors.** Although the average non-oil growth rate during the period 1996-2002 was an impressive 6.5 percent, there is evidence that some sectors have not performed well and have not yet shown any signs of recovery. When discussing their performance, however, it is important to note that, besides the exchange rate, there are a number of structural impediments that may have adversely the competitiveness of these sectors. Credit to affected the domestic private sector has been stagnant with very high real interest rates, which in part reflects the tight monetary policies that have been followed and the accompanying stringent fiscal controls. However, the institutional structure of the financial markets in Azerbaijan is still very weak (this generates a low degree of monetization, which makes monetary policies even more complex). And, perhaps just as important, the other mechanisms and institutions that support a market system are still weak. Legal systems, enforceable property legislation, and other infrastructure constraints exist which inhibits both new investments in the non-oil sector as well as the necessary restructuring of the traditional traded sectors. Finally, there is one additional piece of evidence that is reassuring: domestic dollar wages in Azerbaijan are still relatively low,

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real exchange rate is in equilibrium. However, this condition does not hold for transition economies given that external and internal equilibrium and a functioning market system are not in place. Many prices are set administratively, production patterns and systems are not necessarily determined by relative prices, and the exchange rate was not a reflection of the relation between domestic prices and world prices (in the case of the transition economies, the nominal exchange rate was set at artificially high levels, resulting in an overvalued real exchange rate).

about 60 percent of the average dollar wage of countries with similar productivity levels.[12] This is yet another evidence suggesting that exchange rate is not the major factor, threatening the economy's competitiveness, especially taking into account the substantial degree of slack in the economy.[13]

1.15 **This macroeconomic challenge is compounded by one other major factor.** The existing PSAs focus on development of certain oil and gas fields where there are reasonably accurate estimates of reserves and likely revenue flows. The output and revenue projections flowing from this indicate that a clear peak is reached in 2011/12, with a relatively sharp decline thereafter (a fuller discussion of this is set out in Chapter 4). This is a relatively short timeframe for a "resource boom". In the absence of further discoveries or refinements to reserve estimates, Azerbaijan could face a "reverse shock" of declining fiscal and balance of payments revenues. Needless to say, the existing projections are subject to all the uncertainties associated with future oil prices and the timing of construction of future pipelines.

1.16 **Hence, the macroeconomic management task facing Azerbaijan over the coming decade is highly complex and demands a cautionary fiscal approach.** The medium-term monetary policy must take into account a still fragile macroeconomic stabilization and the need to maintain low inflation. The fiscal policy needs to support this non-inflationary monetary policy and smooth the domestic absorption patterns over time, but at the same time it must meet the real challenges of poverty alleviation and the aspirations of the country's citizens. What is clear is that widespread poverty and alleviating its most perverse side effects is a crucial challenge for the authorities.

C. The Poverty Challenge

1.17 **Despite favorable macroeconomic indicators over the past five years Azerbaijan continues to have a low income per capita (US$650 in 2001) with high levels of unemployment.** The increases in real output in the last five years have been due in large part to the direct and indirect effects of development in the oil sector. Some additional employment has been generated in construction with the increased demand for services. However, employment growth in all other sectors has been modest or has declined.[14] The non-oil industrial sector has fared particularly poorly. This sector shed over 7 percent of its workforce during 1995 to 2000, and this followed a decline of about 28 percent in the preceding five years. The decline in non-oil industrial output since 1990 has affected those jobs that previously had a relatively high value added per worker. Official unemployment numbers are not accurate, especially when viewed against the growth in the potential workforce and the large level of "underemployment" in many sectors. Agricultural sector employment is now back to the 1990 levels. However, value added

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[12] EBRD's 2001 Transition Report (p.62) presents an assessment of whether the exchange rates of transition economies are threatening their competitiveness. Competitiveness is measured here on the basis of a comparison of the actual dollar wages to the predicted dollar wages of countries with similar levels of productivity and workforce skills, and comparable economic structures.

[13] It should be noted that the oil and gas sector including all the related activities employs less than one percent of the total labor force, which means that increased oil production is not likely to put pressure on the overall wages in the economy.

[14] In 2000 the petroleum sector provided only 0.25 percent of total employment in the country.

per worker in this sector is low which reinforces the need for economic diversification and for the creation of employment opportunities in other areas if a meaningful reduction in poverty is to be achieved in the medium term.

1.18 **The results of household surveys suggest that little progress was made in reducing poverty in the last five years of the 1990s.** According to preliminary data for the HSB survey, in 2001 almost 4 million people or 50 percent of the population lived in poverty, consuming less than AZM 120,000 per capita per month. Among them, a group of 1.3 million persons or 17 percent of the total population lived in extreme poverty with monthly consumption below AZM 72,000 per capita per month. As elaborated further in Chapter 5 there is also considerable evidence to suggest that both the economic and social infrastructure have deteriorated over the past decade. This is particularly apparent in the urban areas and the smaller townships, where the incidence of poverty is higher, as indicated in the preliminary results of the draft Poverty Assessment Study.

1.19 **The social safety net system in Azerbaijan is still fundamentally framed in the context of the older Soviet systems.** Social protection expenditure accounts for a considerable share of national income (about 7.2 percent of GDP in 1999), the vast bulk of which constitutes support for pensioners. However, there is a wide array of programs for specific groups and categories that are predicated more on a particular category definition (pregnant women, for example) than on measured or perceived need. In general, these benefits are low (in terms of a proportion of the average wage) and are provided in the form of a specific allowance, which again takes no cognizance of need.

1.20 Given the declines in real wages for most of the workforce, and the large numbers working in sectors in which it is difficult to collect social contributions (the service sector, for example), it should come as no surprise that **the social insurance system is facing a financial sustainability problem.** Differences between pension insurance and the social assistance system are not clear, and social pensioners have been receiving benefits similar to those of most labor pensioners. This in turn undermines the credibility of the state pension system, as it weakens the contribution incentives, thereby further aggravating the collection problems. In fact, replacement rates for all social assistance programs are very low, with limited impact on beneficiaries, and in many cases may not justify the administrative costs involved in running them.

1.21 **Finally, there are large numbers of internally displaced populations (IDPs) and refugees as a result of the conflict in Nagorno-Karabakh.** There are an estimated 784,000 of these IDPs and refugees, most of whom have been living in rudimentary and temporary circumstances without basic infrastructure services or access to basic public services. Furthermore, they tend to be located in areas, with limited income generation or formal employment opportunities.

1.22 The Government recognizes the need to set priorities to improve the living standards of the most needy. In March 2001, the Government initiated, under Instruction No. 636 of the President of the Azerbaijan Republic, the development of a comprehensive Poverty Reduction Strategy (PRS) and established a special commission for this purpose. In June 2001, an Interim Poverty Reduction Strategy Paper (I-PRSP) was issued, which articulated the main principles of this strategy. The more comprehensive PRS is under way and will constitute a specific plan of

action aimed at the practical implementation of policy and economic measures for poverty reduction. Within this strategy, priorities for public expenditure will be set, together with the necessary linkages between specific targeted outcomes and the public expenditure initiatives.

D. The Balanced Growth Challenge

1.23 Azerbaijan is at a critical juncture in its economic and social development. There is no doubt that many of the requisite ingredients necessary to propel the country on a self-sustaining growth path are in place, and considerable successes have already been achieved. However, the economic management and policy decisions made over the next five years will be critical if this success is to be augmented. There is now a strong imperative to address an economic, social, and public expenditure agenda that seeks a more rapid reduction in poverty, which in turn will require economic diversification and a revitalization of non-oil sector activities. From a fiscal and public expenditure perspective, this must be accomplished in a manner that will maintain the monetary stability already achieved. An overly aggressive public expenditure program may not necessarily stimulate sustainable jobs nor improve the quality of public services. The economy is therefore facing a balanced growth challenge: ultimately, there must be a balance between the needs of a wider non-oil part of the economy, which require careful monitoring of appreciation in the real exchange rate, with the need to address poverty more effectively.

1.24 As the experience of other countries has shown, the ability of the implementation capacity to spend the additional fiscal revenues wisely is the key factor. There is always the risk that domestic absorption through public spending designed to spur growth or modernization will involve very low rates of return or will require continued subsidization in the future. The speed with which public revenues increase as a result of a resource boom can lead rent-seeking behavior to garner the windfall, and this may occur in an environment that is weak institutionally and is thus less able to filter out all of the requests.[15] All of these issues are relevant for Azerbaijan. It should also be borne in mind that, given the nature of the PSAs and the volatility of oil prices, revenue flows from the oil windfall might not be smoothly continuous. If sudden inflows are treated as if they are permanent, then expenditure commitments can be created or public expenditure in investment activities started that cannot always be fulfilled smoothly

1.25 Ultimately, there has to be a balance between the needs of a wider non-oil part of the economy, which require careful monitoring of appreciation in the real exchange rate, with the need to address poverty more effectively. In the longer term, budgetary surpluses will be necessary as will measures to stimulate domestic savings, thereby reducing the demand for foreign capital to fund investment. Finally, continued emphasis needs to be given to improving the market environment for non-oil investment and production. This PER focuses on the public expenditure part of this overall policy agenda, providing a framework for both a more effective attack on poverty and a more efficient use of public resources. This framework will be consistent with the maintenance of overall macroeconomic stability and the generation of sustainable growth in the non-oil parts of the economy.

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[15] See Phillip R. Lane and Aaron Tornell, "Power, Growth, and the Volacity Effect," *Journal of Economic Growth*, Vol. 1(2), 1995, for further discussion of some of these issues.

II. THE EXISTING FISCAL FRAMEWORK

A. OVERVIEW OF PUBLIC FINANCES

2.1 **The structure and composition of public finances have undergone a radical change over the past decade.** On the revenue side, tax efficiency declined dramatically in the early 1990s, in part reflecting the massive declines in output, but, more important, reflecting the collapse of the existing tax regime inherited from the FSU. Total revenues as a proportion of GDP declined by more than one-half in two years (1993-95) during the time the country was experiencing hyperinflation (see Table 2.1). During the last seven years there has been a steady improvement in revenue mobilization; however, this improvement has not been spectacular. For example, tax revenues rose from 10.3 percent of GDP in 1995 to 14.7 percent in 2001, but the potential improvement given the large tax arrears associated with the energy and utility sectors is much larger (see the section on the quasi-fiscal deficit, below).

Table 2.1 Consolidated Government Budget, 1993–2000

As share of GDP (in percent)	1993	1994	1995	1996	1997	1998	1999	2000
Total Revenues (incl. grants)	40.6	33.8	17.6	17.6	19.1	19.6	18.5	21.2
Total Expenditures	55.8	45.9	22.5	20.4	20.8	23.7	23.6	20.8
Balance (incl. grants)	-15.3	-12.1	-4.9	-2.8	-1.6	-3.9	-4.7	-0.6

Source: 1993-1994: IMF Country Report No. 98/83; 1995-1996: IMF Country Report No. 00/121; 1997-1999: IMF Country Report No. 02/41; 2000-2001: IMF Country Report No. 02/40.

2.2 **There has been a considerable change in the structure of the tax system, with a strong movement toward indirect taxes, which reflects the introduction of a value added tax (VAT) and improvements in the trade tax regime (see Table 2.2 and Table 2.3).** The proportion of tax revenues accounted for by profit taxes has fallen by half, reflecting the poor performance of the traditional non-oil sectors of the economy, and of course the tax arrears from the utility sectors. The VAT is now the main source of tax revenue for the State Budget.

2.3 **In the initial period following independence, the pace of tax reform was gradual; however, a comprehensive Tax Code was adopted and became effective in January 2001.** This Tax Code represented a major step forward by bringing all tax provisions into an integrated code.[16] This reform has been accompanied by progressive improvements in tax administration and a further amendment to the Tax Code that has simplified further tax regulations and expanded the tax base.[17] As a result of these developments, tax revenues have been relatively stable with some strong gains in certain taxes (VAT) in the last year. Problems and anomalies

[16] This does not include customs administration, which is common throughout the transition economies of the CIS.

[17] Income tax exemptions were reduced and further simplification of the small business tax system and expansion of VAT liability were the key elements of this fine-tuning.

remain, however. The prime area for change relates to the energy and utility sectors. Potential tax collections and tax arrears are high and there is little transparency in these sectors with regard to their obligations to the State Budget.[18] Finally, attention needs to be given to the issue of wage taxes, which are high and which discourage employment (at least in the formal sectors) in the non-oil sectors of the economy.

Table 2.2 Share of Direct and Indirect Taxes, 1994–2001

	1994	1995	1996	1997	1998	1999	2000	2001
Share of GDP (in percent)								
Direct Taxes	10.9	7.2	8.2	7.5	6.9	6.7	7.1	6.2
Indirect Taxes	6	3.1	6	8.1	7.0	7.5	7.4	8.5
Share of Total Tax Revenues (in percent)								
Direct Taxes	64.5	69.7	57.1	48.2	49.5	47.4	48.9	42.0
Indirect Taxes	35.5	30.3	42.9	51.8	50.5	52.6	51.2	58.0

Note: Direct taxes comprise enterprise profit tax, individual income tax, and social security contributions; indirect taxes comprise sales and property taxes.
Source. 1994: IMF Country Report No.98/83; 1995-1996: IMF Country Report No. 00/121; 1997-2000: IMF Country Report No. 02/41; 2001 (projection): IMF Country Report 02/40.

Table 2.3 Main Tax Revenues as a Share of Total Tax Revenues, 1994–2001

In percent	1994	1995	1996	1997	1998	1999	2000	2001
Profit tax	30.7	36.7	30.1	18.4	14.2	13.7	18.4	15.8
Income tax	8.8	10.5	10.9	13.5	17.0	16.7	13.9	12.2
VAT	19.6	15.8	24.0	26.6	30.0	29.4	28.0	32.5
Taxes on International Trade	4.0	6.2	10.1	12.3	12.2	11.8	14.5	7.7

Source: 1994: IMF Country Report No.98/83, 1995-1996: IMF Country Report No. 00/121; 1997-2000: IMF Country Report No. 02/41; 2001 (projection): IMF Country Report 02/40.

2.4 **The main emphasis of the necessary fiscal adjustment has been on public expenditures.** Total expenditures have more than halved in terms of GDP, from 55.8 percent in 1993 to 22.5 percent in 1995, and were sustained at a level of about 22 percent throughout the second half of the 90s (see Table 2.1). A shortfall in financing items (particularly, a delay in the World Bank SAC-II and lower than expected privatization revenues) necessitated expenditure adjustments in 2001, which caused expenditures to drop to about 20 percent of GDP in that year.[19] Table 2.4 presents trends in total public expenditure in per capita U.S. dollars in Azerbaijan, compared with other countries in the region. One conclusion that emerges from these comparisons is that whereas public expenditure cuts during the first half of the 1990s were dramatic in all the CIS countries, expenditure cuts in Azerbaijan were much more drastic as compared to the average for these countries. In fact, public expenditure in U.S. dollars per capita

[18] SOCAR still pays according to a negotiated tax target that takes into account the substantial quasi-fiscal activities that this firm undertakes. Negotiated tax targets for other state-owned enterprises were eliminated in 2001. The magnitude of tax arrears is massive. By January 2001, accumulated arrears were estimated to be AZM 6,932 billion, or about 203 percent of annual tax revenues and about 29 percent of GDP. The main defaulter was SOCAR with about 60 percent of total arrears; others were Azerenergy (2.1 percent), Azerigaz (1.8 percent), and the Railways (1.8 percent). While it is unclear how much of the accumulated arrears could be recovered, and from whom, what is abundantly clear is that the potential to improve overall public resource mobilization through change in the energy and utility sectors is very significant indeed

[19] This share is below that commonly found in low-income countries (about 26 percent of GDP).

in Azerbaijan dropped tenfold, compared with their pre-transition levels. These drastic expenditure cuts were necessary to avoid the negative consequence of the collapse of fiscal revenues: total fiscal revenues dropped from 40 percent of GDP to about 18 percent of GDP during 1993-95, mostly because of the lost fiscal transfers from the Soviet Union and the output collapse that accompanied the transition to a market economy.[20]

2.5 During the second half of the 1990s fiscal adjustment was eased by the steep economic recovery, which allowed for **some increase in public expenditure in per capita U.S. dollar terms.**[21] Although public expenditure was roughly constant as a share of GDP, there was some increase in U.S.dollar per capita terms (from US$99 per capita to US$146, on average, for 1998-2000). This was a positive development, as the level of expenditure was too low to be sustained. As Table 2.4 shows, in 1995 there were only two countries that had a more compressed level of public expenditure–Georgia and Tajikistan–whereas in 2000 there were at least five countries with a more compressed level of public expenditure than Azerbaijan.

Table 2.4 ECA Countries: International Comparisons of Public Spending in Per Capita US$, 1990–2000

	1990	1995	1996	1997	1998	1999	2000
Armenia	1,000	264	123	127	148	160	151
Azerbaijan	1,000	99	84	118	152	148	137
Belarus	1,541	834	853	1,072	1,148	1,252	1,315
Estonia	2,055	1,353	1,217	1,222	1,432	1,539	1,381
Georgia	1,010	90	118	137	129	106	119
Kazakhstan	1,149	328	351	386	366	250	251
Kyrgyz Republic	1,000	256	247	110	111	81	75
Latvia	2,239	767	837	885	1,068	1,197	1,115
Lithuania	1,608	567	677	841	1,063	1,125	1,042
Moldova	1,296	335	179	227	180	106	107
Russia	1,759	882	1,071	1,291	757	450	626
Tajikistan	1,000	65	28	25	35	28	24
Turkmenistan	1,000	181	75	130	143	123	226
Ukraine	1,000	421	349	439	322	240	225
Uzbekistan	1,000	197	265	177	180	136	112

Source: World Bank, "Kyrgyz Public Expenditure Review," 2002 (mimeo).

2.6 **Nevertheless, even the 2000 level of public expenditure in Azerbaijan is still too low compared with its average for other FSU and CIS countries** (see Table 2.5). In terms of share of GDP, total public expenditure in Azerbaijan is well below the average for 2000—30 percent of GDP for the CIS countries. These comparisons, however, are not representative, as transition countries typically opted for the so-called "welfare" state, with sizable commitments of the state to provide universal education, health care, and social protection. There are other examples where the state is committed to provide only a low level of public services (e.g., the East Asia region), where public spending is typically much lower as a percent of GDP (15 percent of GDP

[20] See Chapter 1 for the magnitude of this output collapse.

[21] It should be noted that as GDP grew considerably over the period 1995 to 2001, the actual nominal and real amount of Government expenditures increased substantially over this period

in 1999[22]). However, with the coming oil windfall the society can choose whether to opt for a welfare state or for a state that provides a relatively lower level of public services. What is clear is that it is not feasible and not advisable to aim for the pre-transition level of public expenditure.

Table 2.5 Selected ECA Countries: Consolidated General Government Spending by Functional Classification, 2000

Percent of GDP	*Total*	*GPS*	*Defense*	*PO*	*Education*	*Health*	*SS&W*	*Housing*	*Recreation*	*Fuel*	*Agro*	*Mining*	*Transport*	*Other Econ*	*Interest*	*Other*
Armenia	23.6	2.3	3.6	1.5	3.0	0.9	5.2	1.5	0.5	0.3	1.6	0.0	0 6	0.0	1.3	1.2
Azerbaijan	20.8	1.1	2 1	1 6	3.8	0 9	5.3	0.4	0.4	0.0.	0.7	0.0	0.1	0.0	1.6	2.7
Belarus	45.3	1.9	1.3	1.4	6 2	4.6	11.4	2.7	1.0	0.3	4.4	0.1	3.0	0.9	0 8	5 4
Estonia	38.6	3.3	1.6	2.3	6.5	5.5	11.1	1.3	2.3	0.1	0.9	0.0	2 5	0.5	0 4	0 4
Georgia	17.2	1.4	0.5	1.3	2.2	0.6	4.3	0.8	0.8	0.4	0.2	0.0	0.7	0.8	2.8	0 3
Kazakhstan	22.3	1.4	0.8	1.8	3 3	2.1	6 6	0.9	0.7	0.0	0.4	0.3	1.5	1.2	1.4	0 1
Kyrgyz Republic	27.7	2.8	1.7	1 1	3.3	2.0	6.1	1.1	0.5	1.2	1.7	0 3	4 5	0.2	1.4	(0.3)
Latvia	36.5	2 8	0.8	2.3	6.5	3.5	14.1	2 1	1.3	0.0	1.5	0.0	2 4	0.8	1.1	(2.8)
Lithuania	34.0	1.5	1.3	1.9	5.8	4.4	11.2	0.5	0.8	0.2	1.6	0.1	1.8	0 1	1.8	1.0
Moldova	31.7	1.7	0.4	1.4	4.0	2.6	11.0	0.3	0.5	0.1	0.9	0.0	0.6	0.2	5.8	2.2
Russian Federation	35.1	2.4	2.9	1.6	2.9	2.0	8.1	2.9	0.6	0.4	0.8	1.3	2.4	0.2	3.8	2.7
Tajikistan	14.9	2.8	1.2	1.2	2 3	0.9	2.3	0.9	0.5	0.2	0.5	0.2	1.1	0.1	0.4	0.2
Turkmenistan	28.3	0.9	0.0	0.0	7 4	3.6	5.1	1.9	0.7	0.0	1.8	0.2	0.0	0.0	0.0	6.7
Ukraine	35.7	2.8	1 5	1.6	4.0	2.9	14.5	0.8	0.7	1.2	0.5	0.8	1.1	0.3	2.5	0.5
Uzbekistan	36.1	0.7	0 0	0.0	9.3	2.6	9.8	0.0	0.7	0.0	3.3	3 3	0.0	0.0	0.7	5 8
Average FSU	30.5	2.1	1.5	1.6	4.8	2 7	8.6	1.4	0.8	0.4	1 4	0.5	1.8	0.4	1.7	1.7
Average CIS	28.9	1.9	1.5	1.4	4.3	2.3	7.7	1.4	0.6	0.5	1.5	0 6	1.7	0.4	1.9	2.3

Source: World Bank, "Kyrgyz Public Expenditure Review," 2002 (mimeo).

2.7 **This fiscal compression has not been uniform across all parts of public service delivery or all categories of public expenditure.** As shown in Table 2.6, expenditures in health and education have declined relative to other categories, and in the case of health precipitously so. Expenditures in this sector declined in relative terms to about 0.9 percent of GDP in 2000, which means they almost halved since the first part of the1990s. Education has also witnessed a decline of about one percent of GDP over the last five years.

[22] World Development Indicators

Table 2.6 Consolidated Government Expenditures in Per Capita Terms, 1995-2000

US$ per capita	1995	1996	1997	1998	1999	2000
Education	11.1	20.6	18.1	19.0	24.2	25.2
Health	4.4	8.2	6.2	5.1	5.7	5.7
Social protection and social provision	13.8	21.0	29.4	34.3	31.8	34.3
Housing and communal services	0.1	0.3	2.8	2.3	2.1	2.6
Memorandum Items						
Population, mln [1/]	7.7	7.8	7.8	7.9	8.0	8.0
Nominal Exchange Rate AZM/US$ [2/]	4,414	4,301	3,985	3,869	4,120	4,472

[1/] World Bank Development Economics Data Group (DECDG).
[2/] IMF *International Finance Statistics.*
Source: Macro-Policy Group.

2.8 **Public expenditures are also low in U.S. dollar per capita terms compared with average spending in the FSU countries** (see Table 2.7). Only the four poorest countries of the CIS (Georgia, Moldova, Tajikistan, and the Kyrgyz Republic) have lower per capita public expenditures than Azerbaijan in the above-mentioned categories of functional classification. Average per capita spending numbers are higher for the CIS than are the Azerbaijan indicators (1.3 times for education, three times for health and almost twice for total public expenditures). When compared with the Baltic States, public per capita expenditures in Azerbaijan are about nine times lower.

Table 2.7 Selected ECA Countries: Consolidated General Government Spending by Functional Classification, 2000

Per Capita US$	*GPS*	*Defense*	*Education*	*Health*	*SS&W*	*Housing*	*Agro*
Armenia	14.81	22.73	19 17	5.98	33.28	9.60	10.39
Azerbaijan	7 3	13.5	25.1	5.7	34.3	2.6	4.7
Belarus	18.98	12.90	62.92	47.30	116.25	27.83	44.83
Estonia	116 63	58 93	233.28	195.29	395.78	47.66	30.81
Georgia	9 93	3.42	14.96	4 38	29.80	5.69	1.56
Kazakhstan	15.28	8.87	36.84	23.64	74 43	9.62	4 98
Kyrgyz Republic	7.91	4.80	9 09	5.58	17.15	3.14	4.77
Latvia	84.15	25.88	197.33	107.76	431.30	65 29	44.86
Lithuania	45.69	39.93	179.17	133 46	342.34	15.72	49 57
Moldova	6.78	1.41	15.88	10 43	43 25	1.06	3.67
Russian Federation	43.30	51.12	52 39	35.54	144.05	52.15	13 63
Tajikistan	4.46	1 92	3 65	1 48	3.68	1.47	0.74
Turkmenistan	7 56	0.00	62 57	30.85	42.80	16.41	14 84
Ukraine	17.93	9.62	25 42	18 26	91 33	5 15	3.41
Uzbekistan	3 92	0 00	50.36	14.28	53.43	0.00	17 89

Source: World Bank, "Kyrgyz Public Expenditure Review," 2002 (mimeo).

2.9 **Not only has the sectoral spending proportion changed; the functional use of public resources has changed as well.** Public investment spending has declined, with the limited amount actually undertaken (an annual average of about two to three percent of GDP over the five years up to 2000) related to foreign financed project spending. Public expenditures on goods

and services have fallen from about 12.7 percent of GDP in 1997 to 10.7 percent in 2000.[23] Transfers to households have remained relatively constant, but subsidies have fallen sharply with the elimination of the explicit communal services subsidies.

2.10 **The implications of the past trends in public expenditure are significant, as deficiencies in key elements of the country's infrastructure have become more pronounced.** It is not yet known if this situation is more acute in urban or in rural areas. Furthermore, parts of the existing capital stock have deteriorated significantly as the amount dedicated to repairs and maintenance has become negligible. For example, in education in 1999 only 0.9 percent of education spending was on capital expenditures and only 16.2 percent on goods and services. Wages accounted for 84 percent of public expenditure in education in 2000 (increasing from 55.0 percent in 1997). This increasing share of wages in education budgetary expenditures in part reflects salary increases. However, there has been an increase in the number of positions in the sector, which now accounts for about 24.8 percent[24] of all general government employment in 2000.[25] According to the education law of 1992, a full-time job of a teacher amounts to 12 hours a week, or between 450-500 hours annually. This is probably the lowest standard workload for teachers in the region. A teacher is allowed to work another six hours per week in the same school. This explains why so many teachers are employed, which has resulted in a highly compressed salary scale.

2.11 **The health sector is the second largest employer in the budget sector, accounting for about 13 percent of the general government workforce in 2000.** Here, too, the composition of public spending seems inappropriate. Over 53 percent of health spending is dedicated to wages and salaries, 10.6 percent is dedicated to public utilities and only about 11.8 is percent for medicines and medical supplies. An extremely low 3.1 percent is devoted to "capital repair and maintenance" (1999).[26] A more complete description of the education and health sectors and the operational deficiencies therein is contained in Chapter 5. Suffice it to note that in two key areas of the Government's poverty alleviation agenda (as outlined in its Medium-Term Public Expenditure Strategy), the past performance of public spending in health and education suggests that the quality, coverage, and efficiency fall far short of the needs.

2.12 **There is considerable scope for some degree of rationalization of public sector employment.** Overall, there were about 1.3 million employees in the general government sector in Azerbaijan in 2000.[27] The 158 employees per 1,000 population is comparable with other CIS countries but is considerably higher than most other countries regardless of their stage in economic development.[28] There have been ad hoc and sector specific wage adjustments over the past five years. Overall, however, for the bulk of the general government workforce wages are

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[23] Macro Policy Group of the Ministry of Finance of Azerbaijan.

[24] State Statistical Committee, "Azerbaijan in Figures 2002," pp.82 and 83.

[25] This proportion is high when compared with other CIS countries, OECD countries, and developing countries (a ratio of 39 positions per 1,000 inhabitants in Azerbaijan, about 22 in Kazakhstan and the Kyrgyz Republic, 20 in OECD countries, and nine in developing countries). Data are drawn from "Government Employment and Pay: Some International Comparisons," Peter Heller and Alan Tait, IMF Occasional Paper 24, IMF, March 1984. Overall employment in the budget sector increased by 7.5 percent between 1995 and 1999. See IMF Country report No. 00/121, September 2000.

[26] IMF Country Report, No. 00/121.

[27] State Statistical Committee "Azerbaijan in Figures 2002," p. 83.

[28] The comparable ratios are 58 for OECD countries and 36 for developing countries.

low, resulting in a variety of negative repercussions. Many workers in government service hold multiple positions (particularly in the education and health sectors) which results in degradation in operational accountability and efficiency. This has also spawned an increase in the use of informal user charges for the public to gain access to services, which has a more perverse impact on poorer households. Finally, the low wages undermine internal personnel structures. Promotions are often awarded to move personnel to higher salary scales rather than as a true reflection of experience and competence.

2.13 **Past pay adjustments (with a few exceptions) have been across-the-board, and thus have not altered the compression ratios.** The compression ratio (defined as the ratio of the highest to the lowest salary scale) for teachers and health care workers, for example, is at about 7.4, which is too low compared with the same ratio for civil servants and top officials. The authorities recognize this and also recognize the need to retain high quality staff and to provide appropriate incentives for good performance. Therefore, the intent to review the structure of the civil service and its underlying pay policies exists, but a comprehensive program to achieve this has yet to be formulated.

2.14 **As the following chapter will show, there is a need to streamline and reform the institutional and administrative structure of general government in Azerbaijan.** This reform should encompass the organizational form, with a staffing and functional framework appropriate to a market economy. In the interim, however, certain immediate steps can and should be taken. First, the process of fragmenting the system of government pay scales should be reversed and the existing different pay scales should be consolidated into a unified pay scale. Second, some stronger efforts to decompress the pay scale should be made with an avoidance of continued across-the-board adjustments. Finally, the system of cash and kind pay supplements should be rationalized through a more transparent integration into the overall pay scale structure, with a monetization of in-kind supplements.

B. Off-Budget Accounts

2.15 Until recently, budget system management was highly dispersed among a number of special funds. And many budgetary organizations maintain their own accounts (often more than one) outside of the state budget. **To allow for better accountability and tracking of budget expenditures and revenues, certain steps were taken toward greater consolidation of the budget.** First, the Treasury System was created in 1995, followed by the establishment of the Treasury Department in the Ministry of Finance. The bank accounts of all of the budget institutions were closed and the Treasury Single Account and the regional Treasury Transit Accounts were established. The Treasury Transit Accounts cover all receipts and payments of the local government in each region. The Single Treasury Account has been operational since 1997, when control over liabilities was established and financial planning was introduced. Quarterly limits on the expenditures and commitments of the budgetary institutions have been put in place.

2.16 There were four special funds, whose revenues were included in the General Budget but were earmarked for special purposes: (i) the Road Fund; (ii) the State Fund for Protection of

Forests and Reforestation; (iii) the State Fund for the Protection of Nature; and (iv) the State Support Fund for Entrepreneurs. The Road Fund was abolished by 2001.

2.17 Three large extrabudgetary funds, namely the Social Protection Fund, the Disability Fund, and the Employment Fund were merged into the Social Protection Fund as per the "Law on the Social Protection Fund" adopted by the Parliament in November 2001. From 2002 onward, all transactions of the Social Protection Fund are to be executed through the Treasury.

2.18 A Presidential Decree of December 29, 1999, set up the fourth extrabudgetary fund – the State Oil Fund. The preparation of the Oil Fund's budget is now carried out in consultation with the Ministry of Finance and endorsed by the Supervisory Board of the Fund, prior to approval by the President. Project-related expenditures of the Oil Fund are now treated as a part of a consolidated budget approved by the Parliament, and starting from 2003, expenditures and revenues of the Oil Fund will be executed through the Treasury.

C. The Quasi-Fiscal Deficit

2.19 The most intractable fiscal problem in Azerbaijan is the quasi-fiscal deficit that exists in the utilities sector. Countries experiencing severe fiscal restraints are often tempted to shift some of their fiscal expenditures off budget, which results in an accumulation of quasi-fiscal deficits.[29] Quasi-fiscal deficits usually result from the provision of implicit subsidies/transfers, which are not accounted for in the budget as government expenditures. Although familiar from other countries, this issue is especially acute in Azerbaijan, as the quasi-fiscal deficit was 14 percent of GDP on average during 1998-2001.[30]

2.20 **The quasi-fiscal deficits in the energy and water sectors are substantial.** In the energy sector, World Bank estimates of quasi-fiscal deficits are on the order of 11 percent of GDP for 1998 and 13 percent for 1999. For 2000 and 2001, the IMF estimates are on the order of 20 and 11.6 percent of GDP, respectively.[31] In water supply services, the size of the quasi-fiscal deficit is estimated at US$68.5 million or 1.3 percent of GDP for 2000. The quasi-fiscal deficit in the energy sector originates from three main sources: (i) implicit subsidies, resulting from charges for SOCAR's supply of fuel oil and natural gas to Azerenergy and Azerigaz for domestic consumption that are below market prices; (ii) non-payments for gas and electricity supply; and (iii) an excess of technical losses and thefts. Inadequate financial discipline, non-payments for goods and services received, explicit and implicit subsidies, all combine to create large quasi-fiscal deficits in the electricity (Azerenergy), gas (Azerigaz), and water (Abspheron Regional Water Company [ARWC] for Baku) sectors.

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[29] Easterly, W., "When is Fiscal Adjustment an Illusion?," 1999.

[30] See World Bank, "Azerbaijan Republic Energy Sector Quasi-Fiscal Deficit Assessment," November 2000 (mimeo).

[31] The drop in the size of the quasi-fiscal deficit between 2000 and 2001 in terms of both absolute value and percent of GDP can be attributed to several factors, such as a lower oil price, a change in the composition of SOCAR's export, and a modest increase in collection rates. See Annex 1 for a detailed estimation of the quasi-fiscal deficit in the energy sector for 2001.

2.21 **In the water sector,** collections in 2000 dropped substantially from previous years, reaching 36 percent of billings.[32] The excess of technical losses for the same year amounted to more than 50 percent of water production. This deterioration is closely linked to deferred maintenance of the network and the absence of metering of domestic consumption. Tariff differentials between household and non-household domestic customers remain very high, as tariffs for industrial customers are 12 times higher than those for household customers. Finally, in the case of explicit subsidies, ARWC has been required to provide water to privileged categories of customers without the corresponding budget transfers.

2.22 **This array of implicit and explicit subsidies has high social and economic costs, manifested by frequent system breakdowns and poor quality of services that cause consumer losses and have negative health and poverty implications.** For example, among residents of Baku, 87 percent of those surveyed perceive piped water to be unsafe and 81 percent consider the water shortage problems severe or very severe. On average, water is available to individual households of Greater Baku about 22 days per month for four hours per day. The population copes through various costly strategies that can be as high as seven percent of income for the poorest segments of the population.[33]

2.23 **The burden of quasi-fiscal deficits is even greater, but is less quantifiable, in terms of the negative fiscal impact resulting from a less efficient utility structure and a deteriorating infrastructure due to under investment.** *First*, there are potential destabilizing macroeconomic effects and the opaque pricing structures make it all but impossible to encourage private sector participation in the provision of utility services. *Second*, the quasi-fiscal deficit results in the accumulation of sizable energy-related government-guaranteed debt, which creates budgetary pressures. In 2000 the additional debt accumulated by the utility suppliers to finance needed additional expenditures and foregone fiscal revenues amounted to US$531 million in the energy sector and to US$74 million in the water supply sector in Baku. *Third*, the quasi-fiscal deficit erodes fiscal revenues, as it creates large tax and other budget payments arrears. In 1999, the tax arrears of SOCAR, Azerenergy, and Azerigaz increased to US$865.3 million (19.0 percent of GDP) as compared with US$603.4 million (13.6 percent of GDP) in 1998. Similarly, the ARWC accumulated tax and other budget payments arrears (including arrears to Azerenergy) of about US$110 million in 1999.[34]

2.24 **The underinvestment in infrastructure has a particularly devastating effect.** Systems breakdowns have caused significant losses to existing customers and have deterred potential investors in the non-oil sectors of the economy. Furthermore, there is a high cost resulting from the need to replace equipment long before the end of its original design life. Although the cost of deteriorating infrastructure is very high, it is hard to provide an exact estimate of the economic cost associated with infrastructure replacement plus the second round effects on the rest of the economy.

2.25 **The Government has designed a reform strategy to eliminate quasi-fiscal deficits in the utility sectors.** As a part of this strategy, the Government adopted a comprehensive program

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[32] The reason for this was the recent policy change to eliminate non-cash forms of payment.

[33] World Bank, "Improving the Effectiveness of Public Expenditure Strategy," April 2001 (draft).

[34] It is noteworthy that the total of accounts receivable for the water company is almost the same at US$105 million.

to strengthen financial discipline and improve service delivery. This program aims at establishing financial discipline in the energy sector and largely eliminating the quasi-fiscal deficit in the sector within five years. In order to strengthen financial discipline, key elements of the program include: (i) enforcing the right of energy and water companies to discontinue service to non-paying customers, with the Government monitoring the disconnection program; (ii) allocating in the 2002 budget, appropriate funds to budget organizations to pay their utility fees, providing strict supervision of the payment of these fees, and disconnecting institutions that consume in excess of the budgeted limits; (iii) providing adequate compensation in the state budget for utility fee subsidies to poor households; (iv) delivering services to enterprises with a history of delinquency only on the basis of advance payments; and (v) bringing subsidies from SOCAR to the energy and water companies explicitly in the budget, while compensating a corresponding tax credit to SOCAR. However, the Government has yet to design a relevant allowance scheme to alleviate the impact of the reform measures on the poor.

2.26 **The phased program to eliminate the quasi-fiscal deficits in the utility sectors targets a reduction of implicit subsidies in the electricity, gas, and water sectors by at least 30 percent overall from the baseline formula established, and by at least 30 percent in each individual sector in 2002.** This will be achieved by a combination of improved cash collection, increased tariffs, and/or gains in efficiency. To achieve this, it is planned to increase collections to 45 percent in the electricity and gas sectors and to 60 percent in the water sector.

2.27 **To support the reform program in these sectors, the Government is committed to provide access to the relevant financial and operational information.** In this context, the Government has instructed SOCAR, Azerenergy, Azerigaz, and the ARWC to deliver and also to share with the IMF and the World Bank: (i) monthly accounts receivable statements arranged by user groups; (ii) monthly statements of non-technical losses; (iii) monthly statements of historic and projected cash flows; (iv) annual financial statements prepared in accordance with IAS as well as an audit opinion thereon from a reputable internationally recognized auditor of having performed the audit in accordance with IAS; and (iv) a plan to upgrade the financial management arrangements of these bodies, including the design and implementation of appropriate accounting procedures and internal controls, to facilitate the production of reliable, relevant, accurate, and timely financial and management accounting information.

2.28 In addition to strengthening financial discipline, **the Government is undertaking a number of reform measures to eliminate quasi-fiscal deficits and improve public service delivery.** First, the Government is embarking on a utilities restructuring and privatization program as part of its efforts to eliminate the root causes of these deficits and the operational inefficiencies in the energy and utility sectors. The basic aim is to enhance efficiency by bringing in the capital needed to maintain service, monitor consumption (meters), and improve management, and last but not least, to engage private operators with incentives to improve collections. Second, the Government has started to formulate an appropriate framework for regulating the natural monopolies. Third, while eliminating implicit and extrabudgetary subsidies and introducing explicit budgetary subsidies, it is also important to put in place a better social safety net and to reformulate tariff policies.

2.29 **All of these reform efforts, the elimination of the quasi-fiscal deficits, and adherence to an overall fiscal policy framework that maintains monetary stability will set the stage for**

a more effective public expenditure policy that is consistent with the stated intent of the Government's Medium Term Public Expenditure Strategy. Progress has already been made in improving transparency and public expenditure management with the elimination of the multitude of "off-budget accounts". It is also recognized that future public expenditure patterns must respond to the need to alleviate poverty and ameliorate the economic and social plight of the poorer households. What is also needed is a reform of the general government institutional framework that will create a public service that can deliver these needed public services in a more efficient and fiscally transparent manner. This institutional agenda will be addressed in the following chapter.

III. THE PUBLIC SECTOR INSTITUTIONAL FRAMEWORK

A. THE EVOLVING FISCAL AND BUDGETARY INSTITUTIONAL ARRANGEMENTS

3.1 This review of the Government's institutional framework is undertaken from the perspective of public expenditure management. To function efficiently, the budgetary system must satisfy four major requirements. *First*, the budgetary system should be transparent and easily monitored, and should lend itself to a multi-year budgeting framework that is linked to the objectives set out in the PRS. *Second*, the budgetary system should be well structured so that continued monetary and macroeconomic stability and management of the oil wealth will be ensured. *Third*, the budget systems should ensure the probity and integrity of public expenditures and of internal and external audit procedures, and the efficient procurement of the necessary goods and services. *Finally*, the institutional arrangements and administrative structures of general government should be consistent with its relevance for a market-based economy and its cost-effectiveness in the delivery of public services. **This section reviews recent reform efforts in public expenditure management and the budgetary system and outlines the remaining challenges to the efficient functioning of the budgetary system.**

3.2 Azerbaijan's Government inherited a public expenditure management system that was ill suited to an emerging market economy and a changing role of government. The budgetary structures of a planned economy had a sectoral and "economic article" approach to budget development and formulation. **The budget, driven by standardized service production norms and controls, was overly mechanical and was cumbersome as a mechanism for setting priorities in the allocation of public resources.** The Government recognized these deficiencies and embarked on the reform of public expenditure management throughout the 1990s. Initial progress, however, was very slow.

3.3 The Budget Systems Law (BSL) No. 391 was adopted in late 1992, but was inadequate as a framework for planning and policymaking as it provided little or no incentive for the efficient use of resources, and resulted in weak accountability and control functions. The major problem was inadequate coverage of the state budget. There were many special funds that received resources from the budget, but with limited knowledge, either a priori or ex post, of the use of resources. Furthermore, there were many extrabudgetary funds that received revenues from the

budget and other sources (user fees, for example). This profusion of spending units outside of the unified Treasury system resulted in weak accountability and lack of transparency, and impeded an evaluation of the policy implications of public spending and the prioritization of sectoral policy.

3.4 The budgetary approach was not linked to a medium-term expenditure or macroeconomic framework. Line ministries received little specific guidance for programmatic spending priorities and conformed to rigid reliance on outdated and detailed norms for the calculation of expenditure requests which resulted in spending patterns that were ill-suited to the current situation. In many instances, if a ministry wished to adjust spending patterns according to perceived needs, the regulatory framework made this impossible.[35]

3.5 For a large part of the 1990s, budget execution was deficient, with very large deviations and variances between plan and execution (as much as –36 percent in 1995 compared with +22 percent in 1994). In part, these wide variations were a reflection of the highly inflationary and unstable monetary environment prevailing at the time. Furthermore, within the annual budget cycle overcommitment was endemic resulting in arrears. These arrears were sometimes cleared through netting arrangements that often involved barter transactions between organizations and ministries. Obviously, transparency and operational accountability in such a situation is impossible.

3.6 Public investments are a crucial part of public expenditure. As noted in the previous chapter this aspect of public spending has witnessed a considerable fall over the past decade. The expected increase in available resources over the coming decade is expected to reverse this trend. As this occurs, some key institutional changes will be needed. At the most fundamental level, investment spending must be part of an overall public expenditure planning process that encompasses a multi-year time horizon and the recurrent cost implications of these investments. This was absent in the 1990s. There are also severe weaknesses in the institutional capacity to evaluate projects and investments and also their implementation.

3.7 The structure of central government in Azerbaijan has also had a significant negative impact on public expenditure policy and the implementation of the state budget.[36] This structure is a reflection of the FSU period. The executive branch is headed by the President with an appointed Prime Minister and Cabinet of Ministers. The legislative branch has relatively weak oversight of the executive branch and of public expenditure policy formulation. The administrative structure is complex, opaque, and fragmented.[37] Decision-making has tended to be highly centralized even in very minor matters. The overwhelming dominance of the President's Office and Cabinet of Ministers has prevented or undermined the development of policy formulation and decision capacity at the ministry level. This inhibits the development of a medium-term budgetary framework, given that ministries often simply become implementing

[35] For example, given regulations regarding the number of staff per hospital bed, in order to alter the deployment of personnel for health services the Ministry of Health must first reduce the number of hospital beds supported in that area.

[36] This section of the PER draws heavily on "Azerbaijan: Public Sector Strategy," (draft), World Bank Report No. 18660, January 1999.

[37] For the beginning of 2002 there were 20 ministries and 10 state committees.

agencies and decisions lack transparency and formal procedure. Accountability also suffers under this organizational arrangement.

3.8 **Structurally, there is no defined core civil service.** Similar to that in other FSU countries, the civil service regime is more "open," and each entity recruits and manages its own personnel. Civil service management is not centralized, except for the supervisory actions of the Cabinet of Ministers with respect to the top grades. As a result, the institutional checks and balances that normally promote transparency, accountability, and initiative are absent. Furthermore, within this type of institutional context budget development and execution can proceed in an ad hoc manner that has little linkage to a longer-term policy approach.

B. The Institutional Reform Agenda

3.9 **The authorities have recognized the obstacles to efficient public expenditure management associated with the above administrative structure and have initiated some reform efforts.** A single account Treasury System was introduced in 1998 and has proved successful. This system provides a monthly warrant to allow short term managerial planning by spending units and to control the disbursement of cash. This approach, and the priority given to wages, salaries, and social contributions, has eliminated the accrual of wage arrears. Furthermore, adjustments in budget execution are undertaken through adjustments in the level of monthly expenditure warrants issued to spending units. This warrants system has been effective in allocating resources across the budget year, and the process is an orderly one.

3.10 **The reporting systems for budget execution have improved substantially.** Monthly estimates of cash availability and authorizations for warrants based on Treasury estimates are provided by the Ministry of Finance (MOF). The other important development is that a large number of the off-budget operations of both ministries and local governments have been brought into the Treasury framework. Since these budget and off-budget items are subject to the same economic and functional classifications, this consolidation has proceeded quite smoothly.

3.11 **What remains is the need to computerize the entire Treasury System.** The processing of transactions is still relatively slow and the timeliness of information could be improved. This would also facilitate the progression toward commitment accounting. Overall, however, the Treasury System that has been introduced represents a solid foundation that will improve the budgetary process in general and multi-year programming in particular. Currently, the Treasury System covers expenditures of all extrabudgetary funds, including the Oil Fund.

3.12 Periodic amendments have been made to the BSL, introduced in 1992, with perhaps the most comprehensive being undertaken in 1999. However, it was realized that more needs to be done to broaden the coverage and the transparency of the BSL. **Hence, the Government of Azerbaijan drafted and enacted a new BSL in 2002 that provides a legal framework to make the budget process a more effective tool in policy formulation.** This new law clearly delineates the core responsibilities of the Treasury and involves the line ministries far more in strategic priorities. A key element of the new BSL is that it incorporates regulations governing

all extrabudgetary operations (including the Oil Fund), defining the need for all general government revenues and expenditures to be included in the consolidated budget.

3.13 Another key contribution of the new BSL is that it will allow for a more effective multi-year budgeting framework. Thus, it will provide the necessary link with the ongoing PRS exercise, the PIP (which will encompass a medium-term implementation cycle), and the MTEF. Annual budgets can thus be made consistent with the multi-year objectives of poverty reduction and infrastructure development. This new law will ensure that future state budgets provide far more detail on expenditure allocations and is much more explicit in defining the responsibilities and accountabilities of spending units in the implementation of this budget. The first budget affected will be that for 2003, which will be prepared according to the BSL's provisions. The Government has already issued directives to all line ministries to ensure that early budgetary preparations are fully consistent. The drafting of implementing rules and regulations is presently under way with technical assistance from the donor community.

3.14 Unfortunately, institutional weaknesses remain. Some lack of clarity remains in the delineation of responsibilities for budget preparation between the MOF and the line ministries. This is particularly apparent with regard to state budget institutions located in the regions, for which the controlling line ministries assume no oversight responsibility. Financial analysis capabilities in the line ministries should be strengthened and there is a need to strengthen the Project Appraisal Department in the Ministry of Economic Development (MED), which will undertake technical, financial, and cost-benefit analyses of investment proposals in support of other line ministries.

C. Financial Controls, Audit, and Procurement

3.15 Over the past year there has been considerable improvement in the structure of financial controls and audit of public expenditure.[38] Enactment of the new BSL, together with further refinements to the Treasury System, will improve the coverage and transparency of public expenditure monitoring, evaluation, and accountability. Implementation of a modern Treasury Information Management System (TIMS) is under way with technical assistance from the IMF that includes a new budget classification structure, a chart of accounts, and the development of operational and regulatory guidelines.[39]

3.16 The framework is now in place to provide an improved management of public expenditures and to link this to the goals set out in the MTEF. This framework now needs to be fully implemented. The first real test of this implementation will occur in the 2003 budget year. What remains unclear is the public expenditure framework for local authorities and municipalities. There is a stated intent for a degree of administrative decentralization as enshrined in the Constitution. A clear division of responsibilities between different levels of

[38] A Country Financial Accountability Assessment was completed for Azerbaijan in 2002 and has been used extensively in the assessments made in this section.

[39] Technical assistance is also being provided under the recently approved Azerbaijan Second Institution Building Technical Assistance (IBTA-II) of the World Bank.

government is emerging. However, these responsibilities and their fiscal implications have yet to be defined. A draft Law on Municipal Property is under preparation to define the property that will become municipal property (primary and secondary schools, for example). The implication is that these definitions will have to be maintained by the municipalities. This situation would add to the burden on local budgets and is worsened by the absence of a clear strategy on the part of the Government on key infrastructure and the absence of an implementation schedule for this law.

3.17 The Law on Financial Principles (Status) of Municipalities of 1999 suggests that there could be considerable scope for local public expenditures encompassing social protection, socio-economic development, and environmental protection. This law further specifies 17 taxable activities that will provide revenues for the municipalities, which will be collected locally. **Currently, the municipalities receive ad hoc transfers from the central state budget, and there is no systematic process in place for fiscal transfers from the central government to the municipalities.** However, the long-term objective would be that municipalities would become independent of the state budget. This has important ramifications for the medium-term expenditure strategy and the PRS.

3.18 Local municipalities have recently been given responsibility for the repair and maintenance of facilities and infrastructure located in their areas. This has created certain serious anomalies that must be rectified. Buildings such as schools, hospitals, and clinics were formerly built and owned by the relevant line ministries, but the municipality was responsible for their upkeep. Under past budget formulations there was a structural weakness whereby the financing of these maintenance and operating activities was focused in the district offices of the MOF with no line ministry oversight. **The most glaring example of this disconnect between functional responsibility and financial accountability is in the health sector.** The legislation on municipalities provides for the transfer of the ownership and management of these assets from the local representatives of the central government to the municipalities. However, both ownership and transfer often remain incomplete, leaving a vacuum in terms of responsibility.

3.19 The Ministry of Health (MOH) has hospitals throughout the country, but the budgets of the hospitals and other medical establishments located in the districts have hitherto been neither controlled nor influenced by the MOH. This is the case despite the fact that these facilities are under the administrative control of the MOH and are accountable to the MOH for the quality of service provided. The direct participation of the MOF district office in budget formulation of all agencies at the district level means that the MOH has played a very limited role in the preparation of budget proposals other than to provide a check on the budgetary norms applied. The new BSL is designed to address some of these issues, but the future linkages between accountability for service delivery and the allocation and the use of resources remain unclear. This confusion could increase as the municipalities become more independent financially. This situation also raises the question of social equity, as undoubtedly there will be "richer" municipalities (i.e., those with a stronger tax base) that are able to afford higher standards of service delivery. **There is an urgent need to clarify and specify more rigorously the public expenditure role of municipalities and districts and to ensure that the objectives and goals set out in the MTEF, the PIP, and the PRS are not undermined by confusion over the responsibilities for the achievement of these objectives. Such confusion will be particularly**

dangerous with regard to future public investment activities, which may involve capital expenditure from a line ministry but a maintenance and operational expenditure commitment from a different level of public administration.

3.20 There is no transparent formula to determine central budget transfers to the municipalities. This makes it difficult for municipalities to prepare budgets and plan future activities. The legislation on municipalities does not provide explicit safeguards for financial management of municipal budgets. Furthermore, local taxes and user fees are the main source of revenue for municipalities, but these are still set by the central government, which constrains the ability of municipalities to raise revenue and apply cost recovery principles to investments. Under the Second Structural Adjustment Credit (SAC II) the Government has established a Tariff Regulatory Council, with the participation of relevant the Government institutions. The Government should publish a time-bound plan to move tariffs to economic prices and implement appropriate countrywide tariff changes.

3.21 With regard to the external audit functions of public expenditures, there has been some administrative confusion in the past. The Chamber of Audits (CA) was formed in 1994.[40] Although this entity was envisaged as the supreme audit institution it did not really fulfill this role. It had no obligation to review the Government's financial operations systematically and report its findings to the Parliament or the President, and its audit mandate was confined to property and privatization. The primary function of the Chamber of Audits was to develop and regulate the audit function and profession in Azerbaijan.

3.22 This omission regarding sound public expenditure management was remedied in 1999 with the enactment of the Law on the Chamber of Accounts, which establishes this Chamber as the supreme audit institution reporting to Parliament. This law was amended in the following year and the Parliament also approved the Internal Regulations (Charter) of the Chamber of Accounts. This Chamber is now vested with the necessary authority and rights to enable it to audit and make public the results of its audits of all public sector entities, including all budgetary and extrabudgetary organizations and funds. The Chairman of the Chamber of Accounts was appointed by the Parliament in June 2001 and the resources for the full staffing and proper functioning of the Chamber were included in the 2002 budget. The issue now is to have this vital institution fully functioning as speedily as possible.[41] It is planned to have the Chamber's 2003 work plan and related financial plan presented to the Parliament before the end of 2002.

3.23 The recently completed Country Financial Accountability Assessment (CFAA) also believes that there are weaknesses in the internal audit systems for budgetary organizations. Two presidential decrees have effectively abolished all internal inspection/control departments of ministries, committees, and other central executive power bodies, except for the Main Department of Public Finance Control (MDPFC) in the MOF in respect of public finances; the Ministry of Taxes in respect of matters within its jurisdiction; and

[40] Regulations for the organization and functioning of the Chamber were promulgated in September 1995.
[41] This institution is being supported under the recently approved IBTA-II.

the National Bank of Azerbaijan (NBA) in respect of its role as banking supervisor.[42] The Government took this action as part of its strategy to reduce obstacles to private sector development, as it was felt that these departments unduly harassed the budget organizations and companies under their jurisdiction, leading to both widespread inefficiencies and corruption.

3.24 The result is that no ministry, committee, or other central executive power entity has a proper internal audit function that can, among other things, examine, evaluate, and monitor the adequacy and effectiveness of the accounting and internal control systems. The CFAA also believes that the MDPFC is not fully able to fulfill this function and thereby **recommends the establishment of proper internal audit departments within all budget organizations, including ministries, local governments, and state enterprises.** It is believed that with proper operating regulations and internal structures, and with appropriate oversight, the past abuses and harassment can be avoided.

3.25 **Azerbaijan has made considerable progress in the legal framework surrounding public procurement.** Two early legislative texts addressed public procurement issues, and a State Procurement Agency (SPA) was established in 1998.[43] These early efforts contained deficiencies and had many internal inconsistencies and contradictions. This was recognized and the SPA developed more effective legislation based on the UNCITRAL model law.[44] A new law, the Public Procurement Law (PPL), was adopted by the Parliament and signed by the President in December 2001 with implementing regulations promulgated by Presidential Decree No. 668 in January 2002. These measures abrogated the earlier legislation. It is the view of the recently completed CPAR undertaken by the World Bank that "in terms of substance and degree of development, the PPL is one of the better such laws in the region."[45]

3.26 The SPA is staffed at the highest levels with able and committed staff and, despite the absence of a sufficiently systematic and appropriate reporting system, has been effective in identifying and correcting breaches of procurement rules. **The main issue now remains for some significant capacity building of the institution, which includes an appropriate review department, separate from its functional departments, and a more transparent and formalized review procedure.** The concept of procurement based on market economy principles is relatively new in Azerbaijan; hence, there is a need to build a corps of procurement officers, which will require a countrywide training program. This need is particularly acute in the districts.

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[42] Presidential Decree No. 462, On Compliance of Rules in Controlling the Industry, Service and Finance-Credit Activities, June 17, 1996, sought to reduce the number of dual, parallel, and unwarranted inspections which were considered as negatively affecting the development of the market economy. However, it was felt that the measures introduced by the Decree did not go far enough and thus Presidential Decree No. 69, On Improvement of Public Control System and Addressing the Artificial Obstacles in the Development of Ownership, January 7, 1999, was also enacted.

[43] Decree 524 of December 19, 1996, and the Law on Tenders of February 11, 1997, set out regulations on the procurement of goods, construction, and services of budget organizations.

[44] United Nations Commission for International Trade Law.

[45] See "Azerbaijan: Country Procurement Assessment Report," World Bank, 2002.

D. The Oil Fund

3.27 Perhaps the most significant development in public finance in recent years in Azerbaijan has been the establishment of the Oil Fund. In recognition of the need for a mechanism to manage the revenue flows resulting from the large increases in oil output, the State Oil Fund of the Azerbaijan Republic (SOFAR) was established by Presidential Decree on December 29, 1999 (a sketch of the Fund's institutional setting is presented in Box 3.1) and became effective in early 2001. The Government has made a commitment to exercise considerable caution over the use of this expected windfall and to ensure that the benefits resulting from the exploitation of this natural asset would accrue to all citizens and to future generations. This cautious approach was deemed even more essential given the fiscal institutional reforms presently under way and the need to develop an appropriate PRS and an integrated PIP.

Box 3.1 Institutional Framework for the State Oil Fund of the Azerbaijan Republic (SOFAR)[1]

Supervision and Control

- The ultimate authority over all aspects of the Oil Fund's activities rests with the President, who is empowered to liquidate and re-establish the Fund, approve the Fund's regulations, identify its management structure, etc.
- The three level management structure consists of the President, Executive Director, and Supervisory Board. Members of the Supervisory Board and the Executive Director are appointed and dismissed by the President.
- The Board consists of key government officials (Prime Minister, ministers), two parliamentary members (nominated by the Speaker), and academia. It is entrusted with the functions of internal supervision to oversee the composition of the Oil Fund's assets and compliance with the expenditure rules.

Investment Strategy and Operational Management of Assets

- The investment strategy is annually approved by the President based on recommendations of the Executive Director, taking into account recommendations of the Supervisory Board.
- Operational management is delegated to the Executive Director, who chairs the Investment Board (internal structure of the Fund).
- Professional portfolio managers may be contracted for a certain portion of the Fund's assets.
- Investment portfolio guidelines determine currency composition, the balance between liquid (up to 40 percent of the portfolio) and long-term investments, and fixed and equity income instruments. Preference is given to fixed income instruments, while equity income instruments (corporate securities and stakes) are banned unless a highly reputable professional investment manager is hired to handle them.

Transparency, Accountability, and External Oversight

- The President selects a highly reputable international auditor to conduct an annual audit of the Oil Fund's accounts. The results from the annual report on the use of the funds and the external audit report are published in the mass media. Pursuant to the Azeri laws, the Chamber of Auditors may also audit the Fund.
- Quarterly reports produced by the Executive Director shall be submitted to the Supervisory Board and the President.
- The annual report is prepared in coordination with the MOF. After recommendations of the Supervisory Board are incorporated, it shall be submitted to the President. The annual report 2001 is posted on the official website.

Governance of Revenues/Expenditure Rules

- Ultimate decision-making capacity rests with the President.
- Consolidation with the state budget is ensured by close coordination with the MOF through the joint Budget Coordination Committee co-chaired by the Executive Director of the Oil Fund and the Minister of Finance, and based on the Memorandum of Understanding signed between the Fund and the Ministry.
- All investment expenditures are to be executed through the Treasury.
- Use of the funds is subject to the State Procurement Law, which governs all budgetary expenditures.
- Investments should be made in projects of national importance; while criteria for project selection are still to be developed, project investments have to be part of the governmental PIP and MTEF and consistent with the PRS.

[1] *Annual Report 2001*, State Oil Fund of the Republic of Azerbaijan, and www.oilfund.az.

3.28 **The institutional setting of the Oil Fund, underpinned by a comprehensive set of operating procedures, represents a major step toward improving transparency and accountability.** A supervisory board was established in December 2001 and was drawn from a wide cross-section of Azerbaijan society, including the Parliament, the Government, public organizations, and civil society. An annual budget will be drafted and submitted to the Parliament as part of a consolidated annual budget procedure ensuring public scrutiny of the use of the Oil Fund. The Oil Fund currently produces quarterly reports on revenues, expenditures, and assets, which are made readily available to the public. Internationally reputable accounting firms audit the Oil Fund accounts annually. Its accounts as of end-2001 have been audited, and the results were made public through the publication of the auditor's report in July 2002. In addition, the Oil Fund's spending is carried out through the state's Treasury System, and the use of funds is subject to the State Procurement Law (SPL) and the provisions therein, which govern other budgetary expenditures. Finally, the Oil Fund's spending should be consistent with the Government's MTEF, PRS, and PIP.

3.29 Under Presidential Decree No. 592 of October, 2001 a draw-down of eligible funds totaling AZM 16.7 billion manats (or about US$3.6 million) was authorized for 2001 to construct housing and other infrastructure requirements necessary to improve the living conditions of internally displaced persons (IDPs) and refugees, who hitherto have been living in makeshift accommodations without basic utility services. Expenditures for the same purposes are also envisaged in the Oil Fund budget for the year 2002: initially they were planned at the level of AZM150.3 billion,[46] but after the first meeting of the Oil Fund's Supervisory Board (July 2002), the President authorized the withdrawal of an additional AZM182.6 billion, which brought the total amount to be spent out of the Oil Fund (together with the operational expenditures) by the end of 2002 to AZM336.1 billion (US$69 million). This expenditure program will occur during 2002 and is consistent with the poverty alleviation principles documented in the I-PRSP and the evolving PRS.

3.30 The IMF and World Bank staffs are working on reaching an understanding with the Government on the submission to Parliament of a new legal framework on the Oil Fund, which would give the asset management and budget rules the force of law. Concrete proposals address the following issues. First, the role of the Oil Fund should be clarified as solely a vehicle for managing part of the liquidity generated by the exploitation of oil and gas resources, until the government decides to spend a portion of those resources. Second, the Fund should maintain a unified control of fiscal policy and should facilitate expenditure coordination. The MOF should be put in charge of preparing and executing a consolidated budget, consisting of the state and Oil Fund budgets. To help alleviate poverty and to support the Government's medium-term development objectives, this consolidated budget should be consistent with the PRSP, the MTEF, and the PIP, and the MTEF and PIP should be discussed formally on Parliament every year. Third, the investment of Oil Fund's assets (prior to their expenditure) should be limited to investment-grade assets, as defined by internationally reputable rating companies. To that end, the Fund would not be permitted to invest in domestic commercial projects under the new law, with a view to protecting its assets from undue exposure to risk.

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[46] Presidential Decree No. 604, "Budget of the State Oil Fund of The Azerbaijan Republic for the Year 2002," December 21, 2001.

E. AGENDA ITEMS

3.31 **In conclusion, considerable progress has been achieved in developing the institutional arrangements underpinning public expenditures in Azerbaijan.** Weaknesses remain and these relate mostly to capacity building and implementation capacities rather than to structural or systemic weaknesses. For example, there is an urgent need to develop a project appraisal capacity together with an ability to forge stronger links between budgetary finance allocation decisions and operational outcomes. This includes developing more effective monitoring and evaluation capabilities that will go beyond mere control and tracking of expenditures but will encompass output indicators of performance and the quality of service delivery. This is necessary not only to improve the efficiency of public expenditures but also to provide a more effective frame for accountability by public servants.

3.32 However, certain caveats are associated with the above. **The functional and budgeting systems for district and municipal public expenditures need to be further clarified.** The role envisaged for these subnational entities will be crucial in realizing the goals of the PRS and allowing for an integrated nationwide PIP. Fiscal decentralization has many benefits, especially when it brings beneficiaries much closer to service providers, thereby improving accountability. However, this must occur within a framework in which responsibilities are clearly and unambiguously defined and this is linked to a clear revenue source. Furthermore, it is unlikely that all districts and municipalities will develop their autonomous fiscal systems at the same pace. It is therefore likely that some municipalities will be more dependent on state budget resources than others as the decentralization process evolves. This would raise incentive issues, not to mention equity issues, especially in the provision of basic health care, primary education, and potable water.

3.33 There is no single model of a fiscal decentralization system. There are a variety of revenue sharing methodologies as well as a variety of service responsibilities. What is needed in Azerbaijan is the development of a model that fulfils the public policy intent, merged in a transparent and accountable fiscal system. The present arrangements fall far short of this.

3.34 **A final area needing attention is the overall civil service structure.** Reform in this area has been slow. Comprehensive civil service reform takes time to implement. Some progress has been made with the merger of some central ministries and some initial legislative steps for the legal framework of public employment. What has not been fully articulated is a concept of the type of central government structure that will be suitable for a market economy in the context of the country. This requires setting up the criteria and principles for civil service reform for the existing ministries and state committees and the Council of Ministers, which will guide a civil service reform strategy that encompasses all aspects of a professional and modern civil service. While it is recognized that the structure of public administration in Azerbaijan and its institutional capacities cannot be transformed in a short time frame, there must be a guiding blueprint for change with time bound targets.

IV. THE FISCAL OUTLOOK AND RESOURCE ENVELOPE

A. THE MACROECONOMIC OUTLOOK

4.1 **The overall macroeconomic outlook for Azerbaijan is positive and is driven by the development of new oil production and the construction of transportation links to bring this increased output to market.** Projections of the likely increases in output, together with their associated investment activities, are drawn from the estimates of the participating oil companies and the Government. These estimates provide one component of the projected GDP growth path. For the other sectors this projection becomes more problematic. The recent positive performance of agriculture is encouraging, but there is considerable uncertainty about all other sectors of the economy. Table 4.1 presents the projected key economic indicators.

Table 4.1 Key Economic Indicators, 2001–2010

Key Indicators	2001	2002	2003-05	2006-10
	(Annual percentage change)			
GDP at constant prices	9.9	7.9	9.3	16.9
Oil GDP at constant prices	18.1	5.6	13.8	33.6
Non-oil GDP at constant prices	6.4	9.0	7.5	5.0
	(Ratios to non-oil GDP, percent)			
Investment	29.3	61.2	74.5	44.9
Public sector[1]	5.0	8.6	6.3	8.4
Private sector	24.3	52.5	68.2	36.5
Oil sector	5.4	31.1	41.0	13.4
Non-oil sector	18.9	21.4	27.2	23.1
Consolidated government balance	1.6	-3.1	-1.8	9.5
Revenues	30.0	32.1	30.4	44.8
Expenditure	28.4	35.2	32.3	35.3
Current account	-1.8	-25.4	-38.4	22.8
Oil sector	25.3	1.1	-10.3	42.9
Non-oil sector	-27.2	-26.6	-28.1	-20.1
Total DOD	31.2	31.3	30.4	27.7
Memorandum Items				
Oil price US$ per bbl	24.3	23.0	21.3	18.0
Exchange rate, av. AZM/1 US$	4.77	4.92	4.94	4.94

[1] Public investment in 2002 includes a BTC loan of AZM 576 billion (2.7 percent of the non-oil GDP)
Source: World Bank staff estimates.

4.2 Given careful macroeconomic management of the oil windfall and assuming that structural reforms accelerate, non-oil sector growth is projected at an annual average of 7.5 percent during 2003–05. Once the oil-related FDI dries, the non-oil sector growth rate is

projected to moderate to 5 percent per annum by the end of this decade.[47] The non-oil growth projections have taken into account the following factors: (i) the starting base for the non-oil sector is low following the severe contraction in the early mid 1990s; (ii) although the oil-related foreign direct investments will have a high import content, some share of these investments will be invested domestically (e.g., in such sectors as construction and services), which will allow for somewhat higher growth rates during 2003–05; and (iii) non-oil sector growth will be based on gains in total factor productivity that result from ongoing reforms and economic restructuring and will increase the level and efficiency of public expenditure (see Box 4.1).

Box 4.1 Prospects for Total Factor Productivity (TFP) Growth in Azerbaijan

- High total factor productivity growth is essential for sustained growth in the non-oil sectors and increasing standards of living in Azerbaijan.
- The experience of more advanced transition economies shows that in the shorter term substantial productivity gains are possible (V-shaped pattern of TFP is one of the major stylized facts of a successful transition to a market economy).

V-shaped TFP Pattern in Advanced Transition Economies

	Czech Republic	Hungary	Poland	Slovak Republic
Transitory recession*				
Average TFP decline	-4.5%	-7.1%	-7.5%	-6.8%
Cumulative TFP decline	-12.9%	-13.7%	-14.4%	-24.6%
Recovery period**				
Average TFP growth	1.0%	2.2%	3.8%	4.2%
Cumulative TFP growth	5.9%	16.3%	29.6%	23.1%

* Czech Republic 1990-1992, Hungary 1990-1991, Poland 1990-1991, Slovak Republic 1990-1993.
** Czech Republic 1993-1998, Hungary 1992-1998, Poland 1992-1998, Slovak Republic 1994-1998.
Source: Own calculations based on De Broeck and Koen (2000a).

- Azerbaijan has the potential to experience higher TFP growth rates because the recorded output and productivity losses during first years of transition were much deeper (accumulated loss in TFP of 61 percent between 1990 and 1996)[1] than those experienced on average by other transition countries.
- Accordingly, in our framework we assume that TFP growth rates would average 5.2 percent between 2003 and 2005 and decline gradually to an average of 3.1 percent between 2006 and 2010.
- In the longer term, TFP improvements are driven by technological progress, therefore chances for similarly high rates of growth beyond 2010 are limited.
- Even in the short term, a TFP recovery will only be possible if structural reforms are implemented to stimulate enterprise restructuring and entry of de novo firms.

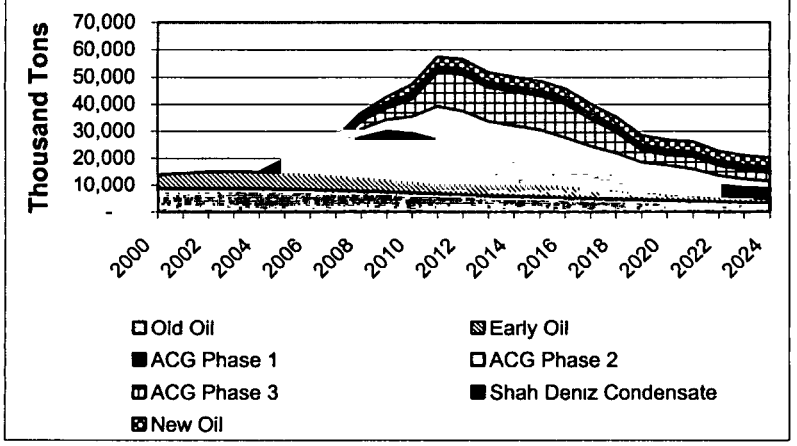
[1] De Broeck and Koen (2000b), p. 23.

4.3 **Gains in total factor productivity are the key to sustainable growth in the non-oil sectors and economic development.**[48] Annex 3 presents an illustrative growth accounting framework, which links the sustainable non-oil GDP growth to optimistic but plausible assumptions about TFP growth rates before 2010. This framework is based on the aggregated

[47] See Annex 3 for more details and illustrative calculations about the required capital accumulation and TFP growth.
[48] See Measuring Growth in Total Factor Productivity, PREM Notes, No. 42, and Easterly, William and Ross Levine (2001).

production function with assumptions about the share of capital and labor, the initial stock of capital, and the projected path of investments. Box 4.1 presents the experience of other more advanced transition economies. In these countries TFP growth rate was quite substantial at the beginning of transition process and moderated later on; accordingly we predict a similar pattern in Azerbaijan. Accelerated structural reforms, combined with increased levels and efficiency of public expenditure, will underpin gains in TFP during this decade. Despite these substantial productivity gains, the private non-oil investment would increase to 27 percent of non-oil GDP during 2003-05, and would moderate to 23 percent of non-oil GDP on average during 2006-10.

Fig. 4.1 Azerbaijan Oil Production



Source. World Bank

4.4 The outlook over the next decade is affected substantially by the unusual "shape" of the projected oil output (see Figure 4.1 above). Despite the country's rich endowment of oil and gas resources, technical estimates suggest that without a major new oil discovery, and given the current schedule of the four major oil and gas projects, oil production will peak in 2011 at about 65 million tons followed by a relatively short plateau of peak production and thereafter by a decline in 2013.[49] This decline will be quite rapid—with production dropping to less than half its peak level in about six years (2018) and to about a quarter of its peak level in 2024. This obviously has important ramifications for a long-term public expenditure program and conditions a medium-term expenditure framework that needs to be cautious. **In particular, it will be crucial not to develop a public expenditure framework that incorporates a high "fixed cost" element that will be difficult to adjust in later years.**

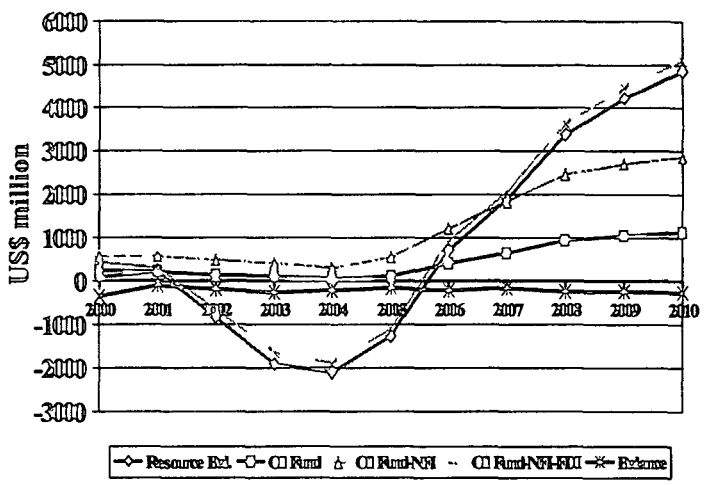
4.5 **Developments in the oil and gas sector will have a substantial impact on the balance of payments and the overall economy.** During this decade and the next, oil sector development will undergo through three main phases: (i) the period of capacity increase, during which a sizable investment is taking place; (ii) the second phase, during which the main investment projects are completed and production volumes increase rapidly; and (iii) the mature phase, during which production volumes will decline rapidly.

[49] These technical assessments are drawn from the participating oil companies' own estimates.

4.6 During the initial phase of capacity increase (2002-05) it is anticipated that approximately US$13 billion (or twice current GDP) will be invested in the Azerbaijan oil and gas sectors. This includes the Baku-Tbilisi-Ceyhan (BTC) oil pipeline and upstream oil extraction structures, and development of the huge Shah-Deniz gas field with a possible gas pipeline to Turkey. The planned investments in the oil and gas sector will push the private investment to GDP ratio to about 68 percent of non-oil GDP on average during 2003-05. These projections suggest that during the same period the current account deficit will increase to about 38 percent of non-oil GDP on average, as a result of the high import content of the oil and gas related investments. By 2005 oil and gas exports starts picking up seriously, while oil related imports will decline rapidly, resulting in massive current account surpluses. The enormous swings in the external resource balance of Azerbaijan are due to these prospects.

4.7 What are the sources and uses of these resources during the rest of the decade? Most of the oil and gas investments during 2002-2005 will be financed by foreign direct investment (FDI) of the oil companies and partners. Net factor income (NFI), which is primarily outflows in terms of profit repatriation, as well as the accumulation of oil profits in the State Oil Fund are expected to be relatively modest during the investment period. Once the oil and gas from the new investments start to flow, the resource balance turns sharply positive (Fig 4.2). However, even by 2010 only about one fifth of the profits will go to the Oil Fund. The lion's share of the revenues will leave Azerbaijan in the form of oil companies' profit repatriation and capital repatriation of the investments, i.e., negative FDI. Resources left for other uses of the economy are little affected by the oil and gas sector developments.

Fig. 4.2 External Resource Balance: Sources and Uses



Source. World Bank projections

4.8 All the outflows related to the oil and gas sector activities are self-financing, so while there may be substantial current account deficits during the first stage, they will be financed by the oil sector FDI, whereas substantial capital and profit repatriation outflows will be financed out of the oil export earnings. Table 4.2 presents the contribution of the oil and gas private sector to the balance of payments. According to World Bank estimates, oil and gas exports are expected to decrease from US$1.61 billion (equivalent to 31 percent of GDP) in 2000 to US$1.5 billion in 2004 due to the expected decline in world oil prices and capacity constraints on exports.[50] In 2005 exports are projected to reach US$2.2 billion thanks to larger production volumes offsetting the effect of lower projected oil prices. As the Baku-Tbilisi-

[50] These projections are based on the assumption that the oil price will decline from US$28.3 per bbl in 2000 to US$22 per bbl in 2003, and to US$21 per bbl in 2004.

Cheyhan (BTC) pipeline is completed, oil-related exports are estimated to increase between US$4.7 and US$6.8 billion in 2007 and 2010, respectively. Growing exports, however, will be associated with growing capital and profit repatriation. Furthermore, the Oil Fund's assets will be invested abroad to avoid the negative consequences of a large and volatile oil windfall on the domestic economy; this will further lower the oil and gas contribution to the overall balance of payments.

Table 4.2 Oil and Gas Sector Impact on the Balance of Payments, 2003–2010
(US$ million)

Oil and Gas BOP	2003	2004	2005	2006	2007	2008	2009	2010
I. Current account	-716	-793	-47	1381	2167	3323	4064	4618
Exports	1667	1551	2209	3375	4770	5843	6458	6812
Imports GNFS	-2102	-2096	-1833	-1183	-1391	-993	-742	-473
Interest earnings on SOF	33	45	49	36	53	78	116	159
Profit repatriation	-314	-293	-472	-848	-1265	-1607	-1768	-1879
II. Capital account	1815	1992	1380	-266	-1028	-2314	-3059	-3689
FDI	2474	2532	2312	1527	1682	1242	868	474
Capital repatriation	-538	-497	-816	-1387	-2069	-2616	-2861	-3017
SOF assets invested abroad	-121	-44	-116	-406	-641	-941	-1066	-1147
III. Overall balance	1098	1199	1332	1115	1139	1008	1005	929
Memorandum Items	**Percentage**							
Oil CAB to non-oil GDP	-15.0	-15.0	-0.8	22.5	33.2	47.5	54 1	57.3
Oil BOP contribution to non-oil GDP	22.9	22.7	23.0	18.2	17.4	14.4	13.4	11.5
Total CAB to non-oil GDP	-44.4	-43.1	-27.7	-0.6	11.8	27.6	35.4	40.0

BOP – Balance of Payments; CAB – Current Account Balance; FDI – Foreign Direct Investment
Imports GNFS – Imports of goods and non-factor services; SOF – State Oil Fund
Source. Authors' calculations.

4.9 **Given this path of the oil sector balance of payments, what are the trends in the non-oil saving-investment balance?** Because oil rents are to a large extent concentrated in the public sector, there is a paramount role for the government in the redistribution of oil resources to the non-oil sector.[51] The external support by the oil sector, therefore, will mostly materialize through increasing the government's saving-investment deficit (or the non-oil fiscal deficit), which is a key variable in determining the non-oil current account deficit.[52] It is furthermore assumed that any oil revenue in excess of the revenues spent domestically through the budget will be deposited abroad, thus avoiding the negative impact of rapid domestic absorption of the oil revenues. Table 4.3 shows a breakdown of the non-oil current account balance by non-oil private and public saving-investment balances. The Government non-oil deficit is projected to increase from 8 to 12.6 percent of the non-oil GDP during the projection period and will stabilize at this amount thereafter. The non-oil private sector saving-investment deficit, however, would have to improve from 21.5 percent of the non-oil GDP in 2003 to about 5 percent of the non-oil GDP by the end of the decade. This improvement is required because: (i) the oil-related FDI will decline

[51] According to production sharing agreements, profits from oil and sales are divided among the Government (the Oil Fund), the foreign oil companies (for profit and capital repatriation), and SOCAR (the state-owned oil company) Thus, the only significant share of oil revenues accrues to the Government as fiscal revenues (Oil Fund inflows, and oil-related state budget revenues).

[52] See Annex 4 on the theoretical underpinnings of the optimal fiscal strategy for oil exporting countries and Section B of this chapter for the empirical application for Azerbaijan.

substantially after 2006;[53] and (ii) the flows of non-oil FDI are not projected to increase substantially.

Table 4.3 Projected Trends in Non-Oil Current Account Balance, 2003–2010
(in percent)

Current Account Balance to Non-Oil GDP Ratio	2003	2004	2005	2006	2007	2008	2009	2010
Overall	-44.4	-43.1	-27.7	-0.6	11.8	27.6	35.4	40.0
Oil sector	-15.0	-15.0	-0.8	22.5	33.2	47.5	54.1	57.3
Non-oil sector	-29.4	-28.0	-26.9	-23.1	-21.4	-19.9	-18.7	-17.3
Non-oil deficit	-7.9	-9.2	-9.8	-11.7	-12.2	-12.4	-12.6	-12.6
Non-oil private sector	-21.5	-18.8	-17.2	-11.4	-9.2	-7.5	-6.1	-4.7

Source: Authors' calculations.

Table 4.4 Projected Balance of Payments, 2003–2010
(US$ million)

Balance of Payments	2003	2004	2005	2006	2007	2008	2009	2010
I. Current Account	-2119	-2275	-1603	-37	768	1930	2662	3227
Trade Balance	-829	-1042	-299	1011	2221	3405	3905	4291
Service Balance	-1077	-1067	-963	-320	-327	-36	319	564
Income (net)	-291	-241	-416	-810	-1210	-1524	-1649	-1717
Current Transfers (net)	78	75	75	83	84	86	87	89
II. Capital Account	2169	2325	1715	101	-640	-1901	-2619	-3203
FDI (net)	2062	2170	1638	307	-193	-1151	-1740	-2256
Public Sector M&LT borrowing	127	129	131	100	95	90	87	100
Other ST Capital	101	70	62	100	100	100	100	100
Oil Fund Outflow	-121	-44	-116	-406	-641	-941	-1066	-1147
III. Overall Balance	49	50	112	64	129	29	43	24
IV. Financing	-50	-111	-133	-64	-129	-29	-43	-24
Change in NFA (increase)	-50	-111	-133	-64	-129	-29	-43	-24
V. Financing Gap	0	60	21	0	0	0	0	0
Memorandum Items								
Gross official res. in months of imports	1.9	2.0	2.3	2.4	2.3	2.3	2.4	2.5
Current account balance to non-oil GDP, (%)	-44.4	-43.1	-27.7	-0.6	11.8	27.6	35.4	40.0

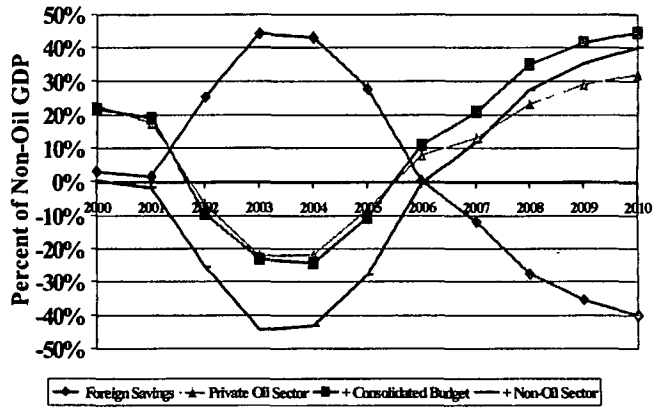
Source: Authors' calculations.

4.10 **During the projected period, the overall current account to non-oil GDP will swing from a deficit of 44 percent of non-oil GDP to a surplus of 40 percent of non-oil GDP.** The "baseline" balance of payments projection scenario is presented in Table 4.4. However, this is combined with growing capital outflows, reaching on average 38 percent of non-oil GDP during 2008-10, compared with 15 percent of non-oil GDP in 2000. In part this reflects the fact that

[53]This means that the domestic component of the oil-related FDI will no longer be available to finance private non-oil saving-investment deficits.

with the growing oil and gas exports there is increasing capital and profit repatriation.[54] But it also reflects certain key assumptions that have been made in creating the baseline projection scenario. Most prominent is the assumption that besides the budgetary spending out of the Oil Fund, excess oil fund revenues will be deposited abroad as financial assets. From the balance of payments perspective, therefore, the net inflow in the Oil Fund is becoming a key variable.

Fig. 4.3 Savings and Investment Balances



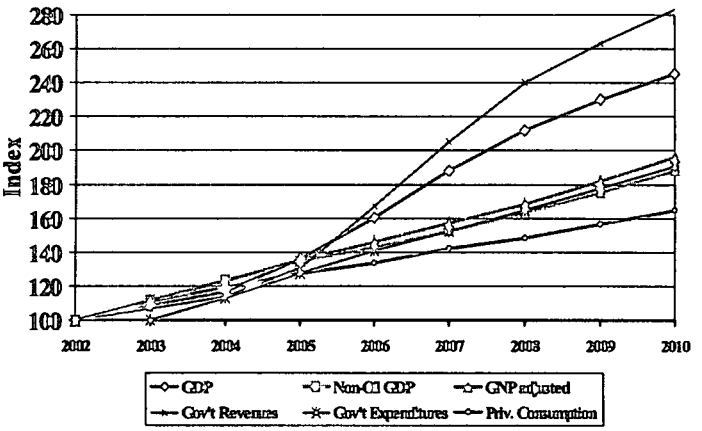
Source: World Bank projections

4.11 Of course the trajectory for net inflows to the Oil Fund depends of the public expenditure strategy for the rest of the decade. **Although there may be ample room for public expenditure increases, capacity and Dutch disease concerns call for an expenditure envelope that is only modestly expansionary.** Foreign net savings inflows to Azerbaijan are, as noted above, expected to swing from massively positive to massively negative during the decade. The foreign savings are by definition mirrored in the net savings of the domestic economy. Private oil and gas sector net savings are negative during 2002-2005, followed by large positive savings. The consolidated government balance (added on top in chart of Fig. 4.3) is expected to be in deficit during the next three years but increasing surpluses are projected thereafter. Given the exhaustible nature of oil-related revenues, the uncertainties surrounding future discoveries, and the volatility of oil prices, it is only appropriate here to assess the fiscal stance by looking at the non-oil deficit. The non-oil sector has, and is expected during the investment boom to continue substantial saving-investment deficits in the order of 20 percent of non-oil GDP. Nevertheless, this situation is not sustainable forever. Despite the coming oil boom, the non-oil sector must bring its resource drain to a five percent range in order for macroeconomic stability to be maintained. Thus, a prudent Government fiscal stance is called for towards the non-oil sector.

[54] The amounts of profit and capital repatriation are determined by the terms and conditions of the Production Sharing Agreements (PSAs). Capital repatriation, as determined by the currently functioning PSAs, is calculated as 50 percent of the profit oil, whereas the rest of the profit oil is divided among the foreign investors, SOCAR (the state oil company), and the Government, as specified in the agreements.

4.12 In this baseline scenario, GDP is projected to increase almost 2½ times between 2002 and 2010 (Fig. 4.4). However, in terms of resources available to the domestic economy, this figure can be misleading. A better indicator is "adjusted GNP" in which profit and capital repatriation is subtracted from GDP. $GNP_{adjusted}$ will grow with only 95 percent during the period, and non-oil GDP about the same or about 6.3 percent average annual growth. What is striking is that private consumption per capita is expected to grow by only three percent per annum on average for the rest of the decade due to the consolidation of the non-oil sector net savings balance.

Fig. 4.4 Accumulated Growth



Source: World Bank projections

Table 4.5 Projected Trends in Consumption, Investment, and Resource Balance, 2003–2010

Real Sector, % of Non-OilGDP	2003	2004	2005	2006	2007	2008	2009	2010
GDP by Final Use	100	100	100	100	100	100	100	100
Consumption	99	96	94	93	92	90	88	87
Private	78	76	74	74	73	72	70	69
Public	15	15	15	14	14	14	13	13
Investment	32	34	34	32	31	31	32	32
Private	27	27	27	24	23	23	23	23
Public	5	6	7	8	8	9	9	9
Non-oil Resource Balance	-31	-30	-28	-24	-23	-21	-20	-18
Non-oil Exports	13	12	12	15	17	18	18	18
Non-oil Imports	44	42	41	40	40	39	38	36
Memorandum Items								
Private consumption growth per capita, (%)	7.3	3.2	2.9	3.3	4.1	1.9	2.4	2.4
Non-oil GDP per capita in US$	577	633	687	722	761	809	861	916
GNP per capita in US$	753	811	919	1038	1177	1296	1390	1480
GNP adjusted pc in US$	688	751	822	875	936	994	1063	1138

Source: Authors' calculations.

4.13 Within the projection framework, a modest growth of non-oil foreign direct investment has been assumed, reflecting in part further structural reforms to improve the overall business climate. It has been further assumed that the official debt to non-oil GDP ratio will decline over time. Azerbaijan's total external debt outstanding and disbursed at the end of 2001 is estimated at

US$1,269 million or about 31 percent of non-oil GDP; whereas the Oil Fund assets for the same year are estimated at US$491 million or 12 percent of non-oil GDP. The net asset position of the Government will continue to improve as the Oil Fund assets to GDP ratio is projected to grow from 16 to 63 percent of non-oil GDP during 2003-10. Debt service payments in 2001 amounted to 4.7 percent of export earnings and are projected to increase to 6 percent in 2004 and to decrease beyond 2005, as exports will be growing more rapidly than debt.

B. THE FISCAL OUTLOOK

4.14 Rapid development of the oil sector in Azerbaijan will result in a massive increase in fiscal resources available to the Government. Furthermore, this will occur within a relatively short time frame. Since the oil rents are to a large extent concentrated in the public sector, the question of how to allocate these oil revenues across generations is of key importance to determining the fiscal outlook and the public expenditure envelope. As discussed in Chapter 1, this poses some complex management issues for the authorities. This section presents two illustrative scenarios for the optimal intertemporal allocation of the oil windfall.

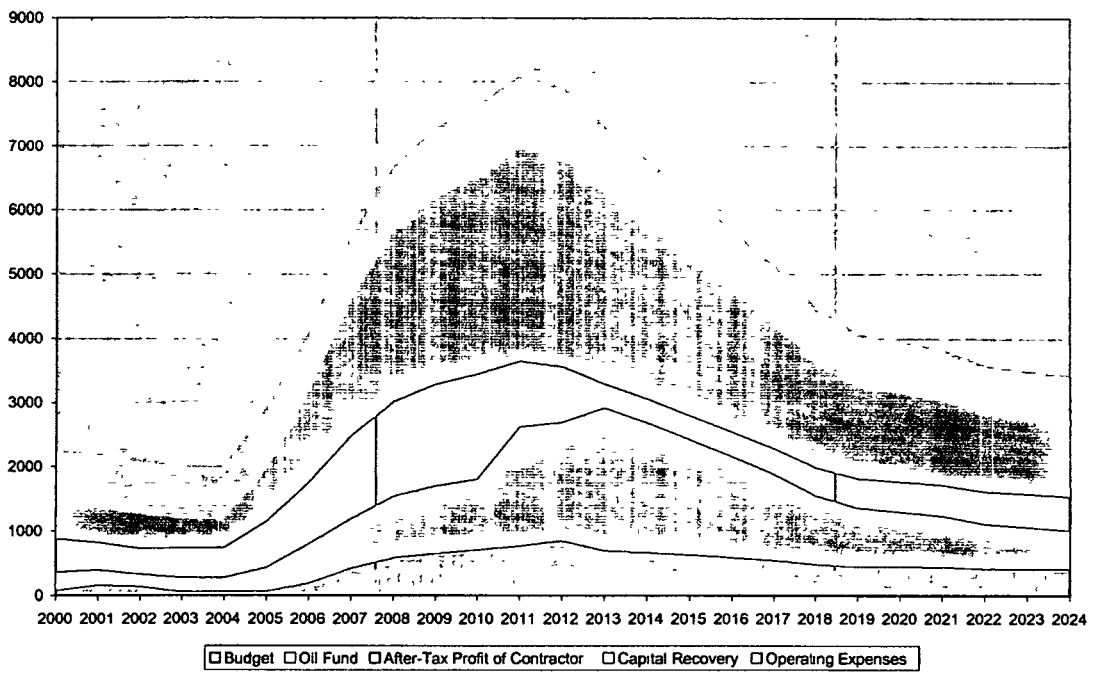
4.15 *First*, the development of these oil and gas reserves by definition represents a depletion of the country's natural resource endowment. Obviously, the country receives something in return. However, from a long-term sustainability perspective this reduction should ideally be compensated by the accumulation of other asset forms such as physical or human capital. The decision on the fraction of oil revenues to be saved as financial assets, therefore, requires the policymakers make explicit decisions about the intergenerational distribution of revenues related to the extraction of exhaustible oil and gas resources. *Second*, the value of these resources is very sensitive to oil price changes. This implies that the fraction of oil revenues to be saved as financial assets will also exhibit substantial sensitivity to oil price changes. A prudent approach to the fiscal framework, therefore, would require very conservative oil price projections. *Third*, when thinking about the fiscal envelope during this decade, it is important to remember the hump-shaped profile of oil-related fiscal revenues and the fact that they will decline rapidly during the next decade (see Figure 4.5). **Herein lies the crux of the projected fiscal envelope presented in this PER—the need to utilize these increasing fiscal resources in a productive and sustainable manner.**

4.16 **The legitimate needs for increased public spending are many; nevertheless this spending must be accomplished in a manner that is consistent with sound macroeconomic management.** In particular, a rapid expansion of public expenditure could result in an excessive real exchange rate appreciation, with all of the highly negative consequences for the rest of the economy. Furthermore, as noted in Chapter 3, while the Government has embarked on an institutional strengthening program to improve the efficiency and effectiveness of the use of public resources, this program is still in its infancy. Public expenditure systems need to become more transparent and systemic reforms are needed in a number of key areas such as health care, education, and social assistance.

4.17 **Based on Word Bank projections of production volumes and prices, and taking into account the profit sharing agreements between the Government and the foreign companies, oil and gas related fiscal revenues are projected to increase nearly sevenfold during the**

period 2000–13. The creation of the Oil Fund and the cautious approach that has been adopted for its use is therefore considered as a positive step. An important advantage of the Oil Fund is that it separates the commercial decisions associated with oil extraction from public spending decisions and provides an effective and convenient way to prevent the adverse effects of excessive raid—volatile transfers of oil revenues to the domestic economy.[55] Figure 4.5 plots the revenues from oil and gas extraction and their distribution among operating costs, profit and capital repatriation by contractors and related fiscal revenues. These last consist of the Oil Fund revenues and state budget oil-related collections, such as oil-related profit taxes. It is noteworthy that while total revenues peak in 2011, fiscal revenues peak in 2013 when profit and capital repatriations are less substantial.

Fig. 4.5 Distribution of Revenues from Oil and Gas Extraction (US$ million)



Note Estimated at international oil price of US$18 per barrel after 2006
Source: World Bank.

4.18 What is apparent is that the economy will experience a massive windfall with a concomitant fiscal gain during the second half of this decade and throughout the next decade. This fiscal gain, however, is a result of the depletion of the country's oil and gas reserves. Long-term sustainability requires that a part (or all) of the resource rents have to be reinvested productively, to compensate for this reduction in natural resource capital by the accumulation of other forms of assets, such as physical capital or human capital. Since oil rents are to a large extent concentrated in the public sector, the question of how the oil and gas

[55] The Oil Fund inflows consist of oil signature bonuses, the Government's share of profit oil, acreage fees, transit fees, rental fees and interest accruing to the Oil Fund's assets.

revenue should be spent and distributed across present and future generations becomes a cornerstone to successful economic development.

4.19 Table 4.6 presents the gross oil and gas fiscal revenues divided into three periods: (i) the initial phase when the oil potential is still to be realized (before 2007); (ii) the accelerated production phase (between 2008 and 2018); and (iii) the phase of declining production (2019 to 2024). This division is arbitrary with oil revenues accounting for more than 25 percent of projected non-oil GDP[56] in the period of accelerated production and below that threshold otherwise. According to World Bank estimates, oil resources will be fully depleted before 2025.

Table 4.6 Projected Revenues from Oil and Gas Extraction, 2002–2025

	Initial	Full Potential	Decline	No Revenues
	2002-2007	2008-2018	2019-2024	after 2025
Average government revenues from oil and gas extraction, US$ mln	**541**	**2176**	**1,176**	**0**
Of which: Oil Fund	384	1529	748	0
Of which: State Budget	157	648	428	0
Average revenues from oil and gas extraction, % of non-oil GDP	**11**	**42**	**21**	**0**
Of which: Oil Fund	8	29	13	0
Of which: State Budget	3	12	8	0
Present value of future oil and gas extraction revenues at beginning of period, % of non-oil GDP	**460**	**452**	**92**	**0**

Note: Non-oil GDP shares of oil revenues are evaluated under the conservative assumption of flat non-oil GDP per capita.

4.20 **Because the oil windfall is projected to last about two decades, defining a public expenditure envelope for the projected period requires making a choice about the inter-temporal allocation of the oil-related fiscal revenues.** The government's objective should be to maximize the welfare of its citizens, both those living today and today and in the future. It is therefore important to ensure that future generations are not negatively affected by excessive current spending. In particular, future generations will be worse off if the oil related revenues are spent too quickly, without leading to improved long term non-oil growth prospects. Thus, if the per capita non-oil GDP will be constant over time, the Government should save most of the oil revenues to offset the depleted natural capital and to keep the wealth constant over time. In this case, if the oil wealth is fully replaced by net financial assets, then future generations will be as well off as the current generation. In this case the additional oil-related spending will be equal to the implicit interest earned on the oil wealth.[57] However, if future productivity gains are to be expected, then the non-oil income per capita will increase over time, making future generations richer. In this case, the best strategy is to allow for a more rapid increase in public spending, which implies that the oil wealth will decrease over time, to compensate the non-oil per capita income of the current (poorest) generation.

4.21 In designing an optimal fiscal strategy for Azerbaijan, we recognize the limited institutional and economic capacity to absorb rapid increases in government expenditures.

[56] Non-oil GDP is assumed to grow at a 1 percent annual rate for purposes of this classification.
[57] This is a solution given by permanent income hypothesis.

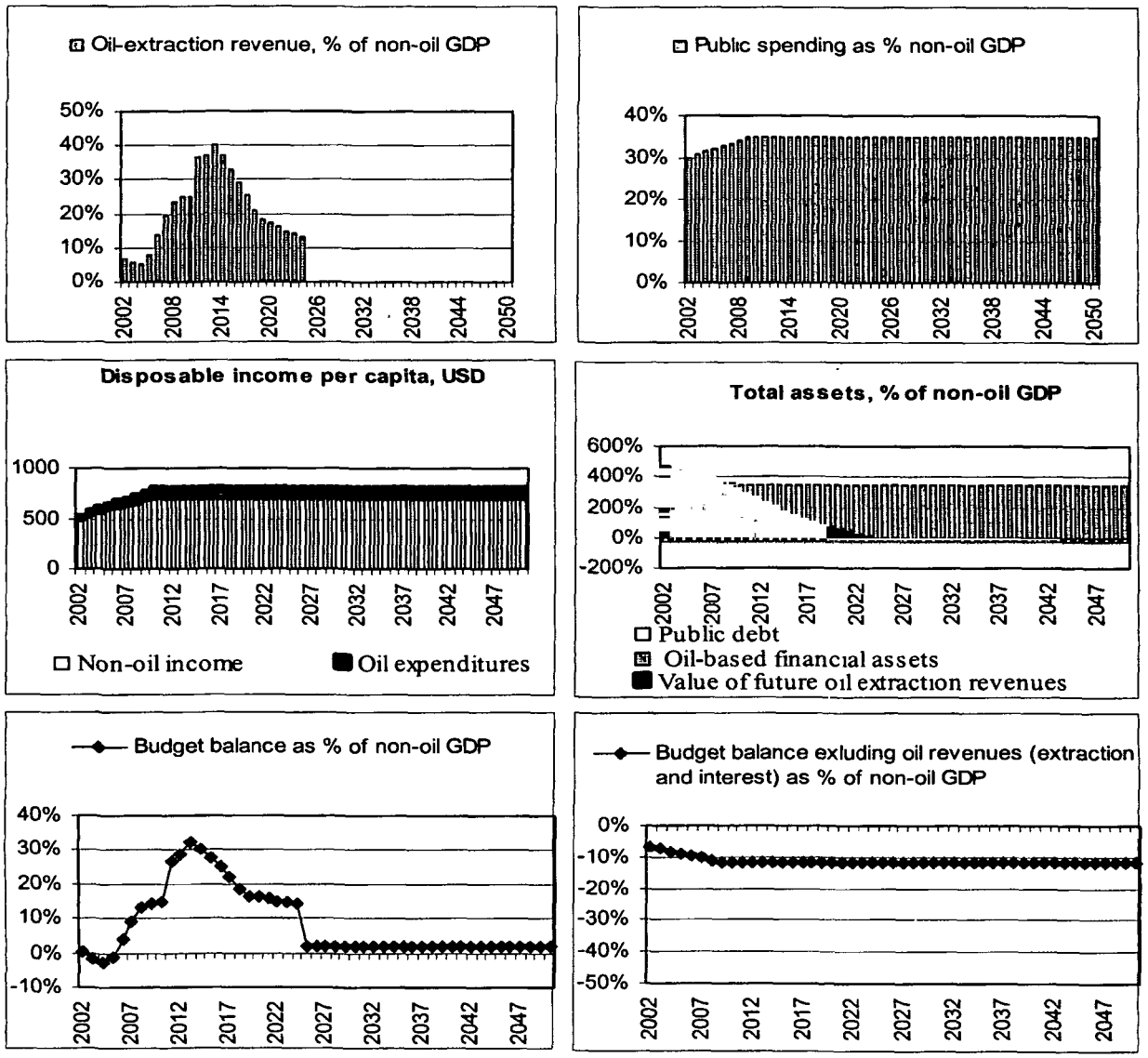
Therefore our methodology combines the above-mentioned optimization principles with constraints to public expenditure increases, to reflect the low implementation and absorptive capacity of the economy. Annex 4 derives the optimal allocation of oil and gas fiscal revenues for various growth and oil price scenarios in the presence of adjustment costs, by building on the work of the optimal fiscal strategy for oil exporters by Engel and Valdes (2000). Below we present major findings from these calculations.

4.22 Our central scenario is based on the average annual non-oil GDP growth rate of 5.9 percent during 2003–10 (in line with Section A). In this scenario, public expenditure will increase gradually to 35.0 percent of non-oil GDP at the end of this decade and stabilize thereafter (see Figure 4.6 and see also Table 7 in Annex 4).[58] This implies that the non-oil budget deficit will increase gradually to 12.0 percent of non-oil GDP in 2010. Such a deficit can be sustained forever, as beyond 2010 this scenario implies that the oil revenues are distributed equally across generations. The oil wealth, therefore, will remain constant forever at 343 percent of non-oil GDP. This scenario offers the prudent approach to the issues of fiscal sustainability for Azerbaijan and minimizes the risks of future policy reversals.

4.23 Our second scenario is built on the assumption that future productivity gains are to be expected, thus leading to increasing non-oil income per capita beyond 2010. In such case public expenditures reach 36 percent of non-oil GDP in 2010, however they will continue to grow. Figure 4 in Annex 4 shows that public expenditures should actually increase to 43 percent of non-oil GDP in 2021 but will be declining gradually afterwards. Oil assets would be depleted and budget will reach balance in 2049. Such a policy would make sure that oil wealth will be distributed to those with biggest need.

[58] A key assumption in the derivation of total public expenditure as a share of non-oil GDP is the share of the non-oil revenues to non-oil GDP. In this scenario, we assume that the non-oil revenues are 23 percent of non-oil GDP over the projection horizon.

Fig. 4.6 Sustainability Scenario:
Growth Rates from the PER until 2010 and Stabilization of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs, 2002-50



Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5 percent afterward, maximum annual increase in government expenditures as a share of non-oil GDP: 0.7 percent. Time preference rate: 4 percent, interest rate: 4 percent, effective tax rate on non-oil GDP: 23 percent. International oil price is US$18 per bbl after 2006.

4.24 **To conclude, the results from our analysis suggest that there is room for a public expenditure increase during this decade.** The precise increase in public expenditure hinges on the long-term productivity gains in the non-oil sector. Based on conservative assumptions about the long term non-oil GDP growth rate, public expenditure can gradually increase to 36 percent of non-oil GDP by the end of this decade.[59] It should be noted, however, that the optimal fiscal strategy is highly sensitive to oil price assumptions, which determine the size of government revenues from oil extraction, and to interest rates that determine the return on accumulated oil assets and the net present value of the oil wealth. This sensitivity is discussed in the next section, while results of the detailed sensitivity analysis are reported in Annex 4.

C. Fiscal Policies and Uncertainty

4.25 **The blessings of rapid development in the oil and gas sector in Azerbaijan do not come without a price**—namely, , the greater dependency and vulnerability of the economy to oil price changes, given the significant part that oil and gas exports play in the balance of payments and the fiscal accounts.[60] Similarly, a sizable accumulation of financial assets implies higher sensitivity to world interest rate movements. To illustrate the sensitivities of optimal fiscal strategies to these external factors, two other oil price projections and two other interest rate projections have been considered within the framework of fiscal sustainability as outlined in Section B.

4.26 **To illustrate sensitivity to oil prices, we reproduce our results from Section B with two alternative assumptions about future oil prices.** We first assume a negative permanent oil price shock of 20 percent, which implies a permanent drop from US$18 per bbl (baseline assumption) to US$14.4 per bbl after 2006. Table 4.7 illustrates the impact of this negative permanent oil price shock on the optimal fiscal policies as outlined in our central scenario, presented in Section B.[61] Lower oil prices implies lower oil wealth by about 115 percent of non-oil GDP and, consequently, a drop in the permanent sustainable non-oil deficit and total allowable expenditure by 3.4 percent of non-oil GDP. Thus, what seemed to be a prudent path of public expenditure under baseline oil price projections now results in excessive deficits. On the other hand, a positive permanent oil price shock of 20 percent (implying an oil price of US$21.6 per bbl after 2006) results in a larger non-oil deficit and higher allowable public expenditure. Oil wealth is increased by around 115 percent, and the permanent sustainable non-oil deficit and expenditures are increased by 3.4 percent of non-oil GDP.

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[59] Higher spending is possible if effective taxation of the non-oil GDP is increased, but we do not see rationalization for such policy.

[60] Owing to the modalities of profit sharing agreements, relationships between oil prices and government revenues are highly non-linear with a number of oil price thresholds triggering sizable changes in fiscal revenues. Consequently, our results about the impact of oil price changes tend to be asymmetrical.

[61] We remind you that this scenario assumes an average annual growth rate of 5.9 percent during 2003-10 and a constant non-oil GDP per capita afterward.

Table 4.7 Oil Price Sensitivity:
Growth Rates from the PER until 2010 and Stabilization of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs, 2002–2025

	2002-2007	2008-2018	2019-2024	after 2025
Government revenues from oil extractions, share of non-oil GDP, %	9.4	28.5	14.1	0.0
Low prices, change	-1.6	-9.1	-4.0	0.0
High prices, change	1.5	9.4	2.9	0.0
Disposable income per capita, US$	634	806	815	815
Low prices, change	0	-24	-28	-28
High prices, change	0	23	29	29
Public spending, share of non-oil GDP, %	30.7	32.6	32.8	32.8
Low prices, change	0.0	-2.7	-3.4	-3.4
High prices, change	0.0	2.7	3.4	3.4
Non-oil budget balance, share of non-oil GDP	-7.7	-9.6	-9.8	-9.8
Low prices, change	0.0	2.7	3.4	3.4
High prices, change	0.0	-2.7	-3.4	-3.4
Overall budget balance, share of non-oil GDP, %	1.6	23.5	15.6	3.3
Low prices, change	-1.6	-8.3	-4.6	-1.2
High prices, change	1.5	8.8	3.7	1.1
Average Oil Fund assets, share of non-oil GDP, %	0	137	300	330
Low prices, change	-2	-54	-107	-115
High prices, change	2	64	108	114

Assumptions: Annual non-oil GDP growth rate: taken from the PER before 2010 and on percent afterward, maximum annual increase in government expenditures as a share of non-oil GDP: one percent, all other assumptions as in the base scenario except for various oil price assumptions. Baseline projections are based on international oil prices at US$18 per bbl after 2006; low price projections assume international oil prices are lower by 20 percent (US$14.4 per barrel) after 2006; and high price projections assume international oil prices are higher by 20 percent (US$21.6 per barrel).

4.27 We also performed an interest rate sensitivity analysis to find the impact on oil wealth and the sustainable non-oil deficit. For this purpose, two additional simulations to the central case presented in Section B have been performed: one assuming a higher interest rate of five percent per annum, and the other assuming a real interest rate of 3 percent per annum, as compared to the baseline assumption of four percent.[62] Unlike changes in oil prices that have

[62] For illustrative purposes we want to maintain an optimum fiscal strategy consistent with the permanent income hypothesis under higher interest rates. Accordingly, time preference is also modified so that the interest rate is again equal to a time preference of 5 percent, as compared to the baseline assumption of 4 percent. Similarly, time preference is reduced to 3 percent in the low interest rate scenario.

obvious effect on public expenditures, changes in interest rates have two contradictory effects, which make analysis more complex. Higher interest rates have a negative effect on expenditures because they reduce the net present value of future oil extraction, but also have a positive effect as they increase return on financial assets. The overall effect of an interest rate increase on expenditures proves to be positive as return on oil-related financial assets is the source of revenue for the Government for much longer period of time than revenues from oil extraction. Table 4.8 shows that for the central scenario, a higher interest rate implies an increase in the permanent sustainable non-oil deficit and allowable total expenditure by 2.6 percent of non-oil GDP. On the other hand, lower interest rates imply more restrictive optimal fiscal policies. Sustainable non-oil deficit and expenditures are reduced by 2.9 percent of non-oil GDP.

Table 4.8 Interest Rate Sensitivity:
Growth Rates from the PER until 2010 and Stabilization of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs, 2002–2025

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, US$	634	806	815	815
Low rates, change	0	-20	-24	-24
High rates, change	0	18	23	23
Public spending, share of non-oil GDP, %	30.7	32.6	32.8	32.8
Low rates, change	0.0	-2.3	-2.9	-2.9
High rates, change	0.0	2.2	2.6	2.6
Non-oil budget balance, share of non-oil GDP, %	-7.7	-9.6	-9.8	-9.8
Low rates, change	0.0	2.3	2.9	2.9
High rates, change	0.0	-2.2	-2.6	-2.6
Overall budget balance, share of non-oil GDP, %	1.6	23.5	15.6	3.3
Low rates, change	0.0	1.4	0.6	0.1
High rates, change	0.0	-1.4	-0.5	-0.2
Average Oil Fund assets, share of non-oil GDP, %	0	137	300	330
Low rates, change	0	8	17	17
High rates, change	0	-7	-16	-16

Assumptions: Annual non-oil GDP growth rate: taken from the PER before 2010 and one percent afterward, maximum annual increase in government expenditures as a share of non-oil GDP: one percent, all other assumptions as in the base scenario except for various oil price assumptions. Baseline projections are based on international interest rate of four percent, alternative projections assume it at three percent and five percent. For illustrative purposes time preference is modified and kept equal to the interest rate in each case in order to maintain the optimum fiscal strategy consistent with permanent income hypothesis.

4.28 **All of the presented scenarios are ex ante sustainable, as they are consistent with the inter-temporal budget constraint.** They point, however, to two important shortcomings of the approach. *First*, too optimistic assumptions would lead to a choice of a path that ultimately could prove unsustainable when less favorable outcomes would undermine the fiscal stance of the Government (for example, if the projected non-oil growth rate did not materialize, or if there were a negative oil price shock or lower interest rates). The optimal fiscal path of the non-oil deficit and, consequently, the path of total fiscal expenditure are subject to significant uncertainty, as oil prices are very volatile. This calls for a fiscal envelope that is based on conservative oil price projections, as well as for the building up of precautionary savings during the years when oil production is still low. *Second*, while large overall deficits during the next few years are consistent with an optimal (and sustainable) fiscal path, such a path requires overall substantial surpluses in the longer-term perspective. As the ability of the current government to commit future government to actually run large surpluses is very low, the political risk arises. This means that the fiscal path that is optimal (and sustainable) ex ante may prove to be unsustainable ex post, when future governments might be systematically avoiding fiscal adjustment.

D. The Overall Fiscal Balance and its Public Expenditure Implications

4.29 **As is shown by the framework in Section B, developing the public expenditure envelope for Azerbaijan requires making a decision about the inter-temporal allocation of the oil windfall, which is expected to be of a temporary nature.**[63] A crucial requirement of this framework is to separate fiscal revenues into oil (windfall nature) and non-oil (permanent nature). Within the "baseline" projection framework, total non-oil fiscal revenues are projected as a roughly constant share (23 percent) of the non-oil GDP during 2003-10. This is a cautious assumption given that improvements in tax administration will occur and, in particular, income based taxes for both households and firms should increase in importance. Oil-related (windfall) revenues are coming directly from the oil model and are related to oil and gas production volumes and prices. Furthermore, assumptions about the non-oil GDP growth rate, the real interest rate, and the path of oil prices are also important for the design of the public expenditure envelope. As shown in Section B, the ratio of total public expenditure to non-oil GDP will depend crucially on the non-oil fiscal deficit (the current income component of the oil windfall), and on the share of the non-oil revenues in the non-oil GDP ratio.[64]

4.30 **This public expenditure envelope also takes into account the adjustment costs associated with rapid expenditure increases.** These adjustment costs are related to the limited institutional and economic capacity to absorb the windfall expenditure.[65] As shown in the previous section, an optimal fiscal policy would be consistent with a fairly rapid transfer of oil-related fiscal revenues in the economy in order to improve the welfare of the worst off generation (that is, the current generation), as future generations will be better off if the non-oil growth materializes. However, such a path would require running substantial surpluses when the rapid

[63] Current estimates suggest that the oil windfall is expected to last about two decades.

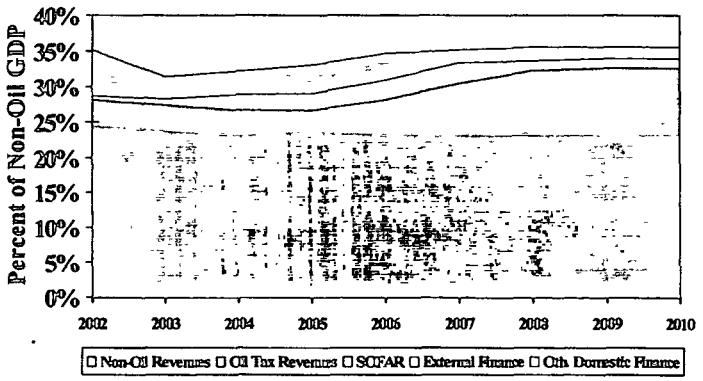
[64] It should be recalled that in Section B we assume that the non-oil revenues are spent entirely in each period, so that only the oil-related (windfall) revenues may be shifted across time.

[65] See footnote 95.

oil extraction takes place, which may not be politically feasible. In addition, expectations about future growth in the non-oil sector may fail to materialize, and the net present value of the future oil wealth is uncertain and subject to oil price volatilities. Therefore, although there may be ample room for public expenditure increases, the above-mentioned concerns call for an envelope that is less expansionary.

4.31 While the Government revenues (including Oil Fund inflows) are projected to increase by 180 percent in 2010 relative to 2002, a pragmatic formulation of the medium-term public expenditure envelope follows the trajectory on non-oil GDP. A constraint on the maximum speed of growth of public expenditures is also imposed by public institutional capacity. This base case scenario envisages a gradual increase in public expenditure to 35.6 percent of non-oil GDP, as compared with 28.4 percent of non-oil GDP, in 2001 (Fig 4.7). Current expenditure is projected to increase to 26.7 percent of non-oil GDP in 2010, as compared with 23.4 percent of non-oil GDP in 2001. Capital expenditure is projected to reach 8.8 percent of non-oil GDP, as compared to 5 percent in 2001. Long-run analysis and simulations indicate that such a fiscal stance would be sustainable for several generations into the future.

Fig. 4.7 Public Expenditures to Non-Oil GDP and its Financing



Source World Bank projections

4.32 The resulting consolidated government balance is expected to be in deficit during 2002-05, but increasing surpluses are projected thereafter. Given the uncertainties surrounding future discoveries and the volatility of oil prices, discussed in Section C of this chapter, it is only appropriate to assess the fiscal stance by looking at the non-oil deficit. The non-oil deficit is increasing moderately, reaching 12.6 percent of non-oil GDP in 2010, which is consistent with the permanent non-oil deficit to non-oil GDP ratio that can be sustained beyond 2010. Furthermore, this public expenditure envelope does not take into account the contribution of public investment to rebuilding the country's physical capital and human capital stock, which is a prudent assumption, validated from the experiences of other resource-rich economies.[66]

4.33 As seen from Table 4.9, the potential public expenditure envelope increases more than twofold in 10 years, from AZM 5,403 billion in 2001 to AZM 14,185 billion in 2010. The non-oil sector would maintain its current tax contribution with no erosion of the taxable base. Until oil-related tax revenues pick up the Oil Fund would play a role of smoothing out the expenditure path. Other sources is derived from identified foreign financing while there would be no borrowing from the domestic market in the medium term. Based on these assumptions, the

[66] See Gelb, et al. (1989).

external debt to non-oil GDP ratio will actually decline to 26 percent of the non-oil GDP (compared with 31 percent in 2001). The gross assets of the Oil Fund are projected to reach US$5.1 billion in 2010, as compared with US$491 million in 2001.

Table 4.9 Projected Public Expenditure Envelope, 2001–2010

Consolidated Budget, AZM billion	2001	2002 [1]	2003	2004	2005	2006	2007	2008	2009	2010
Total Revenues incl. Grants	5713	6748	7249	7727	8865	11349	13905	16296	17856	19229
Oil Fund revenues	1001	850	800	804	1255	2816	4095	5123	5756	6221
Total Expenditure	5403	7398	7431	8403	9471	10515	11351	12266	13209	14185
Current	4460	5581	6133	6708	7481	8170	8719	9317	9966	10662
Capital	943	1817	1298	1695	1990	2345	2632	2949	3243	3523
Consolidated Balance	310	-651	-182	-676	-606	834	2554	4030	4647	5044
Financing	-310	651	182	676	606	-834	-2554	-4030	-4647	-5044
Foreign	675	775	703	558	805	1171	616	619	622	624
Domestic	-984	-124	-521	118	-198	-2006	-3170	-4650	-5269	-5668
Oil Fund	-1107	-705	-599	-215	-573	-2006	-3170	-4650	-5269	-5668
Banking system	74	479	26	26	28	0	0	0	0	0
Non-bank	19	133	150	250	250	0	0	0	0	0
Other	30	-31	-98	57	97	0	0	0	0	0
Memorandum Items										
Consolidated deficit to non-oil GDP (%)	1.6	-3.1	-0.8	-2.6	-2.1	2.8	7.9	11.7	12.5	12.7
Oil Fund revenues to non-oil GDP (%)	5.3	4.0	3.4	3.1	4.4	9.3	12.7	14.8	15.5	15.6
Public expenditure to non-oil GDP (%)	28.4	35.2	31.5	32.2	33.1	34.7	35.2	35.5	35.6	35.6
Non- oil deficit to non-oil GDP (%)	-6.3	-10.7	-7.9	-9.2	-9.8	-11.7	-12.2	-12.4	-12.6	-12.6
GDP, AZM billion	26620	29480	32218	34636	40304	47603	55873	62952	68144	72924
Non-oil GDP, AZM billion	19038	21047	23602	26111	28581	30306	32264	34582	37137	39867

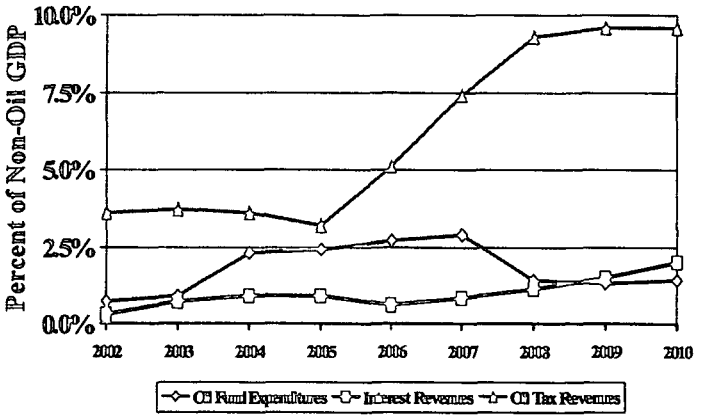
[1] Expenditure on public investment in 2002 includes AZM 576 billion BTC loan.

Assumptions: (i) SOF's revenues are treated as a financing item, but only interest earnings on SOF's assets are available for deficit financing; (ii) no monetary financing; and (iii) external financing is restricted to only identified financing from BOP.

Source: Authors' calculations.

4.34 According to the current Oil Fund regulations, only interest revenues earned on the Oil Fund's investments can be used for public expenditures. This rule may be overly restrictive. During the next five years the non-oil private sector has great opportunities to take advantage of the investment boom in the oil sector. This requires rapid investments in the sector in order to catch up after many years of deterioration in the physical capital base. Given the savings/investment resource constraints, such investments could lead to zero or negative growth in private consumption per capita, a situation difficult to sustain given the promise of the oil riches. Not constraining the accommodating fiscal stance explained above by arbitrary rules on Oil Fund expenditures may be warranted. Consequently it is suggested to relax this rule (Fig. 4.8). Later in the decade, oil and gas related tax revenues are expected to grow substantially. At that point, in this scenario, Oil Fund financing of the deficit would be less than interest revenues.

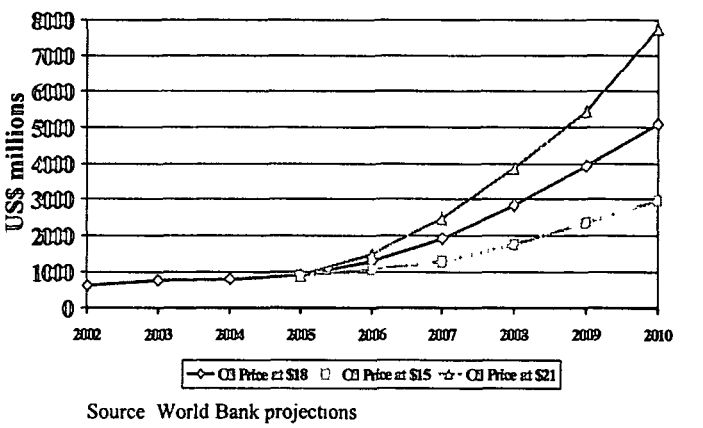
Fig. 4.8 Oil Fund Expenditures Relative to Interest Revenues



Source World Bank projections

4.35 The baseline projections elaborated above, of course, depend crucially on the assumptions made for the developments in oil and gas prices on the world market. What the PER is suggesting is not to deviate from the rule of gearing the fiscal stance to the development of the non-oil sector. Rather, the Oil Fund would act as a buffer to absorb oil price shocks, while short-term corrections in the medium-term PIP and MTEF underpinning poverty reduction and balanced growth of the non-oil sector should be avoided. Again, this would help to mitigate the risk of Dutch disease. According to the scenario (Fig. 4.9), the oil price could drop to $15/barrel without necessitating a major correction in the medium-term fiscal stance. On the other hand, to the extent that a five percent annual growth potential in the

Fig. 4.9 Oil Fund Accumulation with Different Oil Price Assumptions



Source World Bank projections

non-oil sector is about right,[67] incremental revenues from oil prices higher than $18/barrel on average should be saved in the Oil Fund, and the public expenditure path should not be altered in the short run.

4.36 From a **political economy perspective**, the recommendation is to de-link oil revenue flows, dictated by commercial extraction decisions and world oil prices, from the annual budget debates. These are typically short-run exercises, focused on political and economic pressures over the next year (or, the next three years). Planning for sound use of oil and gas revenues to support sustainable development of the non-oil sector requires a longer horizon, one that is well beyond normal political horizons. The Oil Fund provides a long-term political compact on how oil and gas related revenues are to be used not just this year, but for years to come. It can protect some portion of oil revenues for future generations by allowing larger fiscal surpluses in the short run, and a more desirable path of expenditures over the medium to long run than may otherwise be politically feasible.[68] De-linking improves coordination between monetary and fiscal policy, since this fiscal sterilization of oil revenues means that the monetary authority has less of a sterilization task confronting it (and its limited intervention tools).

4.37 A further note of reassurance that this "baseline" public expenditure projection is robust comes from the monetary parts of the projection model. The level of monetization and financial development in Azerbaijan is extremely low by international standards. In our monetary projections, therefore, we assume that provided all structural reforms are on track, velocity will decline by about 33 percent during this decade. This drop in velocity is plausible, given the experience of other transition countries, as well as the very low initial level of monetization (see Table 4.10).

Table 4.10 Money Velocity in Selected CIS Countries

	1995	1996	1997	1998	1999	2000	2001	Cumulative % change 1995-2000
Azerbaijan	9.4	10.8	11.4	11.7	13.2	15.2	13 6*	62
Armenia	15.7	13.8	12.8	10.0	9.1	7.6	7.5	-52
Georgia	48.6	26.2	14.0	14.9	13.7	10.7	10.3**	-78
Moldova	7.9	5.0	4.6	5.2	4.9	4.6	4.0	-42
Kazakhstan	11.3	10.2	9.7	11.5	7.4	6.5		-42
Russia	8.9	8.3	7.4	7.3	8.1	6.8		-24

* September 2001.

** June 2001.

Sources: IMF Red, various issues; De Broeck, M., Krajnyak, K., Lorie, H. (1997), "Explaining and Forecasting Volatility of Money in Transition Economies," with special reference to the Baltics, Russia and other Countries of Former Soviet Union, WP/97/108.

[67] The rationale for a potential growth rate of the non-oil sector averaging 5 percent is elaborated in Chapter IV and Annex 3.

[68] The Norwegian Petroleum Fund, for example, is designed as a "tool for coping with the financial challenges connected to an aging population and the eventual decline in oil revenues, by transferring wealth to future generations," (Norwegian Ministry of Finance).

4.38 The projected monetization ratio, therefore, is assumed to increase gradually, reaching 27 percent by the end of this decade.[69] This assumption will also imply that credit to the economy to non-oil GDP ratio will increase from 10 percent in 2001 to 15 percent by 2010. Note that access to credit is a vital precondition for the non-oil sector growth to materialize, given the prospects of fairly limited FDI inflows in the non-oil sector. Based on these assumptions, inflationary pressures will be minimal, as broad money growth is only slightly higher than GDP growth during 2002-05 (see Table 4.11). Beyond 2005, the double-digit growth rate of broad money is explained by the double-digit growth rate of GDP during the period 2005–08. However, the authorities need to carefully monitor the trends in velocity and money demand and will have to adjust their monetary policy stance accordingly.

Table 4.11 Monetary Trends, 2003–2010
(in percent)

Monetary Summary	2003	2004	2005	2006	2007	2008	2009	2010
Broad money growth	16	14	16	15	18	12	10	10
NFA growth	7	11	12	4	11	2	4	2
NDA growth	13	2	5	18	15	18	12	14
NFA contribution to MS growth	7	13	14	5	10	1	2	1
NDA contribution to MS growth	9	1	3	10	8	11	7	9
M2 to GDP	19	19	20	22	24	26	26	27

Source: Authors' calculations.

4.39 There are many ways in which the public sector can channel the additional resources from oil depletion into the non-oil sector, to reduce poverty and to increase the productivity of the non-oil sector. Transfers to the private sector, if targeted appropriately, will have a direct impact on increasing private consumption and thus alleviating poverty. An increased and efficient level of expenditure on health and education will lead to human capital accumulation, which is crucial to non-oil sector development. Increases in public investment in key areas with a high social rate of return will be required to sustain non-oil sector growth in the long run. (Chapter 5 defines in more detail sectoral public expenditure priorities.) Furthermore, access to credit has been singled out as a structural bottleneck that has a negative impact on non-oil sector development. Because small and medium enterprises (SMEs) are typically credit-constrained, the Government may consider ways to co-finance micro credits to SMEs in agriculture or in labor-intensive light industries. Finally, a tax cut is yet another way to transfer resources to the private sector.

4.40 To illustrate the implications of a tax cut, one additional scenario for the public expenditure envelope is presented below. This scenario assumes that a permanent tax cut takes place in 2006 and that this results in 10 percent lower non-oil tax revenue in nominal terms. Furthermore, we assume that this tax cut is offset by an equal public expenditure cut (in particular, by a public consumption cut), so that the fiscal deficit (consolidated and non-oil) is left unchanged. The tax cut will obviously lead to an increase in private sector disposable income. The public expenditure cut, if it results in cuts in transfers to the private sector, may offset the gain resulting from the tax cut. If, however, public consumption is assumed not to

[69] Note that for the case of Azerbaijan, the monetization ratio is defined as M2 to non-oil GDP. The reason for exclusion of the oil GDP is that a large part of it will not enter the country as it accrues to foreign oil companies as profit and capital repatriation, whereas the Oil fund assets will be also sterilized abroad, to avoid spending pressures.

contribute to disposable income, a cut in public consumption will allow for some increase in private consumption. The net effect of a permanent tax cut that is offset by a public consumption cut will result in a once-off increase in the private per capita consumption growth rate from 3.3 to 5.8 percent, which would fade away by 2010. Table 4.12 provides the public expenditure envelope for this scenario.

Table 4.12 Tax Cut Scenario: Projected Fiscal Revenue, Expenditure, and Financing, 2001–2010

Consolidated Budget, AZM billion	2001	2002 [1]	2003	2004	2005	2006	2007	2008	2009	2010
Total Revenues incl. Grants	5713	6748	7249	7727	8865	10805	13327	15675	17189	18511
Oil Fund revenues	1001	850	800	804	1255	2816	4095	5123	5756	6221
Total Expenditure	5403	7398	7431	8403	9471	9971	10772	11645	12542	13467
Current	4460	5581	6133	6708	7481	7626	8140	8696	9299	9945
Capital	943	1817	1298	1695	1990	2345	2632	2949	3243	3523
Consolidated Balance	310	-651	-182	-676	-606	834	2554	4030	4647	5044
Financing	-310	651	182	676	606	-834	-2554	-4030	-4647	-5044
Foreign	675	775	703	558	805	1171	616	619	622	624
Domestic	-984	-124	-521	118	-198	-2006	-3170	-4650	-5269	-5668
Oil Fund	-1107	-705	-599	-215	-573	-2006	-3170	-4650	-5269	-5668
Banking system	74	479	26	26	28	0	0	0	0	0
Non-bank	19	133	150	250	250	0	0	0	0	0
Other	30	-31	-98	57	97	0	0	0	0	0
Memorandum Items										
Consolidated deficit to non-oil GDP (%)	1.6	-3.1	-0.8	-2.6	-2.1	2.8	7.9	11.7	12.5	12.7
Oil Fund revenues to non-oil GDP (%)	5.3	4.0	3.4	3.1	4.4	9.3	12.7	14.8	15.5	15.6
Public expenditure to non-oil GDP (%)	28.4	35.2	31.5	32.2	33.1	32.9	33.4	33.7	33.8	33.8
Non- oil deficit to non-oil GDP (%)	-6.3	-10.7	-7.9	-9.2	-9.8	-11.7	-12.2	-12.4	-12.6	-12.6
Real growth in Private per capita consumption (%)	2 0	0 1	7.3	3.2	2.9	5 8	4.1	2.0	2 4	2 4

[1] Expenditure on public investment in 2002 includes AZM 576 billion BTC loan.

Assumptions: (i) SOF's revenues are treated as a financing item, but only interest earnings on SOF's assets are available for deficit financing; (ii) no monetary financing; and (iii) external financing is restricted to only identified financing from BOP.

Source Authors' calculations

4.41 **There is always the possibility of a more aggressive increase in public spending over the next decade.** In addition to the obvious macroeconomic dangers of such a fiscal policy stance, one should keep in mind the actual implementation capacity of the Government. Massive institutional and legal reform has already been identified. However, the pace of implementation thus far has been slow (as discussed in Chapter 3). The use of Oil Fund resources earmarked for IDPs identified by Presidential Decrees in mid-2001 and early 2002 have yet to be utilized and key elements of the multi-year budgeting framework for the line ministries have yet to be implemented.

4.42 What is perhaps **the most important conclusion that emerges from this public expenditure framework is the need for the Government to establish effective multi-year**

budgeting and monitoring system. Public sector capital expenditures normally have a multi-year implementation cycle and will have recurrent cost implications. It is therefore important that the public expenditure framework projections presented here are updated annually as a guide to refinements in the multi-year and annual budgeting exercises. This is even more crucial given the inherent volatility oil prices.

Recommendations

The hump-shaped profile of the oil windfall, and uncertainties surrounding this windfall require prudent macroeconomic management summarized by the following:

- A robust macroeconomic framework, which distinguishes between oil and non-oil sectors is essential for designing a sustainable public expenditure envelope. As chapter 4 has shown, growth in total factor productivity in the non-oil sector, and resulting projected increase in the non-oil GDP per capita assumptions are essential in designing the optimal fiscal strategy and public expenditure path.

- This however, needs to be supported institutionally, by holding regular consultations between key ministries, agencies, and academic society. What is also needed, however, is an evaluation and monitoring capacity that will coordinate effectively the various agencies of Government and brings together macroeconomic, sectoral, and budgetary information on a relatively frequent basis and in the context of a flexible macroeconomic projection framework. The key agencies are the Ministry of Finance (MOF), the Ministry of Economic Development (MED), and the Central Bank.

- When evaluating the fiscal stance in the presence of rapidly increasing oil windfall revenues, the non-oil deficit concept should be used as a starting point in the economic analysis. Furthermore, this will also require an emphasis on the preparation of a consolidated budget, consistent with the macroeconomic framework, MTEF and PIP.

- A clear distinction between the oil windfall revenue and the non-oil revenue is needed to design a robust public expenditure envelope that can address the macroeconomic challenges summarized above. The framework presented in chapter 4 shows that there are two main determinants of the overall public expenditure, expressed as a share of the non-oil GDP: (i) the non-oil fiscal revenues to non-oil GDP ratio; and (ii) sustainable non-oil deficit to non-oil GDP ratio, which determines the net asset position of the country.

- In view of the hump-shaped profile of the oil windfall, it is prudent to save a significant share of the oil windfall during the peak years, which will allow future generations to benefit from the oil windfall, and at the same time will insulate the economy from the negative impact of rapid oil windfall absorption; On the contrary, during the initial years, when the oil production volume is still low, there is a case for spending of a somewhat higher fraction of the oil windfall revenues, or alternatively, to borrow, which means that a part of the future oil windfall revenues will be redistributed to the benefit of the current (worst off) generation to implement the

poverty reduction strategy. This therefore calls for revisiting the current constraint on the Oil Fund expenditure and perhaps, replacing it by a constraint on the non-oil deficit.

- To avoid excessive real exchange rate appreciation and waste of oil resources, it is prudent to increase public expenditure only gradually towards their sustainable levels, allowing for somewhat lower redistribution of the future oil windfall revenues, thus taking into account the presence of significant adjustment costs;

- Because a part of the oil windfall accrues to the state budget, it is necessary to change the focus from designing an Oil Fund spending rule, to an oil windfall spending rule, including the windfall state budget revenues. This therefore requires revisiting the current restriction of limiting deficit financing out of the Oil Fund to its investment income. The reason for this is that what matters for a country is its net asset position, therefore, once the sustainable level of the non-oil deficit and public expenditure has been estimated, the Oil Fund spending is just a residual from the required deficit financing and the level of state budget oil revenues.

V. THE SECTORAL AGENDA

A. The Medium-Term Public Expenditure Strategy (MTPES)

5.1 The Government of Azerbaijan issued an MTPES in December 2001 that sets out the policy intent of the Government regarding the use of public resources. It documents the Government's priorities for a more speedy alleviation of poverty in the country and is intended to guide the completion of the PRS and the PIP, and to guide the line ministries as they develop their annual budgets. The Government has clearly stated that the key determining factor for inclusion of a project activity or current allocations in a ministry's budget will be whether these public expenditures meet the Government's poverty reduction objectives as articulated in the PRSP and the MTEF.[70]

5.2 Beyond creating and maintaining an appropriate legal, regulatory, and taxation environment, the Government also recognizes that it has a responsibility to ensure that public expenditure reflects the needs of the very poor in improving the provision of public services and investments that are supportive of private sector growth, job creation, and economic diversification. **In particular, the Government recognizes that the social sectors have experienced significant relative declines in real expenditures.** Within the MTPES, it is the Government's intent to remedy this and, within the context of maintaining the appropriate fiscal prudence, to increase public expenditures on the social needs of the country. The draft MTEF

[70] At the time of the preparation this report, the finalization of the PRSP and the MTEF was scheduled for October 2002.

indicates the Government's intention to increase public expenditures on social needs as a proportion of the consolidated budget from 46 percent in 2002 to about 51 percent by 2005.[71]

5.3 This increase in social sector expenditures will be further reinforced in its impact on poverty and social conditions over the medium term by the planned institutional and budgetary implementations that are under way, which will improve the efficiency of public expenditure and the quality of public service delivery (as discussed in Chapter 3). This part of the report will discuss these sectoral priorities, identifying key reform issues to be addressed in each sector and the role that public expenditure can play in overcoming some of the identified deficiencies.

B. EDUCATION[72]

Overview

5.4 Independent Azerbaijan has inherited a well-developed educational system with relatively high standards of educational outcomes for a country of its income level.[73] As with other FSU countries, Azerbaijan had an extensive network of education institutions at all levels with a large number of well-trained teaching staff across the country (even though the institutions were inefficient and poorly managed). The state financed the provision of free textbooks and teaching materials.[74] Free meals and clothes were provided for orphanages and special boarding schools for children with disabilities. The 1989 census indicated an overall literacy rate of 99.6 percent.

5.5 During the early years of transition, output contraction and the consequent sharp drop in fiscal revenues squeezed public expenditures both as a proportion of GDP and in real terms, to the point where there was a danger of severe erosion in human capital. Between 1992 and 1995, the share of the education budget as a share of GDP fell from approximately seven percent to 3.5 percent (see Figure 5.1). In 1995, in real terms, government spending on education was only 27 percent of its level in 1992.[75]

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[71] Government of Azerbaijan, State Program on Poverty Reduction and Economic Growth (draft), and MTEF, 2002.

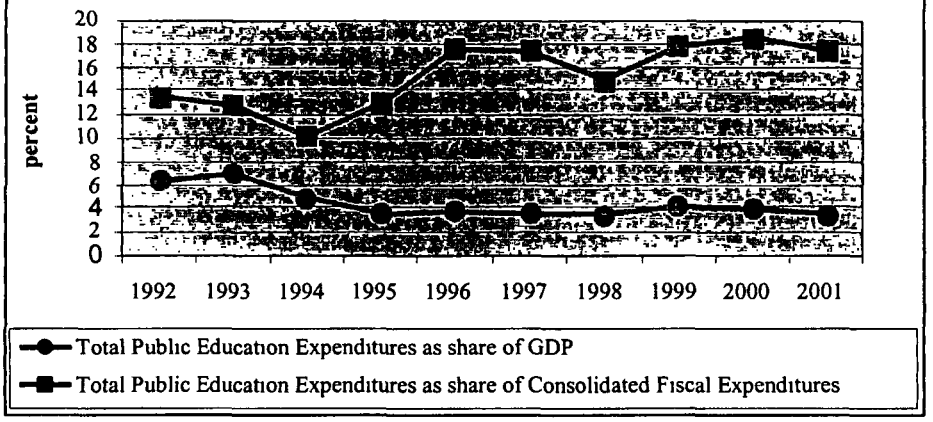
[72] The section is drawn from "Azerbaijan: Continuing Public Expenditure Reform," IMF, June 2000; "Education and Poverty Report of the Azerbaijan Poverty Assessment," World Bank, 2002 (draft); "Report and Recommendation on Azerbaijan Education Cost and Financing Study," World Bank, May 2002 (blueprint).

[73] According to the Education Law of 1992, the education system of Azerbaijan consists of : (i) general education programs; and (ii) vocational and professional programs. General education consists of. (i) preschool education (in kindergartens and other institutions for children 3-6 years of age); and (ii) general education (grades 1-11). General education is compulsory and free of charge in public schools. It consists of primary education (grades 1-4); basic education (5-9); and upper secondary education (grades 10-11) Most general education schools generally contain students from grades 1-11, and children are in the same school building for 11 years. Vocational and professional programs include: (i) vocational programs; (ii) secondary professional education programs (technicums); (iii) higher education programs, and (iv) post-graduate education programs.

[74] Practice of free text books provision was suspended in the first years of independence and resumed again in 1995 in primary schools only.

[75] World Bank, "Azerbaijan Poverty Assessment Report," Vol. I, p. 38.

Fig. 5.1 Dynamics of Education Expenditures, 1992-2001



Source: 1992-1994: Azerbaijan Poverty Assessment Report, v I, p.38 and
1995-2001: Macro-Policy Group.

5.6 After the initial sharp drop in public spending on education, considerable efforts were made to protect education expenditures. **As the prospects for growth improved, educational outlays grew in absolute terms between 1995 and 2001,** but remained relatively stable at about 3.5 percent of GDP. Public expenditure on education is roughly in line with the world average of about 3.8 percent of GDP, but it is much lower than the average for OECD countries (5.9 percent in 1999).[76]

5.7 **However, the real increase in public expenditures during the second half of the last decade did not result in improvements in the quality and efficiency of education services.** This is evident from the increased perception that private tutoring is essential to good education: 67 percent of secondary schools graduates stated the necessity of training with private tutors.[77] Equally important is the unproductive use of resources, notably crowding out essential expenditures for textbooks and other school supplies. In addition, the unit cost in general education has been progressively increasing from US$78 in 1999 to US$139 in 2000 and was planned at US$145 in 2001,[78] which can be a sign of the worsening efficiency of expenditures, since enrollment rates do not show a trend for decline.[79] This, together with the growing direct and indirect costs of education, has hampered access to education for the poor.

[76] OECD countries indicate considerable variations among countries with respect to percentage of GDP spent on education. The range is from 3.8 percent or less in Greece, Turkey, Japan, and Korea to over 6.5 percent in the Nordic countries (OECD, 1998).

[77] State Statistical Committee, *Statistical Yearbook of Azerbaijan 2001*, p. 148. Survey is dated November 2000.

[78] Data relate to general secondary students The source for average expenditures per student is MOF, converted to U.S. dollars as per the IFS exchange rate, and not adjusted for inflation.

[79] *Statistical Yearbook of Azerbaijan 2001*, p. 138.

Main Issues and Challenges

5.8 **Four main reasons can be cited for the overall deterioration of the quality of education:** (i) expenditure allocations are inefficient and lead to an unproductive use of resources; (ii) there is over employment in the sector; (iii) the links between financial considerations and policy formulation are weak; and (iv) management coordination is poor.

5.9 **Expenditure allocations are inefficient and lead to an unproductive use of resources.** The share of expenditure on education in Azerbaijan in 2001 is 17.3 percent of the consolidated budget (see Table 5.1), larger than the average for the OECD countries (13 percent).[80] The bulk of these expenditures, however, consist of teachers' salaries, which have risen steadily, reaching nearly 82.5 percent of total education expenditures in 2001 (see Table 5.2). The relatively high share of wages and social security contributions, foods, and utilities in the education budget has crowded out other essential inputs such as textbooks, teacher training, educational materials, maintenance, and operation of schools.

Table 5.1 Trends in Education Expenditures, 1992–2001

Indicator	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total Public Education Expenditures, AZM bln	1.6	11.9	91.8	376.0	509.0	563.9	581.5	795 1	906.0	928.1
Total Public Education Expenditures as share of GDP	6.4	7.1	4.9	3.5	3.7	3.6	3.4	4.2	3.8	3.5
Total Public Education Expenditures as share of Consolidated Fiscal Expenditures	13.4	12.8	10.2	13.0	17.5	17.3	14.8	17.9	18.5	17 3
Per Capita Education Expenditures, US$	4.1	15.9	7.7	11.1	15.2	18.1	19.0	24.2	25.1	24.5
Memo										
GDP, AZM bln[1]	24 7	157.0	35,44.3	10,669.0	13,662.3	15,791.1	17,202.9	18,875.0	23,566.2	26,619.8
Exchange Rate, period average[2]	54 2	100.0	15,70.2	4,413.5	4,301.3	3,985.4	3,869.0	4,120.2	4,474.2	4,656.6
Population, mln[3]	7 4	7.5	7.6	7.7	7.8	7.8	7.9	8.0	8.1	8.1

[1] Statistical Yearbook for Azerbaijan 2001, p. 272, Azerbaijan in Figures 2002.
[2] IFS.
[3] World Bank.
Source: *1992-1994: Azerbaijan Poverty Assessment Report*, v I, p.38; 1995-2001: Macro-Policy Group.

[80] As expected, countries also differ widely with respect to the relative share of public funds devoted to education. For example, Italy (8.8 percent), Germany and the Netherlands (9.4 percent) had the lowest share of the educational budget in the total government budgets vs Mexico (26 percent), South Korea (17 percent) and Canada (13 9 percent) (OECD, 1998, p.66). Some of the difference in the share of the education budget in total public spending simply reflects differences among countries in the division of responsibility for financing education between the public and private sector. In some countries, such as the United States and Japan, about 20-25 percent of educational funding comes from private sources (NCES, 1996).

Table 5.2 Proportional Allocations in Education Expenditures by Economic Classification, 1997–2002 (in percent)

	1997	1998	1999	2000	2001 Allocation	2002 Allocation
Current Expenditures	92 3	96.6	99 2	99.1	97.8	98.1
Personnel emoluments	66 4	75 0	81.1	83.8	80 7	81 3
Wages and salaries	65.8	75.0	60.6	63.6	62.1	63.0
Employers contributions	0.6	0.0	20.5	20.2	18 6	18 3
Expenditures on other goods and services	25.9	19.2	16.2	13.6	15 6	15 1
Food products	2.5	2.6	4.8	4.4	4.7	4.4
Utilities	5.8	4.0	5.2	3.7	5.4	5.5
Stationary goods, and materials	2.1	1.8	1.5	1.4	1.4	1.3
Linen, bedding, uniforms and clothing	0.3	0.3	0.3	0.4	0.5	0.5
Current repairs of furniture, plant, and equipment	1.7	1.7	0.9	0.8	1.0	1.0
Repairs of buildings	0.4	0.3	0 2	0.2	0 4	0.3
Other current expenditure	11.2	8 5	2.3	2.1	2.2	2 1
Stipends	2 9	2 4	1.9	1.6	1.5	1.7
Capital expenditures	4.8	2.1	0.8	0.9	1.1	1.0
Other		1.3	0.0	0 0	1.1	0.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source. 1997 IMF Staff Country Report No. 00/121, 1998-2002· MOE.

5.10 **As a result, public spending on textbooks is less than one percent of total public spending on education, and most basic education students have limited access to textbooks and learning materials.** Starting 1995, the Government has been providing free textbooks to students in the grades 1-4, initially covering 40-60 percent of students, but gradually extending this policy to all students at this grade levels. However, only about 30 percent at this grade level receive new free textbooks, while the rest received used textbooks. The available textbook supply is not only scarce, but the quality of the textbooks also requires attention. Despite recent measures aimed at revision of curricula for certain subjects, content is often outdated and, especially at the general education level, the number of required textbooks is limited to one per subject.

5.11 **The squeeze of non-wage allocations was accompanied by a dramatic decrease in outlays for capital expenditures.** Capital equipment accounted for only 1.1 percent of total education spending in 2001 compared to 4.8 percent in 1997. Despite the common problems of under-provision of non-wage items, however, the situation is not uniform throughout the country. The problem is more acute in urban areas, especially in the capital city, Baku (where schools operate in up to four shifts) and is further exacerbated by the large inflow of refugees and IDPs. Schools in rural areas experience low levels of both student-teacher ratios and average class sizes, which creates a clear need for rationalization, substantial rehabilitation, and refurbishment.[81]

5.12 **Budget allocations are insufficient to cover utility needs.** Starting 2001, budget allocations for education could adequately meet part of the utility needs, without covering heating expenses. This leads to large and growing arrears to utility companies. Schools have been subjected to frequent power, heating, and water shortages. In rural areas the available data indicate that schools are able to pay for only the most basic needs (e.g., salaries) and receive no

[81] *Statistical Yearbook of Azerbaijan 2001*, p.141.

additional funds for other key educational inputs. Most schools, especially in rural areas, do not have proper heating systems or do not receive any public funding for utilities.

5.13 **The inefficiencies in resource allocation can also be seen in the following areas:** (i) the share of non-teaching staff in the sector is high relative to international standards; (ii) there is no flexibility allowing shift of spending allocations across line items and between budget years without relevant decision of the central government; (iii) the existence of narrowly specialized, small-scale vocational and technical education schools, higher education institutions, and research institutions results in a considerable loss in economies of scale, although certain measures have been implemented recently to consolidate vocational and professional programs through merger or liquidation of some secondary professional education schools; (iv) there is a state monopoly in textbook publication; (v) the output mix in the sector is inappropriate for an emerging market economy; and (vi) the cost recovery in tertiary education remains low.

5.14 **The excess employment in the general education sector leads to a high wage compression and results in low average wages in the sector.** The excess employment is caused by the low teaching load (12 hours per week) and the narrow teacher specialization, especially in the upper grades, where teachers tend to teach only one subject. Another reason for overemployment is the allocation of funds based on notional class sizes rather than on actual number of students, which is a particular problem in rural schools, which do not have a sufficient number of student in upper grades. Existing low wages are often complimented by income from private tutoring, which may affect teachers' incentives to teach to the full capacity in schools, and in some cases may also result in incentives for accepting unofficial payments. The average wage for January-December 2001[82] was AZM 165,600, or 63.7 percent of the average wage in the formal economy, or 54.7 percent of the average wage in manufacturing, and 15.3 percent of the average wage in mining and quarrying (the oil sector). Furthermore, the average wage in the education sector is only 75 percent of the average public sector wage and about 60 percent of its private sector counterpart.[83] In January 2000, a 25 percent wage increase was granted across-the-board for the education sector.

5.15 **The formulation of education policies is detached from financial considerations.** The Ministry of Education (MOE) has direct control over educational policies and management issues. The share of centralized expenditures, i.e., those executed through the MOE, in the total expenditure allocated from the state budget for education is about 11.5 percent, while local expenditures, i.e., those executed through local education departments, account for 88.5 percent of that amount. As such there is little accountability mechanism that can enable the MOE to monitor/evaluate the use of resources at the level of local (rayon) departments of education. Because educational decisions remain detached from financial considerations, there are incentives to maximize "education inputs" based on a set of norms, especially at the local level of rayon departments of education. At the same time, the MOF has no information about the cost of education with which to analyze productivity in the education sector (e.g., unit cost) or the effectiveness of education policies. For example, teachers are hired on the basis of a set of curriculum and classroom size norms, without any consideration of the fiscal impact of an increase in the number of classrooms. The MOE decides on the norms (e.g., curriculum and

[82] These are preliminary data
[83] State Statistics Committee, *Azerbaijan in Figures, 2000* (p. 78).

classroom size, which are also specified in the Law on Education), whereas the local education departments and schools determine the number of classrooms based on these norms. They have incentives to maximize the number of classrooms so that they can hire more teachers, who are paid on the basis of the normative teaching load (12 hours per week). The MOF is responsible for the financing of teacher salaries on the basis of these norms and an estimated budget. The MOE has no information about the cost and finance of education, including the unit cost per student in general education, since it assumes that this is the responsibility of the MOF and local governments.

5.16 **The management of the education system itself continues to be fragmented.** The MOE is responsible for the overall management of preschools, general education schools, higher education institutions, and about half of the vocational and technical schools. There are ministries and state companies that are responsible for the remaining vocational and professional schools, mostly in specialized fields. These bodies include the Ministries of Health, Culture, Youth and Sports, National Security, Caspian Shipping Company and Azerbaijan Airlines Company. Rayon education administrations manage preschools, general education schools, and out-of-school programs. Greater consolidation of the management system in education would help enhance the formulation and implementation of educational policy, preventing duplication of activities, particularly in vocational and higher education.

5.17 **With regard to the equity implications, there is an increasing concern about access to education for the poor.** Although primary and secondary education receive a significant share of the total education budget of about 73 percent (see Table 5.3), there is evidence that enrollment rates are lower among the poor, whose children are more likely to have prolonged absences from school.[84] The data from the HBS show little disparity in enrollment rates in primary and secondary education by household income quintiles, but there are large disparities in enrollment at the higher levels of schooling, especially for specialized secondary and higher education. For example, in higher education about 30 percent of students came from the richest quintile, while only 12 percent came from the poorest quintile. In vocational education, the poorest 20 percent accounted for about 28 percent of total enrollment, while the richest 20 percent accounted for only 12.5 percent.

5.18 To offset the sharp increases in the direct costs of education, student financial support programs could play a critical role in providing incentives for students coming from poor households to continue their education, especially at the upper secondary and higher education levels, since there is a widespread system of informal payments and private tutoring, which puts poor children at a disadvantage. Available financial aid programs are not targeted to the poor, since all students in higher education receive "financial support" from the state. It might be advisable, for example, to allocate more funds per pupil in poor school districts where schools cannot rely on parents' contributions.

[84] Since the budget includes grades 1-11, it is not possible to estimate public spending on primary education. When public spending on other secondary schools (e g , lyceums, vocational schools, and boarding schools) is included, public spending on primary and secondary education accounted for approximately 73 percent of total public spending on education in 2001.

Table 5.3 Actual Education Sector Expenditures by Paragraphs, 1998–2001

Budget Paragraphes (Level and types of education)	Percentage			
	1998	1999	2000	2001
Pre-school educational institutions	9.9	9.1	7.7	8.2
General secondary schools	67.8	69.5	65.8	65.8
Evening and part-time secondary educational institutions	0.6	0.5	0.6	0.6
Boarding schools	3.3	3.1	2.8	2 7
Special regime boarding schools	0.9	1.1	1.1	1.1
Technical schools	0.2	0.3	0.2	0.2
Lyceum and vocational schools	2.8	2.8	2.4	2 2
Special technical and vocational schools and lyceums	0.0	0.0	0.0	0.0
Secondary educational institutions	2.0	1.9	2.2	2.3
Higher educational institutions	5.9	5.3	6.0	6.0
Training and qualification upgrading	0.4	0.5	0.4	0 6
Other educational institutions for training	0.0	0.0	0.2	0.3
Extra curricular measures with children	4.1	3.2	7.7	7.6
Methodical works and other measures	0.9	1.5	1.2	1.2
Orphanages	0.4	0.3	0.2	0.3
Education Trust	0.0	0.1	0.1	0.1
Centralized Accounting Maintenance	0 7	0.8	1.4	0.8
Maintenance of centralized Economic Groups	0.2	0.1	0.1	0.1
Total Education Sector	**100**	**100**	**100**	**100**

Source: Ministry of Finance.

Governmental Agenda

5.19 As in other transition countries, the Government's initial response to the sharp compression of public expenditure was to focus on reducing expenditure needs and diversifying the sources of financing. Education financing was diversified through three actions: (i) decentralizing the responsibility for financing and managing most education programs from central to rayon governments; (ii) requiring parents to purchase textbooks that were formerly provided by the MOE, except for grades 1-4, where they continued to be provided free; and (iii) instituting a cost recovery program for students in specialized secondary education and higher education.

5.20 The Education Reform Program approved by the President in 1999 provides a comprehensive treatment of the education sector, which acts as a strategic document and as an outline for an implementation plan. The Reform Program served as a general guideline for development of the new Draft Law on Education prepared for discussions in the Parliament.

5.21 The main features of the Government's reform plan include: (i) curriculum reform and teacher training; (ii) the provision of educational materials including textbooks; and (iii) educational management and finance. The goal is to maintain high enrollment rates in basic and secondary education, while providing equal education opportunities for the poor at the post-secondary education levels. Particular attention will focus on the quality and relevance of education in matching future demand in the labor market.

5.22 The first stage involving the preparation of a reform plan has already been completed. This is to be followed by a pilot stage to be implemented during 2000-03, under which 20 schools will be entirely repaired and re-equipped, curriculum reforms will be introduced, and teachers will attend special training courses. The third stage involves an evaluation of the pilot stage followed by implementation of the reforms across all levels of the Azerbaijan educational systems. Significant reforms in curriculum hours have already been achieved in Azerbaijan as part of the country's curriculum review. This has included reduction in the number of compulsory subjects, with a resulting saving in textbook requirements.

5.23 In response to the inadequacy of financial resources for education, **the program proposes an increase in budgetary and non-budgetary resources, including a cost recovery policy** to introduce charges for textbooks and private tutoring fees. In addition, the proposal includes tax and customs exemptions on the incomes of education enterprises and education sector suppliers.

5.24 **From a public expenditure perspective, the Government's intent is to give priority to the rehabilitation and refurbishment of schools in rural and impoverished regions.** However, a thorough need-based evaluation is required to confirm the soundness of this priority. Consideration is also being given to the provision of school meals in the poorer regions of the country. More funds per pupil will be allocated in school districts in poor areas.

5.25 **The exact nature of the public expenditure strategy in education is articulated in the context of the ongoing PRS and PIP exercise,** the guiding principle of which is not to require additional funds from the state budget, but to improve the existing network and increase effectiveness as a result of costs saving. Thus, between 2002 and 2005, education expenditure will fall from 17 percent to 16 percent of total expenditure, and from 3.8 to 3.4 percent of GDP. This cut will occur at the expense of the downsizing of teaching staff, allowing for a greater share of non-wage expenditure. As a result, spending on goods and services will increase from 15 to 18 percent of total expenditure on education during the same period. In 2003 the Government will provide free textbooks for grades 1-5 for all students, and for all years for IDPs. In 2004 the program will be expanded to include years 6 and 7, and in 2005 all students will receive free textbooks. The developed expenditure strategy envisages a constant share of 1 percent of capital expenses in total educational expenditure throughout 2002-05. As indicated in the PRSP, this will still allow for sufficient funds to be allocated for the repair of 200 existing schools and the construction of 28 new schools.

Recommendations

5.26 The focus should be on improving the quality of education in public institutions, particularly at the primary level, as this will have the greatest impact on the poor, since they have less access to instructional materials, qualified teachers, private tutoring, and private secondary and higher education. As follows from the analysis above, **there is no solid basis for increasing education expenditures; therefore, the main recommendation is to use the existing funding base more productively to achieve an overall improvement in the quality of education services.** The main strategies involved would include the following.

◇ **Reallocating of funds across expenditure lines and cost-savings**

5.27 **Resources for non-wage allocations should be increased in general, with the focus on providing basic education materials and supplies to primary school students in particular.** School rehabilitation and minor repairs should become a priority, because of the considerable future cost of deferred maintenance and the danger of unsafe buildings. To better address the priorities, a nationwide school rationalization plan should be prepared at all levels prior to any physical improvement work.

5.28 **The quality of textbooks can be improved** through demonopolization and the promotion of competition in textbook development and publishing, which are now monopolized. Monitoring of the academic and material quality of new books should be in place. New strategies should be adopted for school libraries/learning resources, and cost-effective options should be available for the provision of learning materials (e.g., mobile school libraries, book rental programs, IT approaches to accessing information).

5.29 **Reducing excess staff should be a major priority.** Hiring policies could be differentiated across regions and school types. There is a need to gradually raise the student/teacher ratio and average class sizes by reducing the number of teachers (the current normative load of 12 hours per week per teacher is too low), increasing the teaching load, and introducing targeted reductions in admission to teaching schools. The teacher re-training program should prepare teachers to handle several subjects. The most substantial improvements can be achieved by reducing the number of support staff. All together it would allow for an increase in compensation levels for the educational staff based on a merit assessment. **The estimated effects on teacher staffing (and non-teaching staff) if the student per teacher ratio increases from 1:10 to 1:15 are summarized in Table 5.4.** Thus, increasing the number of students per teacher will permit reducing the cost per student, even if teachers are granted a double salary as a trade-off for the larger class sizes.

Table 5.4 Model Showing Interactions on Staffing and Cost per Student

	Staffing ('000)		Cost per Student ('000 manat)		
Students/Teacher	**Teaching Positions**	**Non-teacher Staff**	**Constant Salary**	**Double Salary**	**Size of Effect**
10	158	95	503	789	+286
11	145	87	468	730	+227
12	133	80	437	677	+174
15	106	64	370	562	+59
Change (%)	**-33**	**-33**	**-26**	**-29**	

Note: The model assumes a constant 1.592 million students, each teacher has 2 teaching loads, there are 0.6 administrative-technical personnel per teacher, only the teacher salary is doubled, and non-salary expenditure is 20 percent of the total local expenditure. The effect is relative to current 503000/student. This table is only an example. It is not a recommendation. The effects will change if teachers average fewer than two loads, and if salaries increase by less than the assumption and depending on AHP staffing and salaries. The model could be further refined to include number of schools, so that non-teaching staffing and expenditure on heating/utilities would show savings where any rationalization of schools occurs.
Source: World Bank, "Report and Recommendation on Azerbaijan Cost and Financing Study," 2002 (blueprint).

5.30 Consideration needs to be given to **merging or eliminating specialized and tertiary educational institutions** that are underutilized or whose responsibilities overlap with other institutions. Owing to the drop in demand for specialized secondary education there is substantial scope for consolidation.

5.31 It is a sound principle to **allocate budgetary funds on the basis of actual student numbers.** Linking budgetary allocations to the number of actual students would promote efficiency by strengthening the relation between the input and the output of the public education system.

5.32 **Proposals to exempt educational institutions and their suppliers from tax and customs payments** would leave room for tax evasion and would counter efforts at simplifying and enforcing tax procedures throughout the economy.

- **Introducing cost-recovery measures**

5.33 **The education sector in higher and upper secondary education should opt for less reliance on the state and should introduce elements of cost recovery via user charges, such as student fees.** Azerbaijan has already shifted the cost of education to parents through tuition fees and other direct expenditures at all levels. Public institutions now accept a proportion of their students on a fee-paying basis, while government-assisted places are allocated to those who receive qualifying scores from the university entrance examinations (see Table 5.5). If a well-targeted program is in place to support the poor, who cannot afford the increased costs, there is the potential for expanded cost recovery in higher education and greater reliance on selective user fees, even in secondary education at grades 10-11.

Table 5.5 Post-Compulsory Education Enrollments: Total "Paid" and Proportion "Paid"

	1999/00 Intake	1999/00 "Paid"	"Paid" as %Total	2000/01 Intake	2000/01 "Paid"	"Paid" as %Total
PTU/Lyceums	17,316	4,265	**24.6**	16,750	3,810	**22.7**
Teknikum	14,025	3,059	**21.8**	14,342	4,513	**31.5**
Higher Education	21,973	9,705	**44.2**	22,915	10,839	**47.3**

Source: MOE Statistical Booklets (but PTU – professional-technical school – intake shown as 1998/99 not 1999/2000)

5.34 **Student loans should be available to all qualified students** for use in any accredited public or private institution of higher education. A major advantage of this policy is that it will increase competition and student choice significantly, at little cost to public resources. The **targeting of public assistance to the poor should be improved.** There is a strong need for **well-targeted financial support for poor families.** As part of this effort, universal student stipends should be eliminated for all students with the introduction of targeted scholarships in higher education based on *needs and academic merit.*

- **Enhancing the management process**

5.35 **The MOE should be granted a clear authority over education.** The policies and procedures of the MOE, the MOF, and the Cabinet of Ministers should be reviewed to establish the clear authority of the MOE regarding educational policy. The education system clearly needs improved financial management processes and skills. The Government should consider strengthening the MOE's policy function (through transfers from the Presidential Administration), strengthening the MOE's financial management function (through transfers from the MOF), devolving educational management to regional departments, and providing greater autonomy for directors. Even without such radical reforms, the Ministers of Education

and of Finance should examine the duplication of enrollment and financial data collection in their ministries.

◇ **Promoting private sector participation**

5.36 **There is a need to allow for private sector entry in education.** The Government could promote private sector involvement in the education sector by removing the existing barriers to entry, such as Article 28 of the 1992 Educational Law, which prohibits for-profit private schools. Policy actions should focus on refining and reforming the framework for private sector participation, including setting minimum standards in accreditation, quality assurance, and admission procedures.

C. HEALTH[85]

Overview

5.37 At independence, Azerbaijan inherited the Soviet health care system with centralized state financing and service delivery. The strengths of the Soviet health system were the wide coverage of health services for the population, the availability of health care facilities even in small villages and remote areas, a strong immunization program, emphasis on specialized health services, and free access to health care. Following independence in 1991, the MOH had to build up management capacity, since decision making had previously been largely undertaken in Moscow. Pharmaceutical and other supply routes were also disrupted in the post-independence period, as the country had previously used the Soviet health network system of medical supplies. In particular, the severe lack of funding for the health system and the resultant informal charging of patients have resulted in a lack of access to health care for many of the poorest people in the country. Although a number of reforms have taken place and some innovative primary care strengthening projects have been initiated in recent years, the health system structure remains largely that inherited from the Soviet health system. Therefore, considerable strengthening and restructuring are needed.

5.38 **Health Outcomes.** Some disturbing health problems surfaced during the first half of the 1990s, but the magnitude of these problems as reflected in the MOH statistics differs from that in various surveys that have been carried out. For example, the infant mortality rate was officially reported to be 12.8 in 2000 (see Table 5.6). However, survey estimates[87] suggest that it was four times higher than the official estimate in 1996. According to the survey results, maternal mortality rate was almost nine times higher than the official number in 1990. Since the mid-1990s, the official statistics show an improvement in the main health indicators, but this conclusion should be treated cautiously. The inconsistencies in the data are illustrated by the official figures showing a marked improvement in the infant mortality rate and an improvement in life expectancy, while at the same time showing a marked deterioration in the maternal

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[85] This section draws heavily on "Azerbaijan Health in Transition," European Observatory on Health Care System, 2002 (draft), World Bank, "Azerbaijan Poverty Assessment," August 2002 (draft), and IMF, "Continuing Public Expenditure Reform," June 2000

[86] Azerbaijan Multiple Indicator Cluster Survey (MICS), State Statistical Committee and UNICEF, 2000.

[87] Azerbaijan Multiple Indicator Cluster Survey (MICS), State Statistical Committee and UNICEF, 2000

mortality rate. Most of the official health statistics are based on facility-based information; but the rising cost of health care services, through official fees and under-the-table payments, has reduced the utilization of the health care facilities. This is one of the major reasons for the increasing discrepancies between the survey estimates and administrative statistics. In particular, the major deviation in maternal mortality estimates between official statistics and surveys is probably due to the increasing number of home deliveries.

Table 5.6 Selected Official Statistics on Health Status and Health System Performance 1989–2000

	1989/90	1995	1999/00
Infant mortality rate, per 1,000 live births	26.2	23.3	12.8
Under 5 mortality rate, per 1,000 live births	45.5	43.2	31.7
Maternal mortality rate, per 100,000 births	28.5	37.0	48.2
Total fertility rate	2.8	2.3	2.0
Average life expectancy at birth:	71.0	69.0	71.0
Male	67.0	65.2	68.1
Female	74.8	72.9	75.1
Abortion rate (# per 1,000 women 15-44)	23.4	15.5	10.3
Percent of women who received pregnancy consultations	95.6	97.8	97.5
Percent of births attended by trained personnel	97.3	99.7	99.7
Percent of women at term with anemia	8.3	14.5	15.6

Sources: *State Statistical Committee Yearbook 2001* MOH 2001, World Health Organization (WHO) Regional Office for Europe Health for All Databases.

5.39 The main recorded cause of ill-health in Azerbaijan is respiratory disease. Bronchial problems, including pneumonia, account for about half of all children's respiratory illnesses. This is likely to be related to the relatively high levels of child malnutrition in the country. In the latest UNICEF and State Statistical Committee MICS survey, just over one-fourth of children under five years were found to be underweight or severely underweight. The mortality burden is largely associated with Western type health conditions, but an important share of the burden of disease in the country is also due to conditions more typically associated with a low-income country, such as diarrhoea, malaria, and malnutrition.

Main Issues and Challenges

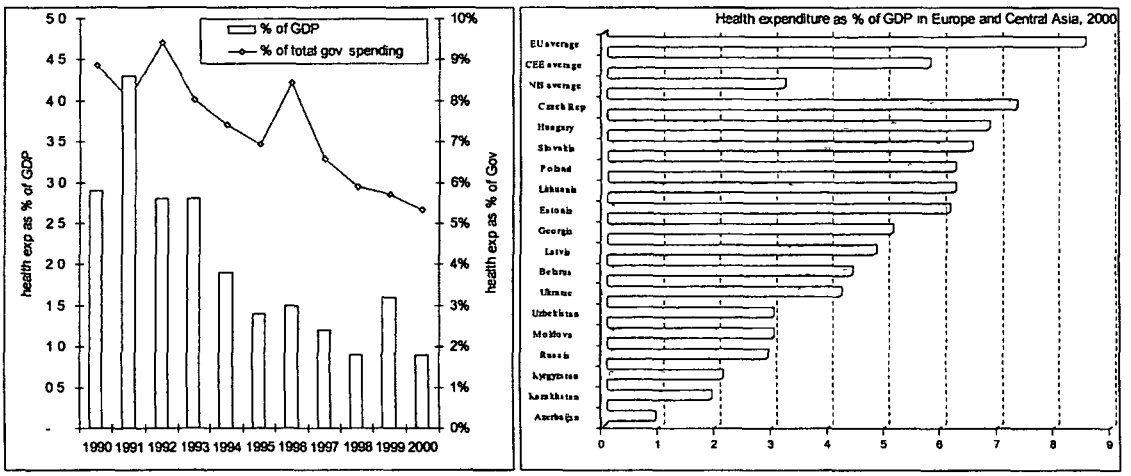
5.40 Four major challenges are confronting the health care sector: (i) the low level of public financing; (ii) the system of informal payments and the resultant reduction in access to health services by the poor; (iii) inefficient expenditure allocations and poor primary health care services; and (iv) excessive hospital facilities and inefficient tertiary level services.

5.41 **The low level of public financing.** Public expenditure on health in Azerbaijan is low and is decreasing. Health care expenditure[88] has dropped as a percentage of GDP and as a share in total government spending since the country's independence in 1991 (Figure 5.2). In 1990 almost three percent of GDP or nine percent of total government spending was allocated to health. By 2000 public spending on health was reduced to less than one percent of GDP and just over five percent of Government spending. The Government's relative efforts toward financing health care are much smaller than the regional average (one percent versus three percent). Even

[88] Included are MOH expenditure (central and locally financed), State Railways, Ministry of Youth and Health Insurance

poorer countries such as the Kyrgyz Republic, Moldova, and Georgia devote more resources (2-5 percent of GDP) for health care financing.

Fig. 5.2 Health Expenditure: Azerbaijan and Selected Countries in Europe and Central Asia



Source: WHO, Regional Office for Europe Health for All Databases, 2002.

5.42 **The low level of public expenditure devoted to health has increased the private costs of these services over time.** This trend has been exacerbated by the regulatory regime, including norms for treatment by specialized doctors, and decrees such as that forbidding access of family members into hospitals.[89] Out-of-pocket payments for health services can become a high burden for Azeri households, including direct fess paid to doctors and medical personnel for services as well as cost of medicines and medical supplies.

5.43 In 1994 the Government also introduced official payments for medical services provided in specialized institutions, with a view to facilitating urgent repairs of medical institutions, purchases of medical equipment, and increases in the wages of certain medical workers. The general thrust of the strategy is on increasing cost recovery for almost all health care services, with exemptions for vulnerable social groups, including invalids, teachers, health workers, and refugees.[90] As about 75 percent of the population is classified as vulnerable and exempt from fees, the MOH has found it impossible to provide the intended services under current budgetary allocations.

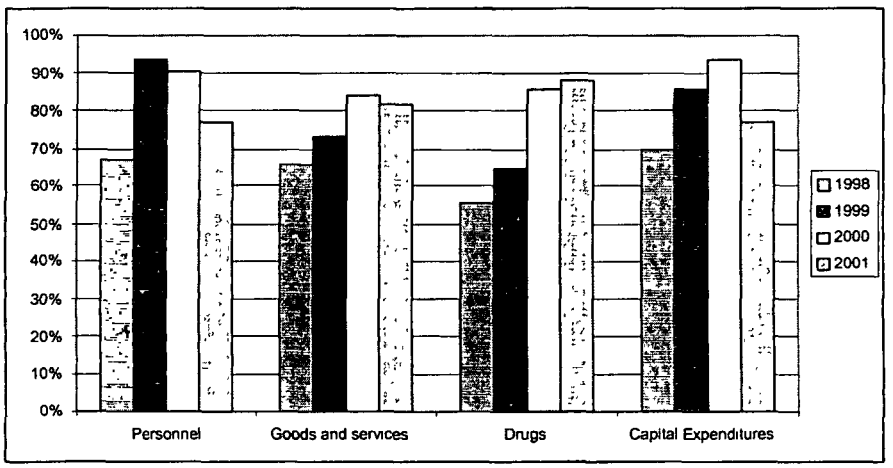
5.44 In practice, therefore, nearly all of the services are paid for by the population, either formally or informally, despite the exemption rules. The share of out-of-pocket expenditures in total health care expenditures is estimated to have risen from about 49 percent in 1999 to about 57 percent in 2001. In relative terms, this burden is higher among the poor, to the point where many poor households are reducing the use of these services—especially of preventive services and are resorting to self-medication or to traditional but less efficient forms of treatment. In 2001 about 28 percent of the population did not seek treatment when ill, mostly because health

[89] For example, Decree No 55 forbids families from visiting their relatives in hospitals. Given the current practice of family members visiting and supplying food and other items on a daily basis, this can easily lead to informal fees for each visit.

[90] Voluntary health insurance is legal in Azerbaijan; but, owing to its expense, it is usually purchased only by expatriates or those in the oil industry (less than 0.1 percent of the total population is covered).

services were too expensive. Among the poorest quintile, the fraction of individuals who did not use health services when they were needed was 39 percent. While this may not show a short-term impact on the current levels of morbidity and mortality, the impact may grow exponentially with time.

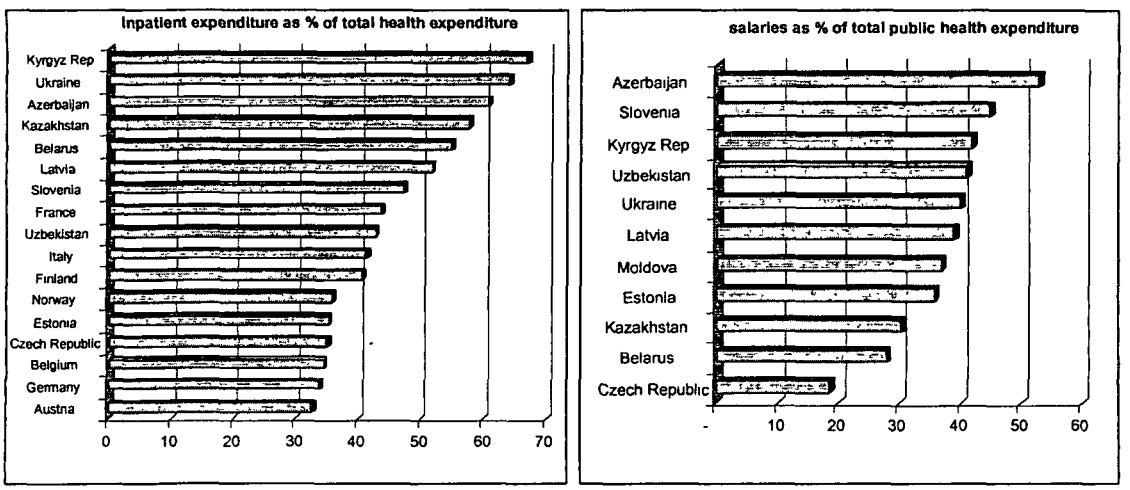
Fig. 5.3 Ratio between Budget Execution and Planned Expenditures (by type)



Source: Azerbaijan, Macro Policy Group.

5.45 **Inefficient expenditure allocations and poor primary health care services.** In addition to the low level of public budgetary resources for the health sector, there has been a major deviation between planned budgets and their execution (see Figure 5.3). During 1998-2001, the ratio of budget execution to planned expenditure was between 69.6 percent (1998) and 94.5 percent (2001). In addition, a disproportionate share of public resources has been devoted to hospital care and wage costs (Figure 5.4), compared with a number of other FSU countries. The high share of hospital spending in total is crowding out other public health interventions with high external benefits (immunization, health promotion, health education, etc.).

Fig. 5.4 Total Inpatient Expenditure as Percent of Total Health Expenditure



Source: WHO, Regional Office for Europe Health for All Databases, 2002.

5.46 Wage expenses increased to over 50 percent of the total health care budget during the period 1997-2000 (see Table 5.7). The high and rising share of spending on wages also has a negative impact on the cost-effectiveness of service delivery. This is because effective health service delivery is determined not only by the overall level of spending but also by the mix of spending (affecting the availability of drugs and medical equipment). The relatively high wage bill in total public spending is due not to high wages but rather to the rigidity of the human resources policy which does not allow for any reduction in the number of personnel in accordance with other available inputs. The wages are essentially a fixed cost which needs to be financed regardless of the amount of medical supplies or other health production factors. The wages of health care personnel are among the lowest in the economy. With an average monthly salary of about US$16 (in 2000) or 35 percent of the national average salary,[91] health care personnel in the MOH network have a very low motivation to increase performance. The large number of staff is due in part to the extensive network of health facilities set up in the Soviet era and to the system of using set "norms" for determining the numbers of health staff that should be provided per number of population. The norms typically call for large numbers of health personnel, with a high number of specialists and little provision of family medicine type primary care services.

Table 5.7 Budgetary Expenditures in the Health Sector, 1997–2000

Share of Total Expenditures in Health , %	1997	1998	1999	2000
Current	93.0	93.0	97.0	100.0
Wages	38.0	45.0	53.0	53.0
Goods and services	55.0	48.0	44.0	47.0
Capital	6.8	6.3	3.1	0.1
Health Expenditures as a share of GDP	1.2	0.9	1.0	0.9
Health Expenditures in US$ per capita	6.2	5.1	5.7	5.7

Sources: 1997: IMF Staff Country Report, September 2000, 1998-2000; Macro Policy Group.

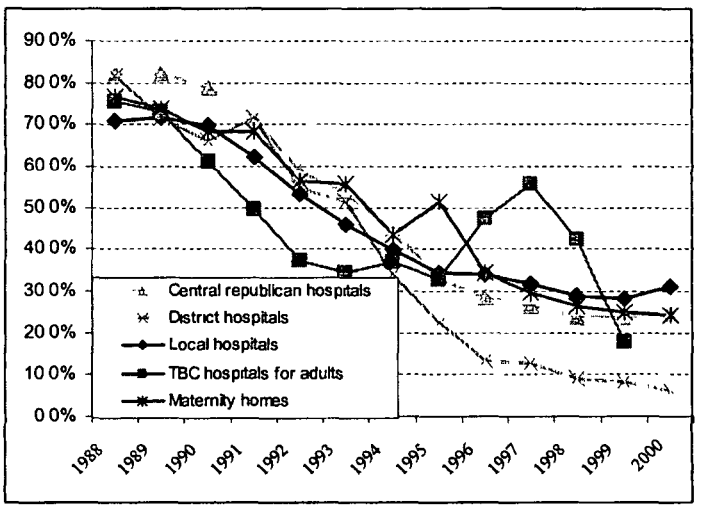
5.47 The result of a relatively high proportion of the budget being allocated to wages is that only about 13 percent of the health budget is spent on medicines and medical supplies. Consequently, most health facilities lack adequate supplies of medicines, are unable to carry out basic maintenance and renovation of buildings, and face serious difficulties in paying for public utilities. Financing for the training of health personnel is similarly inadequate. While it is evident that the declines in public expenditures have been severe, it is also clear that there is much scope for improving the efficiency of the delivery of health care services.

5.48 **Excessive hospital facilities and inefficiemt tertiary level services.** The present health care system focuses on the provision of hospital care and is inappropriate to meeting the primary care health needs of the population, as it is expensive and difficult to sustain. In addition, the services are often fragmented, particularly between inpatient and ambulatory services, and primary care services are provided by multiple physician specialists with low productivity. Today, Azerbaijan has a relatively high number of hospital beds compared with the European average. In 1999 Azerbaijan had 890 hospital beds per 100,000 population, compared with 778 in Europe as a whole and 674 in the EU. At the same time, bed occupancy rates have decreased

[91] In 2000, the average monthly salary for a surgeon was US$17 or 43 percent of the average wage in the economy.

dramatically over the last decade (see Figure 5.5). In the late 1980s, most hospitals had occupancy rates of 70 to 80 percent. Today, with almost exactly the same number of beds and a larger population, the overall occupancy rate for republican hospitals is only 33 percent. Occupancy in adult tuberculosis facilities plummeted to 17 percent in 1999. Occupancy rates in infectious disease hospitals for both adults and children are below 15 percent. This excessive capacity is partly due to the heavy emphasis placed during Soviet times on hospital care. On the demand side, access to hospital care has become beyond the financial reach of much of the population, and the quality of services has deteriorated as non-wage inputs have been under-funded. This is illustrated, in particular, by the low rates of use of maternity services by the poorest population.

Fig. 5.5 Hospital Utilization Rate, 1988-2000



Source: MOH data.

Governmental Agenda

5.49 In response to these concerns, the Government has announced some important initiatives. In particular, the reform strategy set out in the PRSP envisages an increase in expenditure on the health sector, including wage increases. Health expenditures are projected to increase slightly to 1.2 percent of GDP by 2005. From its low base of only 3.8 percent of consolidated expenditure in 2001, expenditure on the health sector is projected to be increased to six percent of total expenditure by 2005. The allocations for personal emoluments will be sharply increased to 64 percent of the very much larger overall allocation by 2005. The budget for salaries and wages will increase by about 32 percent in each of the next three years. The wage increase is justified by a certain amount of downsizing in the number of employees. At the same time, a system of flexible budgeting would be introduced to ensure that the rationalization efforts are not penalized by subsequent reductions in budget allocations. The Government also recognizes that there is a need to refocus health expenditure on providing improved primary health care. The system of targeted exemptions for paid medical services will also be reviewed in order to improve the targeting of the poor. The Government has also committed itself to gradually take over the financing of the expanded program on immunization, and it plans to increase financing for

important programs in malaria and tuberculosis reduction, child and maternal health, and healthy lifestyles.

5.50 The main issue is whether the Government has the capacity and dedication to follow through on these commitments. Some of these programs would depend largely on the availability of additional resources, but others would require difficult policy decisions, especially involving increased efficiency, better utilization of the available resources, and improved governance. It is encouraging that the MOH is already piloting a number of health reform projects that are focused on improving primary care in selected districts, and also that the MOH has formed important partnerships with some of the external donors. However, to be successful the restructuring of the health system and the strengthening of public health will require that these objectives are placed at the center of the Government's development objectives.

Recommendations

5.51 Recommendations for the development of the health sector revolve around several key areas: increasing the budget allocation for health; improving the efficiency of the use of public resources and rationalizing spending; improving the public-private mix of services; ensuring health care access for the poor, especially to primary health care services; and strengthening the governance of the sector. These recommendations are not new: indeed, they have been suggested many times before. While a start has been made in implementing some of these recommendations, the challenge now is to accelerate the pace and deepen the efforts to complete the process.

5.52 The first recommendation is that there is a clear need to increase governmental spending on the health sector. The low level of public resources presently directed toward the health sector had a negative impact negatively on the access to and utilization of services. The collapse of public health spending during the last ten years has also had a negative effect on equity and has reduced the impact of health services. Although the health sector provides only a fraction of the inputs that affect health outcomes, public expenditure in health is potentially an important source of equity-enhancing interventions. Without further Government expenditure on the health sector, health service utilization across income groups will become even more unequal and skewed toward the better off.

5.53 The second set of recommendations relates to the need to rationalize expenditures in the sector and move to a more outpatient-oriented approach, with an emphasis on primary health care. For this purpose, a major reallocation of staff within the health sector is needed, with a substantial retraining program for health staff and a reduction in the number of medical personnel. In addition, there should be a decrease in the number of facilities and hospital beds, and an integration of specialist and general hospitals. To increase progress in this area, clear targets for the number of hospitals and hospital beds should be set, as well as targets for reductions in length of stay. Before decisions are made on downsizing the number of hospital beds, however, the Government should investigate whether there are demand constraints that prevent the population from using the hospital facilities. It would also be necessary to move away from the current allocation of funds based on the number of hospital beds toward output-based allocations, through providing financing based on actual services rendered.

5.54 While there is a strong rationale for some interventions by the Government, as in the case of public sector coverage of the cost of the extended program of immunization and public health campaigns, the development of private sector participation in health care should also be encouraged through the introduction of a carefully designed regulatory framework. Current plans propose privatizing only unprofitable institutions, but consideration could also be given to privatize other institutions in order to improve service delivery and to limit the size of informal payments. As an initial step, the Government should refrain from building new hospitals and should leave developments such as the new specialized hospitals in Baku to the private sector.

5.55 However, along with the proposed efficiency improvements, it is essential to improve the access of the poor to, at very least, primary health care services. One way to accomplish this would be to provide a basic package of medical services free to all citizens and to charge for other services. This program would need to be combined with a more systematic monitoring of user charges and wages in the public health care system. This would involve: (i) a merit-based pay scheme for doctors; (ii) a review of the structure of formal fees to ensure that they do not distort service supply; (iii) a review of the application of fees to ensure that proper controls are in place to limit informal payments; and (iv) a review of the existing regulations to identify and reform those that encourage informal payments.

5.56 Similarly, the accountability of health providers to the Azeri citizens and communities needs to be strengthened considerably. This could be advanced by: (i) enhancing the self-regulation of providers (through the setting up of professional associations and the provision of technical standards, rules of ethics, and systems of accreditation and quality assurance); (ii) strengthening the involvement of clients in monitoring performance (through patients' associations, community-based services, and participatory approaches); and (iii) providing the collective action of monitoring (through public expenditure tracking surveys, and information and media campaigns). Unless such steps are taken, the poor, in particular, will continue to suffer from the lack of essential services of an acceptable standard.

D. SOCIAL PROTECTION

Overview

5.57 The current social safety net system in Azerbaijan faces considerable problems. **The basic structure is still framed within the context of the FSU type of social programs, despite the fact that the nature and structure of the economy has changed.** Many safety net programs are attempting to provide assistance to a large number of people, with the result that benefit levels are very low and those most in need remain highly vulnerable. Program benefits are thinly distributed among a large number of recipients with no real account of family need. Some improvements in the level of public expenditures directed to social protection and social provision could be seen during the second half of the past decade. During the period 1995-2000, expenditures more than doubled in per capita terms, and expanded their share in total public expenditures by nine percent in the same period (see Table 5.8). In 2000, social protection expenditures of the consolidated government amounted to about 5.3 percent of GDP. Of this, 3.6 percent of GDP was allocated to pensions and 1.9 percent to a wide array of family allowances and to other schemes such as disability and unemployment insurance.

Table 5.8 Dynamics of Social Expenditures, 1995–2000

	1995	1996	1997	1998	1999	2000
Social protection and social provision, AZM bln	468	701	917.2	1,049	1,046	1,237
Social protection and social provision as a share of consolidated expenditures, %	16.1	24.1	28.1	26.7	23.5	25.3
Social protection and social provision as a share of GDP, %	4.4	5.1	5.8	6.1	5.5	5.3
Social protection and social provision, US$ per capita	13.8	21.0	29.4	34.3	31.8	34.3

Source: Macro-Policy Group of the Ministry of Finance.

5.58 **The objectives of social insurance and social assistance has become obscured.** Social insurance is responsible for both labor (contributory) and social pensions, while social assistance offers an array of supplements and allowances to both social and labor pensioners (not always based on poverty criteria). As a result, the financing sources for labor and social pensions are co-mingled. Labor pensions are relatively flat and increasingly de-linked from workers' wages, and the difference between the social and labor pension has narrowed over time. Although the flattening of labor pensions was an unavoidable response to the shrinking contribution base, it weakens contribution incentives, thereby aggravating the system's collection problems and creating an unfortunate vicious circle. The social insurance system faces a financial sustainability problem owing to the collapse in the contribution base. The Ministry of Labor and Social Protection of Population (MLSPP) is responsible for the implementation of social policy, the analysis of the current social situation, and the preparation of new concepts. In addition, the MLSPP carries out the administration of state homecare for the elderly, the disabled, and children.

5.59 **The bulk of social assistance in Azerbaijan is delivered through the off-budgetary Social Protection Fund (SPF),** which pays social insurance benefits such as old age pensions as and budget-financed social assistance in the form of allowances for groups of the population considered to be vulnerable (see Table 5.9). The SPF is an independent agency, established under the Cabinet of Ministers, responsible for the collection of mandatory state social security contributions, the payment of pensions and social assistance allowances, and the financing of employment actions and the resolution of social-communal problems of the disabled. It has 82 local offices in the rayons (districts). The local social protection branches are responsible for the administration of social security privileges. In November 2001, the Parliament approved the Law of the Republic of Azerbaijan on the "Amendments and Changes to the Social Insurance Law," intended to unify the collection of social security contributions for the Pension, Employment, and Invalidity Funds. Since January 2002, the Government has brought the execution of SPF funds under the Treasury. Together with the MLSPP, the SPF determines the funds required for financing the pensions and allowances, employment actions, and resolutions of problems related to the rehabilitation of the disabled.

Main Issues and Challenges

5.60 Most of the benefits are poorly targeted and the assistance does not vary according to the needs. Furthermore, there are too many social safety net programs, providing assistance to a

large number of people, which **results in low replacement rates (as a percent of the average wage) and has a limited impact on beneficiaries.** [92]

5.61 The most important family program is the benefit for low-income families, which amounts to AZM 9,000 (3.5 percent of the average wage in 2001) per month per child under 16 (or under 18 if he/she is still in education) in cases where the average per capita household monthly income is less than AZM 16,500 (roughly 6 percent of the average wage). Since roughly 60 percent of all children are under 18, there is the potential for a very high number of beneficiaries. **Despite the attempt to target low-income families, this program does not properly link assistance to specific family needs.** The allowance is financed with transfers from the budget, and is income-tested. If income per family member in the previous quarter falls short of AZM 16,500, the family receives an allowance of AZM 9,000 for each child under the age of 16 (18 for students). The mother's employer performs the income test unless the mother does not work, in which case the father's employer performs the test. Because the SPF only considers officially recorded family income and transfers for the income test, families with unrecorded income may benefit without being poor. Hence, the child allowance, although aimed at poverty alleviation, gives rise to unequal treatment of similar households, and can discourage work efforts.

5.62 **Another major benefit program is the nonworking pensioner's allowance.** The pension system is highly compressed. About 35 percent of pensioners receive the minimum pension and the average pension is close to AZM 80,000 compared with a minimum pension of AZM 70,000. In addition to allowances for nonworking pensioners, the SPF pays the so-called social pensions and guarantees a minimum level of pension income for those who do not have a record of work history. Differentiation between the social pension benefit and the minimum labor pension has been minimal in the past and at times the social pension benefit has been higher than the minimum labor pension. The flat structure prevalent in the current system stems from the dire financial straits experienced throughout the 1990s and from a conscious effort to redistribute resources in order to guarantee a minimum subsistence level to all pensioners.

5.63 **The nonworking pensioner's allowance and the allowance for single elderly persons over 70 are not targeted toward the poorest elderly.** Nonworking pensioners receive an allowance in addition to their pension. Pensioners are presumed to be more vulnerable to poverty, and the benefit is independent of the size of the old age pension and paid without regard to other income by simply adding it to the regular pensions of nonworking pensioners. Similarly, the allowance for the single elderly over 70 is granted indiscriminately.

5.64 **Many other allowances are small and untargeted, and have similar objectives.** These benefits are financed by social insurance contributions. Employed mothers continue to receive their previous wage from the SPF during maternity leave. After giving birth, mothers are entitled to a monthly benefit of AZM 11,000 during the first 18 months and AZM 5,500 for the following 16 months for taking care of their children. Moreover, the SPF pays a one-time birth benefit of

[92] Such low amounts are of limited assistance to a family and might not even justify their administrative costs if they were properly accounted for. Administrative costs, however, are not adequately gauged since enterprise costs for processing and paying these allowances are not considered.

AZM 50,000 to all new mothers independent of employment status. A one-time payment of AZM 100,000 is also granted for funeral expenses. All of these benefits are relatively small and indiscriminately reduce the income losses arising from maternity and death. The goal of the maternity leave allowances and allowances to alleviate the cost of child-rearing seems to be similar to the objectives of the one-time birth allowance. Table 5.9 presents a breakdown of SPF expenditure.

Table 5.9 Social Protection Fund, 1995–2000

	1995	1996	1997	1998	1999	2000
Total SPF Expenditures, AZM bln	533	795	844	947	1139	1330
Pensions	195	366	422	528	695	783
Allowances	325	393	404	400	418	471
child allowances	193	208	184	172	177	191
non-working pensioners	99	131	141	117	136	142
Others	13	36	18	19	26	76
Memo						
As a share of GDP, in percent						
Total SPF expenditures as a share of GDP	5.0	5.8	5.3	5.5	6.0	5.6
Pensions	1.8	2.7	2.7	3.1	3.7	3.3
Allowances	3.0	2.9	2.6	2.3	2.2	1.9
Others	0.1	0.3	0.1	0.1	0.1	0.3
As a share of Total Expenditures of the SPF, in percent						
Pensions	36.6	46.0	50.0	55.7	61.0	58.9
Allowances	61.0	49.4	47.9	42.3	36.7	35.4
child allowances as a share of total allowances	59.4	52.9	45.5	43.0	42.4	40.6
non-working pensioners as a share of total allowances	30.5	33.3	34.9	29.3	32.7	30.1
Others	2.4	4.5	2.1	2.0	2.3	5.7

Sources: 1995-1999: IMF Country Report No. 00/121; 2000: IMF Country Report No. 02/41.

5.65 **The SPF also supports workers during sickness and pays for sanatorium vouchers out of social insurance contributions.** Incentives to keep expenditures for sick leave and sanatorium vouchers in check are small. Sick leave benefits range from 60 to 100 percent of the last wage depending on the length of the employee's tenure. Sanatorium vouchers finance 85 percent of a stay in a sanatorium, whatever the cost. The recipient of the voucher must finance the 15 percent of the cost not covered by the voucher. Sanatorium voucher recipients are generally selected through labor unions and not necessarily according to medical criteria, and therefore the stays are more likely to amount to subsidized vacations.

5.66 Spending on unemployment benefits or on active employment measures is not an important budget item, despite widespread unemployment. In 2001 the expenditures of the Employment Fund equaled AZM 20.7 billion or 0.08 percent of GDP (see Table 5.10). This is one of the lowest ratios for employment programs among FSU states. The bulk of the expenditures are spent on job creation programs, which mostly cover the creation of small agricultural firms under the auspices of local employment offices. Participation in active labor market programs is limited in scope. In 2001, 1,501 unemployed people participated in training and retraining courses, and 2,950 individuals took part in public works programs. In some of the cities, and especially in Baku, the Employment Department offers some other proactive job

search measures, such as vacancy fairs, or labor exchanges in the form of matching short-term job offers by private persons or firms with job applications.

Table 5.10 Budget of the General Employment Department, 2001
(AZM billion)

Unemployment benefits	2.0
Training and retraining	0.2
Public works	0.3
Job creation programs	12.7
Other programs (vacancy fairs, labor exchange, advertisements, etc.)	0.2
Administrative costs	5.3
Total	20.7

Source: General Employment Department.

5.67 The new Law on Employment enacted on August 9, 2001, establishes strict entitlement and eligibility conditions for qualification for the status of an unemployed person, which may partially explain the artificially low official unemployment rates. The requirements allowing eligibility for the benefit are established according to the unemployment definition of the International Labor Organization. At the end of 2001, 48,400 people were officially registered as unemployed (3.7 million people were estimated as employed). In particular, any paid job, including temporary work, is considered as a suitable job for the registered unemployed who are seeking a job for the first time or after a long break (more than three years), or is without a profession, or is long-term unemployed (unemployed over 18 months). According to the new Law on Employment, in order to qualify for the benefit, paid work of 26 weeks in the last 12 months is required. The replacement rate of the benefit equals 70 percent of the amount of the last wages and can be paid for 26 weeks in a 12-month period. In other cases, a minimum benefit determined by local authorities is paid. Benefit sanctions are also rather strict. For example, for the person who has refused two suitable job offers, or who did not register at the office once per month, a temporary benefit stop of three months is implied. Only 6.4 percent of the registered unemployed received unemployment benefits at the end of 2001; for the other registered unemployed, the entitlement had expired or, as for graduates of educational establishments, they were not eligible for the benefit. Nevertheless, the replacement rate of this benefit is high by regional standards (37.1 percent of the average wage at the end of 2000).

Governmental Agenda

5.68 The Government of Azerbaijan fully recognizes the plight of pensioners and members of poorer households and has stated its intent to provide a social safety net program that is fully effective in alleviating poverty and that meets the needs of the most vulnerable. **As reflected in the draft PRSP and MTEF, the consolidated expenditures for social protection and social security will increase over the coming three years, from 25.8 percent of consolidated budget expenditures in 2002 to 26.9 percent in 2005.**

5.69 **In July 2001, the President approved a pension reform agenda** that addresses both the policy and the administrative problems of the current system. The Pension Reform Concept Paper aims at: (i) enhancing the financial sustainability of the current pension system; (ii) improving the contribution incentives by, inter alia, establishing closer links between

contributions and benefits; (iii) enhancing the pension system's transparency by eliminating discretionary rules; and (iv) eliminating the existing inequities within the system by rationalizing early retirement provisions and equalizing the male and female retirement age. The new system will establish a greater distinction between labor and social pensions. As of January 2001, the financing of social pensions had been fully transferred to the State Budget.

5.70 On the administration side of pension reform, the concept paper endorses the introduction of individual records on workers' contributions and the unification under a single institution of all pension administration functions—registration of workers, collection of contributions, maintenance of records, and pension calculation and payment. The MLSPP has prepared and submitted to the Cabinet of Ministers a draft Law on Pension Provision in accordance with the principles of the Pension Concept Paper. The draft law transfers the financing of all social and merit pensions to the state budget and the financing of labor pensions to the SPF, increasing the system's transparency. The draft law also establishes a higher retirement age (65 years) for social pensions relative to labor pensions, unifies the minimum retirement age of men and women at 62; and significantly reduces the number of occupations that benefit from early retirement provisions, raising in parallel the minimum retirement age of these special groups. Pensions will gradually become based on entire length of service rather than only on the last few contribution years.

5.71 As part of its strategy of strengthening the social safety net and simultaneously developing financial discipline in the energy sector, the Government abolished preferential utility tariffs in 2002. In January 2002, numerous social privileges to 25 categories of citizens were abolished and replaced with cash compensation to nine population groups. The privileges had included a range of free or subsidized services and in-kind benefits, such as reduced maintenance fees and tariffs for utilities, and discount fees on public transport; discounts on phone tariffs; subsidized telecommunications services; free or subsidized pharmaceuticals and medical service; and so on. Privileges were granted to both the poor and the rich through the services consumed. Many low-income families were barred from access owing to unavailability of services (e.g., communal services in most rural areas), which increased the regressive impact of the subsidies.

5.72 The abolition of privileges was complemented by the introduction of alternative benefits. The minimum pension was increased by up to AZM 20,000, to AZM 70,000. The highest compensation, AZM 90,000 per month, was allocated to people disabled in the Karabakh conflict and other disabled war veterans, followed by a compensation level of AZM 85,000 to participants in World War II, and AZM 60,000 to the widows of World War II participants. These benefit levels to certain merit groups definitely exceed the actual loss of income due to the abolishment of social privileges, predominantly in housing and public transport. Social privileges can be highly distortionary and can result in wasteful consumption patterns, and this reform was in general an important step forward to improve the reallocation of public resources to make the whole system more transparent. As a result, since 2002 the number of social assistance benefits to different categories of population was cut down to 32, of which only one is pro forma means tested.

5.73 The authorities have acknowledged that there are targeting problems and are committed to revising social assistance benefits and to improving the targeting. They are

committed to preparing a comprehensive social assistance reform strategy that will take into account the complementarities of different social protection programs. Furthermore, they are preparing a study assessing the targeting efficiency of social protection programs using data from the revised household survey system. The next step would be to work out and approve a medium-term strategy for enhancing the targeting of social assistance programs that is consistent with a broader social protection framework. The planned improvements in poverty monitoring and assessment capabilities will be a crucial tool in realizing this strategic intent.

Recommendations

5.74 There is an urgent need for a comprehensive reform of the social safety net system in Azerbaijan. The impressive economic growth that has been recorded in the past few years, and the expected larger growth rates in the future, have not been of benefit to all households and are not likely to be beneficial to all households in the future. Furthermore, given the planned adjustment to utilize tariffs in the energy sector, this will have a significant impact on the poorer households. The creation of new employment opportunities will obviously help, but social assistance will be needed for the most vulnerable, and such resources are scarce. Therefore, the reformed systems must focus on the most vulnerable groups. Hence, **the basic theme guiding social assistance reform must be that eligibility is based on poverty criteria.**

- **Redirecting the social safety net toward well-targeted assistance**

5.75 To better target the benefits to poor families and retirees, the income-tested child allowance, the nonworking pensioner allowance, and the allowance for the single elderly could be **replaced by a unified cash benefit for families with children and pensioners.**[93] This benefit should be based on per capita family income, and it should pay a cash benefit for each family member that is smaller for families with higher per capita incomes.

5.76 No cash benefit should be paid if the per capita family income exceeds a certain limit.[94] The proposed benefit schedule should not have more than three discrete benefit levels designed to preserve the relative income positions of the transfer recipients. This system would redirect resources to the poorest families and pensioners and would mitigate the problem of work disincentives at the income limit.[95] The benefit could be designed to be cost neutral compared with the current budgetary allocations for child and nonworking pensioner allowances. If desired, the unified cash benefit could be expanded beyond families with children and pensioners later, for example, in the context of subsidy reform in the energy sector. Moreover, in the long term, means testing should be improved through accounting for family assets and for informal sources of income through appropriate proxies. The unified cash benefit could eventually become the cornerstone of social assistance.

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[93] Families with children and retirees are considered to be the groups most vulnerable to poverty.

[94] Such a system has been introduced in Ukraine to replace a variety of cash allowances.

[95] The proposed schedule could still reverse the relative income levels of people above and below the cutoff level. However, since people close to the cutoff would not receive the full per capita benefit as under the current rules, this problem would be mitigated.

5.77 **There is a need to replace social pensions with budget-financed social assistance and to review the minimum pension.** Social pensions should not be a separate form of social assistance. Social assistance for the elderly without independent pension rights could be combined with the unified cash benefit proposed above. The current minimum pension aims at protecting those with small pensions from poverty and thus also fulfills a social assistance role. Minimum pension provisions should be reviewed in the context of the proposed redesign of the pension benefit formula.

5.78 **There is a need to restructure sick leave and increase the cost share of employees and employers.** Making at least the first three days of sick leave payments the employer's responsibility would increase the incentive of employers to monitor the validity of sickness claims. The employee's cost share for sanatorium vouchers should be raised to 50 percent. By raising the employee's share from 15 to 50 percent, the incentive to take subsidized vacations at the cost of the SPF would be reduced.

◇ **Off-setting the impact on the poor of the elimination of preferential tariffs**

5.79 Following the experience of the countries in Central and Eastern Europe and in the FSU,[96] **Azerbaijan may introduce several mitigating mechanisms to compensate for the elimination or reduction of utility subsidies, or may introduce more transparent and monitorable forms of utility subsidies. Life-line tariffs** can be one of the policy options for utility services with metered or easily estimated consumption (i.e., for electricity, gas, and district heat, especially as the metering of water supply becomes more widespread). This would mean that the price subsidy would be restricted to the initial block of consumption (called the basic need level). Starting in the early 1990s, most former Soviet states introduced subsidies to limit the burden placed by utility expenditures on household budgets, with reference to either actual utility expenditure or utility expenditure norms. The program compensated low-income households for that portion of rent and public utilities, amounting to between 10 and 30 percent of family income, depending on household size and income. Housing benefits are granted within the social limit of total living space and utilities consumption standards, while any consumption in excess of these standards will be paid according to the effective tariffs. **Covering that part of the utility bill that exceeds a given share of income through earmarked cash transfers** is another form of the utility subsidy mechanisms that provide selected households with cash earmarked to pay part of their utility bills. A number of countries in Central and Eastern Europe and the FSU have introduced **general cash benefits targeting poor households.** These non-earmarked cash transfer mechanisms give complete freedom to households in deciding how to use the money received to compensate for utility tariff increases.

◇ **Designing unemployment programs**

5.80 The cost effectiveness of **active labor market programs** (ALMPs) needs to be re-assessed, and funds redirected from costly job creation programs to other programs. In areas with frictional unemployment, counseling and job search assistance are more promising options. Workers often lack information and confidence about how to look for a job. Also counseling can

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[96] *"Maintaining Utility Services for the Poor. Policies and Practices in Central and Eastern Europe and the Former Soviet Union,"* World Bank, 2000.

be crucial in helping individual job seekers obtain information about education, training, and alternative job opportunities, in making other employment services more demand-oriented, and in better targeting expenditures for other employment services. In areas with structural unemployment, displaced workers need to be re-skilled to compete and re-enter the labor market. Different types of retraining, including on-the-job training and/or institutional training is needed in these circumstances. In areas of high unemployment and in mono-enterprise communities where many workers are laid off, different small business assistance services, as well as public works programs can assist the workers and their families. However, based on an international experience, there is a general consensus is that even under best scenarios, payoffs to ALMPs are modest. It is difficult to address problems of large scale unemployment through these programs. A better approach is to focus on labor market policies that eliminate obstacles to private job creation.

E. MUNICIPAL DEVELOPMENT

5.81 The decentralization process was initiated in July 1999, when the Law on Municipal Elections and the Law on the Status of Municipalities were passed by the Parliament. The first local elections were held at the end of the same year. Municipalities have been created and several key pieces of legislation have been passed, in particular those establishing the foundation of municipal finance, and those on the transfer of assets to municipalities, on municipal finance, and on municipal territory and lands.

5.82 Although this process has been implemented rapidly, major critical issues still need to be addressed as responsibilities are being shifted at the local level. Thus, an incomplete and confusing legal framework, municipal finance issues, economic development issues, questions regarding the public participation issues, a lack of access to reliable basic urban services, accountability and transparency of local governments, and public health concerns are tightly intertwined in urban areas.

5.83 In considering the situation of municipalities, several key problems can be identified:

- **The central government does not have a coordinated and systematic approach to the municipal issues despite its genuine commitment to further decentralization.** This situation is a consequence of the following: (i) a lack of understanding of the concepts of local government on the part of state officials; and (ii) the absence of a central government body in charge of local issues and local governments.
- **The role of the central government (through its local branches) is vaguely defined in the laws, and this prevents municipalities from functioning normally.** In fact, the lack of clarity regarding the separation of the responsibilities of the central government and the municipalities creates confusion in oversight, decisions, and management in key areas such as taxes, municipal assets, local infrastructure, and facilities. Furthermore, the lack of independence of the judicial and the legislative branches in relation to the Government prevents the fair and equal treatment of municipalities in cases of disputes or when decisions at the national or central level are needed. This environment is worsened by the weak technical and managerial capacity of these newly created municipalities. Therefore, the legal framework needs

to be further developed, and an adequate implementation plan should be defined and followed by the Government, as laws would be worthless if they were not implemented after being adopted by the Parliament.

- **The financial situation of the municipalities is not secured.** Although the law provides for identified sources of revenues for municipalities, including land and property taxes, the application of this transfer remains incomplete and limited by the municipalities' authority, ability, and willingness to collect these taxes. In any case, the current revenues from these local taxes appears to be well below the minimum needs of the municipalities to fulfill their increasing responsibilities. Even though the central Government has the obligation to provide fiscal transfer under specific conditions (i.e., when state decisions affect local budgets, or in cases of local budget deficits), the scarcity of government funds and the lack of a transparent mechanism of fiscal transfer would not constitute a reliable and stable source of revenues for municipalities. A second major concern is the status of municipal properties. In this case, also, the transfer of state properties to municipalities tends to be theoretical, given the lack of clear procedures, and divergent or vested interests significantly delay the transfer of highly profitable assets. The dispute resolution system currently in place is not functioning well and does not allow for a foreseeable solution in the near future.

- **The accountability of the municipal elected bodies and executive branches is not properly ensured from a financial standpoint.** Indeed, the law does not provide clear rules and procedures in this regard. Although local budgets should be compliant with the general standards of budget preparation in use, there are no minimum financial safeguards determined transparently at the national level and no standard local budget formats and reporting procedures.

- **In view of the above, there is an urgent need to clarify and implement a coherent inter-governmental framework between the central Government and the municipalities, in order to tackle the key issues identified above.** Such an objective is even more critical considering the fact that both the incidence and severity of poverty are greater in urban areas on average (and are even more severe if Baku is excluded) than in rural areas, as described in the preliminary findings of the draft Poverty Assessment Study and further acknowledged by the Government in its state program on poverty reduction and economic growth.

5.84 **In the rural areas, municipalities have considerable responsibilities in the maintenance of rural infrastructure and the delivery of a range of essential services.** As noted earlier in this report, these municipalities have limited revenue-raising opportunities, with the result that the quality of rural services has suffered. The Government is committed to increase the flow of resources available to these municipalities. The State Budget and the Oil Fund will have a role in this, but the Government is also investigating the possibilities of alternative finance and delivery mechanisms for rural infrastructure. In this regard, the Government is reviewing the necessary regulatory and legislative frameworks governing municipal service partnerships that would include the private sector and community service organizations.

Recommendations

5.85 Municipal development and the issues of fiscal decentralization are important for the successful development and implementation of the PRS and the PIP. Fiscal decentralization has many benefits, especially when it brings beneficiaries much closer to service providers, thereby improving accountability. However, this must occur within a framework in which responsibilities are clearly and unambiguously defined and this is linked to a clear revenue source. **There is an urgent need to clarify and specify more rigorously the public expenditure role of municipalities and districts and to ensure that the objectives and goals set out in the MTEF, the PIP, and the PRS are not undermined by confusion over the responsibilities for the achievement of these objectives.** This would be particularly dangerous with regard to future public investment activities, which might involve capital expenditure from a line ministry but a maintenance and operational expenditure commitment from a different level of public administration. Indeed, the Government should initiate a phased strategy consisting of the following major tasks:

- **Creating or appointing a government body in charge of municipal issues** which would define the governmental policy on decentralization and would coordinate and address local matters.

- **Defining and implementing the government policy and administrative action plan for municipalities that would address:** (i) the issues of clarification of the functions and responsibilities between the local branches of the state administration and the municipalities; (ii) the issues of adequate and homogeneous budgeting systems for municipalities; and (iii) the establishment of transparent safeguards and controls for municipal budgeting systems.

- **Defining and implementing the intergovernmental fiscal framework** between the central Government and the municipalities, including the creation of a transparent fiscal transfer mechanism and the finalization of the transfer of state properties to municipalities.

- **Strengthening the financial, technical, and managerial capacity of the newly created municipalities**, allowing them to: (i) preserve and invest in local infrastructure and facilities, (ii) provide reliable access to basic infrastructure and services, and (iii) foster economic development by removing the barriers to private sector development.

F. AGRICULTURE AND RURAL DEVELOPMENT[97]

Overview

5.86 **Agriculture has traditionally accounted for a sizable portion of GDP and employment in Azerbaijan.** In 1990 agriculture and forestry accounted for 27 percent of GDP and 31 percent of employment.[98] By 2000, employment in agriculture and forestry (including self-employment) had grown to 41 percent of total employment, and agriculture appeared to be the overwhelmingly dominant employer in rural areas. The sector's portion in GDP fell to 18 percent, indicating a substantial income gap for those employed in agriculture. Indeed, despite recent output growth, returns in agriculture are still low and are not able to incite investments in the sector. Less than one percent of capital investments in Azerbaijan are targeted toward the agriculture sector.

5.87 **In the period from 1990 to 1995, agriculture policies aimed at preserving the collective and state farm system.** However, the system broke down under the pressures of war, loss of export demand, inflation, and falling state input supplies, which led to a drastic fall in agricultural production The output decline can be attributed exclusively to state and collective farms, whose output contracted by 70 percent during that period, while private and household farm production fell by only 10 percent.

5.88 **In addition to policy concerns Azerbaijan faced a particularly devastating negative demand shock for food exports** when the intra food trade arrangements of the FSU fell apart. The breakup of the FSU meant that Azerbaijan lost its traditional markets for agricultural products and processed food. In the late 1980s Azerbaijan exported one-third of its vegetable production, about 40 percent of its fruit production, and between 20 and 30 percent of its vegetable oil to other FSU republics, primarily to Russia. By 1995, exports of vegetables, fruits, and vegetable oils accounted for less than 5 percent of production.[99]

5.89 **Agricultural policies changed abruptly in 1995 with the issuing of decrees on farm and land reform, aimed at significant privatization of agricultural land and assets.** The farm and land reform led to three important changes in Azerbaijan agriculture: first, there was significant, though not total, privatization of agricultural land. Thus, the asset base of private households increased, allowing agricultural production to recover to 65 percent of its level of 1990. Second, the privatization of land into small and fragmented land parcels changed the nature of farming in Azerbaijan. Farming is now predominantly on small land holdings, many of which are fragmented into smaller parcels. Land fragmentation has changed the technology of

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[97] The section is drawn from "Azerbaijan Continuing Public Expenditure Reform," IMF, June 2000, and "Azerbaijan Rural Poverty Assessment," World Bank 2002, (draft).

[98] Employment includes agricultural enterprises, private farms, and self-employment in household farms. State Statistical Committee of Azerbaijan, "Agriculture of Azerbaijan 2001," pp. 43-47.

[99] Sources are: 1987-1989: Trade: Economic Research Service, United States Department of Agriculture http://www.ers.usda.gov/data/sdp/view.asp?f=international/97003/, http://www.ers.usda.gov/data/psd; 1987-1989: Production: State Statistical Committee of the Republic of Azerbaijan, "Azerbaijan in XX Xentury," Vol. 1, pp. 261, 270; 1995 data from food balances: Vol. 2, pp. 457-461.

farming in Azerbaijan. Third, partly in response to the change in farm size and ownership, the mix of production has changed.

5.90 Land reform resulted in a substantial growth in agricultural production by rural households and contributed to poverty reduction among the rural population which accounts for 49 percent of the total Azeri population.[100] Nevertheless, 42.5 percent of this rural population are poor, and 13 percent are extremely poor.[101] Rural households depend heavily on agriculture: about 92 percent engage in agriculture production and 53 percent generate their income from agriculture. Hence, **reviving agriculture is an important element of any rural poverty reduction strategy.** This should include not only the quantitative expansion of production, but also a focus on increasing the diversification of production and creating a stronger market orientation.

Main Issues and Challenges

5.91 Although the successful farm and land reform was instrumental in stimulating agricultural growth and although it contributed to poverty reduction among rural households, there is a need to continue reforms in the sector in order to **consolidate the poverty reduction achievements by making growth in rural incomes sustainable.**

5.92 **The primary means of ensuring sustainable growth in agriculture is technological change (i.e., increases in productivity).** Despite a high output growth in agriculture over recent years, in the medium term household farms will find that without an increase in productivity or an expansion to new markets, net revenues from agricultural production will stagnate. Stagnation in agriculture implies stagnation in a substantial portion of the non-oil sector of the Azeri economy, because agriculture is the second largest economic sector by GDP and the largest sector by employment.

5.93 Increasing productivity requires a knowledge of new technologies such as hybrid seeds or cultivation techniques; investment in soil management, machinery, and business accounting techniques; the application of fertilizer, pesticides, and herbicides; a working irrigation system; and perhaps increases in farm size. Investment and working capital often require seasonal or longer-term credit. A second concern for ensuring sustainable growth in agriculture is that the domestic demand for food should grow, despite inelastic demand. This can occur through increasing domestic demand through providing more employment or by developing new markets. **The Azeri Government can play a pivotal role in supporting technological change**

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[100] The approaches used to compare the results of the 1995 and 2001 household surveys take into account changes in the assets (increases in land and livestock herds) of rural households, and estimate changes in poverty from functional relationships between agricultural assets and per capita expenditures in a base year. Using a poverty line of 60 percent of median expenditures, from 1995 to 1998 real rural expenditures per capita increased by nearly 10 percent, lowering the poverty headcount by 3.9 percent; from 1998 to 2001 expenditures per capita increased by 5.7 percent and the poverty headcount decreased by 2.2 percent.

[101] The absolute poverty line of AZM 120,000 is used for poverty classification. Individuals are classified as poor when their monthly per capita consumption expenditure falls below this level. Individuals are denoted as extreme poor, when their monthly per capita total consumption expenditure falls below 60 percent of the median of the entire sample. This relative poverty line is AZM 72,366 per capita and per month.

in agriculture and the expansion of employment opportunities in rural areas. The following paragraphs discuss key policy priorities that the Government needs to consider to maintain positive developments in the sector.

5.94 **Improving public services in rural areas will not only improve rural living conditions but will also create opportunities for investments in the rural economy.** Outcomes of the World Bank's Rural Infrastructure Survey in Azerbaijan, conducted in 2000, show that the majority of respondents pointed to the **poor quality of infrastructure as providing the main impediments to rural development.** These impediments include, but are not limited to: the high cost of transportation services imposed by intra-village and inter-village road system; the availability and quality of drinking water; and, most important, shortages in heating, gas, and electricity supply. Access to public services is worse in rural than in urban areas. Not only does this create living conditions that discourage people and businesses from locating in rural areas, but it also deprives the rural population of opportunities for developing agriculture and other private sector enterprises. The perceived lack of opportunities and the gap in living standards leads to substantial rural-urban migration. This could increase poverty in Azerbaijan, since rural migrants may not be immediately employable and may end up in low-paying jobs.

5.95 **State support for advisory services and agricultural research is essential to ensure change in small-scale private agriculture.** Azerbaijan inherited the FSU's system of agricultural services, which relied on an extensive system of research stations and teaching institutions supporting agronomists and technical specialists who worked as employees of state and collective farms. With the privatization of the state and collective farms and the emergence of smallholder agriculture, and with the budgetary realities of post-Soviet rule, this system of research and extension has essentially collapsed. Rather than continuing to fund the existing unreformed research system or creating a state-funded advisory service, state support should concentrate on those activities that cannot be supplied by markets. Small farmers do not have the resources to perform research, or to test and develop new seed varieties, soil tilling techniques, or pest control packages suitable for the country's environment. Moreover, large international seed or chemical companies are probably less interested in developing particular products for Azerbaijan than in supplying larger, more lucrative markets in developed countries. In order to bring the fruits of research and information on productivity enhancing techniques to the farmers, a system of applied agricultural research and testing institutes is needed, along with a system of agricultural advisory services with private sector involvement.

5.96 **There is currently no comprehensive information and advisory service system in place.** Expenditures on information by the Ministry of Agriculture (MOA) cover only media activities and amount to US$44,000 or 0.1 percent of the budget of the three institutions considered here. This level is far too low to establish an adequate advisory service system for farmers. Applied agricultural research, including experimental farming, is part of a government effort to advise farmers on farming techniques, seed technology, and other matters. The MOA and the State Committee for Amelioration and Water Resources currently allocate US$121,000 and US$28,000, respectively, for fees for scientific and research services, and the institutions allocate a so-called "scientific expenditure" of US$1.4 million. These expenditure items amount to four percent of the agriculture budget, which is relatively high. Possibly, the Ministry's allocation includes the allocation of resources to state farms that have not been privatized and

that serve as research farms, but the exact amount of these allowances is not available. It is therefore difficult to assess the spending on agricultural research. In 2001 the Veterinary and Quarantine Committees were included in the MOA. In 2001, spending on veterinary quarantine services amounted to US$2.3 million or 6 percent of the agriculture budget. This is a relative high amount considering that farmers using these services can finance a considerable part of veterinary services privately. Without a more detailed cost breakdown, it is impossible to assess this cost item in more detail.

5.97 **The development of a working rural land market in Azerbaijan depends on the timely issue of titles to landowners, as well as the enforcement of land tenure rights.** The fact that many household farmers have not received their land titles is often blamed for the underdevelopment of a land market in Azerbaijan. The state can be of assistance in developing a rural land market by operating regional land registration offices that would better distribute land titles to farmers. Many farmers have yet to receive land titles, although the State Land Committee insists that nearly 100 percent of titles have been issued. The problem seems to lie in the distribution of land titles through local authorities, who often delay distribution to farmers. The Government is supposed to set up regional land registration centers under the World Bank Agriculture and Rural Development Project. However, funds for this purpose could not be found in the 2001 approved budget. The State Land and Cartography Committee assigns 85 percent of its budget (US$2.5 million) to mapping, cartography, and geodesy services. This corresponds to six percent of the agriculture budget.

5.98 **Developing new marketing channels is important for increasing income in agriculture.** New markets could be found in Azerbaijan first by marketing more competitive food products in urban areas. Increasing the competitiveness of food products could best be achieved by forming agricultural marketing cooperatives to bring produce to urban markets and by supporting a domestic food industry that can compete with imports. A domestic food industry able to compete with foreign imports could expand to markets outside of Azerbaijan.

5.99 **Agriculture in Azerbaijan is highly dependent on irrigation,** with nearly 75 percent of total cultivated area under irrigation. Yet, during the past decade, operations and maintenance budgets have been far below the levels required to properly maintain the infrastructure. As a result, the main and irrigation distribution systems and drainage channels have not been maintained well and infrastructure facilities are deteriorating quickly. Two-thirds of the respondents to the Rural Infrastructure Survey cited major problems with irrigation, mostly in the form of inadequate supply and untimely water delivery from the main canals.[102] Moreover, the existing on-farm irrigation systems are frequently not well suited to the needs of the new smaller farms emerging from privatization.

5.100 **A major institutional reform should go hand in hand with efforts to rehabilitate the existing system.** The Soviet structure was designed for a small number of large collective and state farms without regard for economic viability based on market prices. In order to make the irrigation system financially viable, the financing and operation of the system should be rethought from the farm level up. Farm privatization means that **farmers themselves are responsible for the upkeep and control of the water distribution system through Water**

[102] Government of Azerbaijan, "Rural Infrastructure Services in Azerbaijan," Sector Note, January 2001.

User Associations (WUAs). This makes the management and financing of irrigation system an issue of a vital importance. Currently, the Government, represented by the State Committee for Amelioration and Water Resources, owns and operates the irrigation system up to the farm gate, and maintains extensive infrastructure and staff. User participation in investments and in operations and maintenance is still low This applies to the on-farm irrigation distribution infrastructure. Most farmers lack experience in managing irrigation systems and are still unorganized. The Government started to develop a long-term strategy for the irrigation and drainage sector. To date, it has adopted key legislation, including the Law on Amelioration and Irrigation (1996), the Water Code (1997), and a resolution on the establishment of WUAs, cost recovery mechanisms, and operations and maintenance at the farm level. According to the Committee for Amelioration and Water Resources, a total of 574 WUAs existed by April 2002, covering 621,965 hectares (44 percent of irrigated arable land). However, it is reported that the WUAs do not yet function properly.

5.101 Expenditure for rehabilitating the irrigation system is shown in the budget of the Committee for Amelioration and Water Resources. The Committee spends about US$21 million on irrigation, and about 50 percent of its budget is spent on the purchase of equipment and fees for reparation and on capital assets. While the overall share in total agriculture expenditure on irrigation amounts to about 50 percent and represents the most important expenditure item, the overall amount still falls short of the amount necessary to rehabilitate the irrigation system and to support the formation of WUAs. It is not clear whether the budget of the Committee for Amelioration and Water Resources includes allocations to WUAs.

5.102 The lack of rural financial services, particularly of credit for seasonal financing and for small capital improvements, is a major constraint to expanded investment in agriculture and rural enterprises. The Government's decision to close the State Agriculture Bank has meant a move away from the direct provision of such financing. It is often suggested that the Government could alleviate rural credit demand by extending small loans on concessional terms. In general, the record of state-run credit facilities is poor. Therefore, the role of the Government has shifted to providing a legal and regulatory environment conducive to the development of a viable private rural financial system. Privately managed microcredit facilities can be an important source for filling in the existing gap in seasonal financing.

5.103 Currently, the Government does not financially support the development of the rural credit system, apart from the credit components of the World Bank-financed Farm Privatization and Agriculture and Credit Development projects. Preparations are currently under way to fund a rural credit system, but there were no outlays in 2001.

5.104 Another major concern regarding rural development is the development of nonagricultural employment in rural areas. Nonagricultural employment ranges from retail stores, to industrial food production, to trade and other industry. An important part of nonagricultural employment is industrial food production. In Azerbaijan, this was an export industry in Soviet times. Production fell further than that of agriculture, and the industry has been very slow to recover. However, rural households are in many ways dependent on the recovery of industrial food production, both as demand for agricultural production and for employment. Thus, problems in the food industry have a direct impact on rural households.

5.105 **Strengthening the agricultural sector and reducing poverty in rural areas requires the reform of Government services to the sector and a comprehensive investment program.** For this purpose, the Government needs to reform the sector's financing system. In 2001 the agriculture budget amounted to AZM 196 billion (about US$40.6 million), about 6 percent of the total central budget. The overall amount earmarked for agriculture is low in view of the sector's challenges justifying public sector support. In addition, the composition of the budgets of the institutions dealing with agriculture should be revised in order to bring the budget in line with the defined priorities of the agriculture sector. The current agriculture budgets of the MOA, the State Committee for Amelioration and Water Resources, and the State Land and Cartography Committee do not provide the spending levels in the necessary priority areas. Table 5.11 attempts a breakdown of the agriculture's budget by major priority areas. Since the budgets do not provide sufficiently detailed information on how the money is spent, the table is only indicative.

Table 5.11 Breakdown of the Agriculture Budget by Major Priority Areas for Government Spending

Priority Areas	2001 (US$'000)	Percent in total
Administrative expenditure	12,045	30.8
Advisory services	44	0.1
Agricultural research	1,507	3.9
Land registration	2,457	6.3
Veterinary services	2,340	6.0
Rural credit system	0	0.0
Rehabilitating the irrigation system and supporting the formation of WUAs	20,687	52.9
Total	**39,081**	**100.0**

Sources: Year 2001 budgets of MOA, the State Committee for Amelioration and Water Resources, and the State Land and Cartography Committee.

5.106 **The agriculture budget given in Table 5.11 does not permit an analysis of the levels and structure of revenues generated by the sector.** Yet it is clear that cost recovery principles should be applied where feasible and to the extent possible (i.e. notably in irrigation, advisory services, veterinary services, and micro-finance systems).

5.107 Administrative expenditures are extremely high at about 30 percent of the total agriculture budget. The main contributors are communication and communal services (14 percent) and spending on salaries and pensions (eight percent).[103]

5.108 **At present, the overall budget share of agriculture spending is too low in view of the sector's challenges justifying public sector support.** Obviously, resources are restricted, and policy decisions need to assign priorities to expenditure allocations. The current budget structure suggests that higher expenditure shares on irrigation and support to rural credit are justified. Expenditure on administration, agriculture research, land registration, and veterinary services could be downsized in relative terms. Absolute amounts might still need to increase in some

[103] It should be noted that major parts of the overall spending on wages/salaries/pensions and of the expenditure on transport were attributed to veterinary services and irrigation rehabilitation.

instances. The priority areas for Government spending in order to achieve sustainable increases in agricultural incomes are given below.

Governmental Agenda

5.109 **The Government of Azerbaijan perceives agriculture as a core non-oil sector and recommends close attention to the sector in the ongoing PRSP process.** The Government has expressed its commitment to continue institutional reforms related to the sector in particular, and to rural development as a whole. As admitted in the PRS paper, the overlapping of responsibilities between the MOA and numerous state committees is one of the sources of inefficiency. The PRS paper cites the following priorities, among others: (i) involving the private sector in veterinary services, medical provision, and technical assistance; (ii) creating the conditions for the establishment of credit unions and micro-credit banks, as well as increasing state transfers to agriculture to improve the financial provision of farmers; (iii) increasing productivity through the establishment of farmers' unions; and (iv) creating marketing channels for farmers' products. As part of the effort to unify public sector wages, and as envisaged by the MTEF, the wage bill for agriculture, fishing, and forestry will be increased. Additionally, expenditures on the sector in proportion to GDP will increase from 3.1 percent of GDP in 2001 to 4.4 percent by 2005.

Recommendations

5.110 Given the high reliance on agriculture in rural areas and the potential of the sector, a rural poverty reduction strategy that builds on agricultural growth is both essential and feasible in Azerbaijan. There is much room for improving the capacity of central and local governments. The Government also needs to envisage sufficient funds for investments in rural infrastructure through the PIP.

Rehabilitating the irrigation system and supporting the formation of WUAs

- Develop a feasible plan for restructuring and rehabilitating the irrigation system and pursue irrigation rehabilitation on the basis of economic viability.
- Apply and extend user charges for irrigation systems.
- Conceive and carry out the institutional reform of irrigation management systems at the community, district, regional, and central levels.
- Finance private specialized technical support for the formation of WUAs.

Supporting the development of the rural credit system

- Reform the financial sector.
- Review the performance of micro-finance schemes in Azerbaijan and in the region and design a strategy for providing micro-finance services that are financially and operationally feasible and are targeted to the poor.

- If the above analysis justifies it, allocate state funds to a revolving fund that can serve as a refunding source for privately implemented and financially feasible micro-credit schemes such as credit cooperatives.

Providing land markets

- Ensure that land titles actually reach landowners, rather than local officials.
- Liquidate unprofitable agricultural enterprises and distribute the land and assets.
- Improve local pasture management and provide access for the poorest.
- Develop and implement a strategy for land conservation and rehabilitation.

Improving the delivery of public services

- Implement large-scale investments in improving rural infrastructure (electricity, heating, roads, drinking water, social infrastructure, communications).
- Ensure that large-scale investments in infrastructure networks (gas, power, main roads, etc.) are continue with a clear priority setting and some coordination with lower level entities to assure an impact on rural areas.
- Provide small-scale solutions to rural infrastructure problems, in addition to ongoing large-scale infrastructure investments. Small-scale investments can improve living conditions, even poor communities could afford some of these investments and would benefit directly.
- Provide technical assistance to municipalities to improve the delivery of municipal services and infrastructure (as defined in the Section E, above) in compliance with economic principles and community priorities.

Establishing information and advisory services for the private farming sector

- Test service delivery schemes and a fee system that permits high cost recovery of services and enables the poorest to benefit from services.
- Set up a market information system for farmers and disseminate the information through the press and other outlets such as the advisory service system.
- Apart from technical training, include business training and marketing in the spectrum of advisory services. Consider sponsoring trade promotion fairs and seminars within and outside of Azerbaijan to introduce Azeri products to new markets.

Establishing and strengthening veterinary disease control and veterinary services

- Define the veterinary services that are to be delivered publicly and downsize state services accordingly.
- Finance one-time technical support to private providers of veterinary services.

Promoting agricultural research

- Downsize and restructure agriculture research in Azerbaijan in accordance with the needs of private farmers.
- Allocate public funding for agriculture research through a competitive research grant system.
- Ensure the dissemination of agriculture research results through an extension system.

5.111 The legal and regulatory environment is to be adjusted to allow rural credit cooperatives to emerge and thereby contribute to an improvement in the availability of finance in the rural areas.

Providing off-farm employment

- Improve the business environment, for example, by simplifying the business licensing process for agro-business, reducing the processing time and making the system more transparent.
- Break the prevailing culture of individual rent-seeking at the local and central levels, and reform the malfunctioning judiciary system.
- Introduce a regular policy dialogue that can serve as a forum to present agro-processors' situations and needs to representatives from the Government, from banks, and from other services suppliers as well as raw material suppliers, and clients.
- Business training programs should be instituted to increase non-farm employment in areas such as handicrafts, wood products, rural tourism, etc. Such training programs could involve grants for market studies for such products and services.

G. General Water and Sanitation[104]

Overview and Main Issues

5.112 **Water supply and sanitation systems throughout the country have been starved of the appropriate levels of operating and investment expenditures.** The deteriorating water and sanitation infrastructure has resulted in a considerable drop in water quality, with obvious dangers to health. The most severe consequences have been in rural areas. Close to 95 percent of households in Baku and other primary cities are connected to a piped water supply as compared to 83 percent in secondary cities and small towns. Only 11 percent of rural households are connected to piped water, with the result that water quality is highly variable (although this percentage may be an underestimate as services provided by collective farms and agricultural enterprises from individual wells or irrigation canals are not included in the official statistics). The wastewater network in Baku serves 78 percent of its population. However, only 50 percent

[104] This section is drawn from "Azerbaijan: Continuing Public Expenditure Reforms," IMF, June 2000, and "Water Supply and Sanitation Sector: Review and Strategy," Government of Azerbaijan.

of the wastewater in Greater Baku receives treatment and the untreated surplus is discharged primarily into the Caspian Sea. In other urban areas, coverage drops to 32 percent. The rural population relies on on-site solutions, primarily latrines and drain fields.

5.113 **Government subsidies and capital investments in the water sector have fallen, which has resulted in an alarming deterioration of the existing infrastructure and in lowered reliability.** On average, water is available to individual households in Greater Baku about 22 days per month, four hours per day. These water shortages tend to affect lower income households more adversely as they spend a higher proportion of their incomes on coping strategies.

5.114 Similar to the energy sector, **the country's water systems suffer from a low collection of payments,** an extremely low collection of revenues in cash, insufficient tariff rates to cover operations, maintenance and replacement costs, and the high cross-subsidization of residential consumers by other consumer categories. The sector's technical problems are tied to a financial crisis resulting from the problems listed below.

- *Low collection of water and wastewater bills.* Utilities under supervision of the Committee for Housing and Communal Property (CHCP) collect about 40 percent of billings, and although the ARWC has made important improvements in collection, its progress has stagnated in the last two years.
- *Extremely low collection of revenues in cash.* CHCP utilities collected only 14 percent of 1998 revenues in cash; ARWC collected only 24 percent.
- *Insufficient tariffs to cover operations, maintenance, and replacement costs.*
- *High cross-subsidy of domestic consumers by other customer categories.* Across-the-board price subsidies place a heavy burden on the Government budget and industry, fail to target the truly poor, and encourage wasteful water consumption.

Governmental Agenda

5.115 **The Government has already undertaken initial institutional reforms in the water supply and sanitation sector**, including the recent approval of a National Water Supply and Wastewater Law, the creation of an independent joint stock company, Abspheron Regional Water Company (ARWC) for water supply services in Baku, the decentralization of responsibility for municipal water and wastewater services to local government, and the merging of the agency in charge of rural water supply into the CHCP.

5.116 **The Government has stated that it will target public expenditures in three key areas of water supply and sanitation.** A high priority will be given to the extension of the water supply and sanitation network to rural areas. However, given the current status of decay of the existing network, this strategy appears arguable. It would be more reasonable to direct scarce capital funds to preventing further collapse of the existing networks, which would serve the majority of households, both in rural and urban areas. Support will also be given to municipal wastewater treatment facilities, which either have fallen into disrepair or simply do not exist, and which pose obvious health dangers. Finally, within the main urban centers, the Government will seek a speedier installation of water meters to ensure that users are charged appropriately and

that suppliers receive a more regular and adequate revenue flow to ensure the appropriate maintenance of the existing infrastructure.

Recommendations

5.117 The magnitude of the required investment is difficult to determine accurately. Rough estimates indicate more than US$1,500 million may be needed to provide water services on a par with Western Europe but with only basic wastewater services. Clearly, improving sector services in Azerbaijan to fully acceptable levels requires a timeframe measured in decades. **The immediate challenge is to prevent collapse and restore basic service levels.** The pace at which progress can be achieved depends largely on Azerbaijan's ability to undertake the following measures.

- ***Increase resource mobilization from all sources.*** Because the Government will not be able to contribute significantly, the only realistic financing source will be higher payments from consumers augmented by borrowings and grant contributions. Affordability and willingness-to-pay will be limiting factors, given the current low collection of low tariffs.
- ***Ensure the cost-effective use of resources.*** Improved productivity for the sector agencies, more efficient operations, and the concentration of scarce resources on cost-effective and high-priority investment opportunities are essential.
- ***Encourage the private sector's efforts*** in providing investment as well as in providing operating expertise.
- ***Rationalize the tariff structure and complement this with targeted assistance.*** Within the existing tariff structures there are many anomalies. While water is a basic human need, there is no clear justification for the excessive cross-subsidization in water provision supplies that presently occurs, especially since there is no targeting that provides relief to poorer households. Actions must be taken to increase the collection rates, bring tariffs closer to full cost-recovery and thus remove implicit and explicit subsidies and cross-subsidies. As subsidies are phased out and tariffs rise, particular attention must be given to protecting the most vulnerable segments of the population. If there exists a rationale for some subsidies on water provision, then they should be made explicit, and they should be targeted in a transparent and efficient manner.
- ***Attribute an appropriate regional emphasis to the policies.*** For urban areas, there is an urgent need for rigorous collection of bills in cash; setting of tariff levels for full cost recovery; transparent, targeted and efficient subsidies; and improved financial management and planning. The rural sector requires a fundamental shift of responsibility. Communities should decide whether to participate and at what level of service, based on the willingness to pay capital and operating costs. Communities should set tariffs to meet a system's financial requirements. Government subsidies for rural water supply should be transitional and targeted to communities on a one-time basis. The Government should coordinate all sources of finance and should balance urban and rural sector priorities.

ANNEXES

ANNEX 1. ESTIMATION OF THE QUASI-FISCAL DEFICIT FOR THE ENERGY SECTOR IN 2001

1. This annex estimates the quasi-fiscal deficit for 2001 by the main components that contribute to the overall quasi-fiscal deficit:

- Market Value of SOCAR's and AIOC's Domestic Oil and Gas Deliveries

2. In 2001 SOCAR supplied 45.7 million barrels of crude oil to its refineries. Of 43.6 million barrels of oil products that SOCAR's refineries produced, 16.2 million barrels were exported. Given that 37 percent of oil products were exported, crude oil for the domestic market can be calculated at approximately 28.8 (=45.7*0.63) million barrels in 2001. A flow chart for SOCAR's oil is shown below. For the gas sector, SOCAR produced 4.4 bcm gas and imported 3.5 bcm gas in 2001. In addition, AIOC produced 0.9 bcm gas which was also delivered to the domestic market. As shown in Table 1, the market value of oil and gas supplied to the domestic market in 2001 is 3,957 billion manat. At a GDP of 26,500 billion manat, this is about 11.6 percent of GDP.

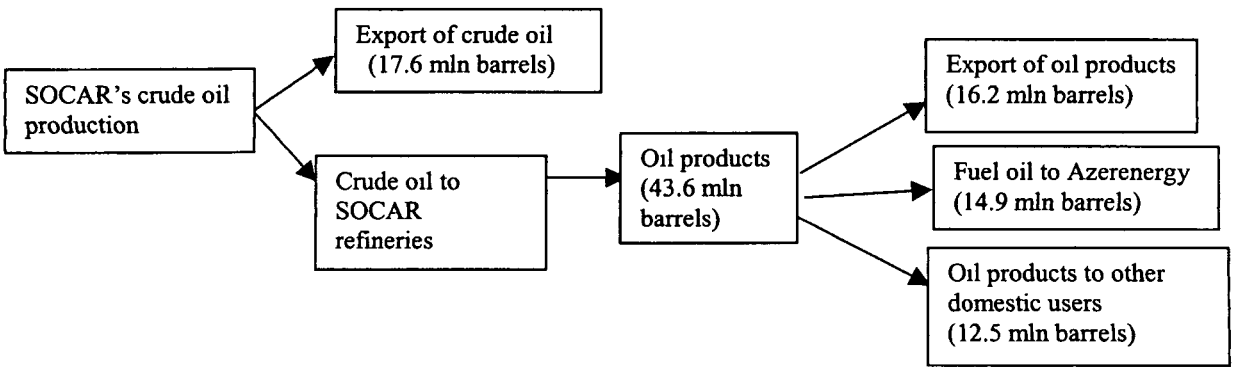

Table 1. Market Value of Domestic Oil and Gas Supplies, 2001

	Quantity	World Market Price in US$	Transport Cost	Value (in million US$)	Value (in billion)
SOCAR crude oil	28.8 mln barrels	24.3	$2.9/barrel	615.6	2,864.9
SOCAR gas production	4.44 bcm	10.0		44.4	207.0
SOCAR gas import	3.53 bcm	51.4		181.3	844.0
AIOC gas	0.90 bcm	10.0		9.0	42.0
Total				**850.3**	**3,957.0**

Sources: SOCAR and IMF staff estimates.

- Expenditures of Azerenergy, Azerigas and SOCAR Refineries in 2001

3. Table 2 shows Azerenergy's cost of producing and distributing[1] electricity, Azerigas's cost of distributing gas and SOCAR's refining cost, excluding fuel cost and debt amortization. Because 37 percent of SOCAR's oil products were exported in 2001, the calculation of domestic energy subsidies includes only 63 percent of SOCAR's total refining cost, or 760.9 billion manat.

Table 2. Expenditures of Azerenergy, Azerigas and SOCAR Refineries, 2001

AZM billion	Azerenergy*	Azerigas	SOCAR Refineries
Wages	69.0	17.4	30.7
Taxes	87.2	49.7	726.0
Social contributions	9.0	6.6	15.2
Maintenance and operational cost	101.7	19.4	435.9
Total cost	**266.9**	**93.1**	**1207.7**

* Preliminary
Sources: Azerenergy, Azerigas, SOCAR, and IMF staff estimates.

- Subsidies Implicit in Domestic Energy Policies in 2001

4. The actual revenue from domestic energy deliveries in 2001 amounted to 2,004 billion manat in total, comprised of 520 billion manat for Azerenergy, 120 billion for Azerigas, and 1,364 billion for SOCAR. SOCAR reported that Azerenergy and Azerigas paid nothing for fuel and gas deliveries. Table 3 presents the staff estimate of the overall subsidies implicit in domestic energy policies.

Table 3. Azerbaijan: Domestic Energy Subsidies

AZM billion	2001
Market value of domestic oil and gas supplies	3,957.0
Plus: expenditures of Azerenergy and Azerigas operations, and of SOCAR's refining activities, excluding the cost of gas and fuel inputs	1,120.9
Minus: receipts from domestic energy sales & excise tax	2,003.8
Total subsidies	3,074.0
In percent of GDP (2001 GDP: 26,500 billion manat)	11.6

Source: IMF staff estimates.

- Breakdown of Subsidies into Non-Payment and Underpricing

5. Within the total framework of energy subsidies it is possible to determine the portions that are attributable to non-payment and the proportion that results from misappropriate pricing. This is itemized below.

[1] Starting from the second half of 2001 Azerenergy no longer distributes electricity directly to end-users. Instead, it supplies electricity to four distribution network companies, which in turn distribute electricity to end-users.

- Azerigas (the gas sector)

6. Azerigas was supplied with 4.58 bcm gas in 2001.[2] At the average gas price of US$26.5 per tcm,[3] the market value of this gas supply is 564 billion manat. A meaningful breakdown of subsidies between Azerigas and its customers shows that underpricing accounted for about 49 percent of quasi-fiscal subsidies in the gas sector in 2001.

Table 4. Quasi-Fiscal Subsidies in the Gas Sector: Underpricing and Nonpayment

AZM billion	2001
a. Market value of gas delivery to Azerigas	564
b. Azerigas non-fuel cost (Table 2)	93 1
c. Azerigas revenue assuming full collection	393.1
d. Azerigas actual revenue	120.3
e. Quasi-fiscal subsidies in the gas sector (=a+b-d)	**536.7**
f. o/w non-payment (=c-d)	272.8
g. o/w under-pricing (=a+b-c)	263.9

Sources: Azerigas and IMF staff estimates.

- Azerenergy (the electricity sector)

7. In 2001, of SOCAR's 27.4 million barrels of oil products delivered to the domestic market, Azerenergy received 14.9 million barrels in the form of fuel oil. Given that the fuel oil delivery to Azerenergy accounted for about 54 percent of total oil products delivered to the domestic market in 2001, the crude content in the SOCAR fuel supply to Azerenergy can be calculated approximately at 15.7 (=28.8*0.54) million barrels. In addition, Azerenergy was supplied with 4.3 bcm of gas for electricity generation. Taking the same approach as in Table 1, the market value of the crude oil that was used for producing fuel oil supplied to Azerenergy was estimated at 1,557.4 billion manat, and the value of gas supplied to Azerenergy was 529.5 billion manat.

8. The data available from SOCAR do not allow for a direct assessment on the refining cost of fuel oil delivered to Azerenergy. However, as about 34 percent of SOCAR's crude oil was refined into fuel oil delivered to Azerenergy, we can take 34 percent of SOCAR's total refining cost, or 414 billion manat, as a reasonable approximation. As shown in Table 5, quasi-fiscal subsidies in the electricity sector alone accounted for almost 67 percent of Azerbaijan's total energy subsidies in 2001. Underpricing accounted for about 66 percent of quasi-fiscal subsidies in the electricity sector in 2001, slightly higher than the 61 percent in 2000.

[2] SOCAR claimed that its gas production (4.44 bcm) as well as AIOC's gas (0.9 bcm) was fully handed over to Azerigas and that the gas import (3.53 bcm) was fully handed over to Azerenergy. However, as SOCAR has no gas pipeline and gas delivery to the domestic market has to go through Azerigas, the division of gas between Azerigas and Azerenergy is often not carried out in the way that SOCAR intends.

[3] We value the gas deliveries at an average price of US$ 26.5 per bcm, calculated as the total value of gas supplies, US$ 234.7 (Table 1), divided by the total volume of gas supplies, 8.9 bcm (Table1).

Table 5. Quasi-Fiscal Subsidies in the Electricity Sector: Underpricing and Nonpayment

AZM billion	2001
a. Market value of crude content in SOCAR fuel oil delivery to Azerenergy	1,557.4
b. Market value of gas supply to Azerenergy	529.5
c. Estimated SOCAR refining cost of fuel oil delivered to Azerenergy	413.6
d. Azerenergy non-fuel cost (Table 2)	266.9
e. Azerenergy revenue assuming full collection	1,446.9
f. Azerenergy actual revenue	519.5
g. Total quasi-fiscal subsidies in the electricity sector (=a+b+c+d-f)	**2,247.9**
h. o/w non-payment by customers (=e-f)	927.4
i. o/w under-pricing (=a+b+c+d-e)	1,320.5

Sources Azerenergy and IMF staff estimates.

- Deliveries of Oil Products to Other Domestic Users

9. The crude content in SOCAR's oil products delivered to other domestic users was 13.1 (=28.8-15.7) million barrels, which had a market value of 1,307.5 billion manat. SOCAR received 1,364 billion manat for deliveries of oil products to other domestic users. As shown in Table 6, deliveries of oil products to domestic users other than Azerenergy contain a relatively small part of energy subsidies in Azerbaijan.

Table 6. Oil Products to Domestic Users Other than Azerenergy: Quasi-Fiscal Subsidies

AZM billion	2001
a. Market value of crude content in oil products delivered to domestic users other than Azerenergy	1,307.5
b. Refining cost	347.2
c. Actual revenue	1364
d. Quasi-fiscal subsidies (a+b-c)	**290.7**

Sources: SOCAR and IMF staff estimates.

ANNEX 2. INSTITUTIONAL ASPECTS OF THE NATURAL RESOURCE FUND'S FUNCTIONING[4]

1. Natural Resource Funds' (NRF) best management practices, although different in their institutional arrangements, are subject to certain common principles:

- *Strong governance,* with prudent oversight provided by an independent public supervisory body or multiple players, interlocked by a system of mutual accountability.
- *Clearly defined goals and transparency* with public disclosure of operations and audit reports, regular dissemination of information through the media and the internet; enhancing transparency of the NRF and/or citizen's understanding is often set as an explicit or implicit objective of the Fund.
- *Integration with the state budget,* which facilitates management and supervision of the oil revenues, while purposes of establishment should be kept in mind (i.e. in case of assets accumulation a good practice would be to monitor performance through setting benchmarks).
- *Sound assets management strategy,* namely, setting benchmarks for the desired return, liquidity, and macroeconomic effects.

Supervision and Control

2. **As a rule, supervision over the NRF is executed through a network of interlocked internal and external agencies.** It can represent a fairly sophisticated structure with dispersion of the supervisory functions between executive and legislative agencies, as in the Alberta Heritage Savings Trust Fund. An operational body exists at the bottom of the hierarchy. Although this body (Investment Operations Committee) does not have explicit power to set policy priorities, it can nevertheless be a de facto supervisory agency through its advice contributions. In addition, the whole system is composed in a way that any component of the reporting hierarchy has veto power options set by the government. A provincial parliamentary committee (the Standing Committee of the Legislative Assembly) is an ultimate supervisory body to the Alberta Heritage Fund. To ensure relevant representation of different political segments of the society, Standing Committee consists of 6 members from the ruling party, and 3 members from the opposition.

3. **Supervisory functions can be subject to a more simplistic vertical management structure as in Alaska**, where Board of Trustees, appointed by the Governor, is given a supervisory role over the asset management entity – Alaska Permanent Fund (public) Corporation (APFC). The Board of Trustees is managed by executive officers, namely a chairman, vice-chairman, and treasurer, who are elected annually by the APFC. The majority of

[4] This section was adapted from the following papers: John R. Heilbrunn, "Governance and Oil Funds" (mimeo), Fitch Ratings "Oil Price Stabilization Funds," Special Report; Ugo Fasano, "Review of the Experience with Oil Stabilization and Savings Funds in Selected Countries," IMF Working Paper WP/00/112; Jeffrey Davis, Ronaldo Ossowski, James Daniel, and Steven Barnett, "Stabilization and Savings Funds for Nonrenewable Resources· Experience and Fiscal Policy Implications," IMF Occasional Paper 205, 2001.

the Board members (four out of six) must not hold any governmental position and should have recognizable competence in finance, investments, and other related fields. Although appointment and dismissal of the members of the Board are at the full discretion of the Governor, he/she must present a written explanation for any dismissal decision.

4. The Norway State Petroleum Fund does not have a supervisory board as such. However, supervisory functions are jointly performed by the Minister of Finance and the Economic Policy Department (EPD) of the Ministry of Finance (both are responsible for the overall assets management policy and for setting up benchmarks for performance measurement), and the Central Bank. Norges Bank, the Central Bank of Norway, is delegated by the Ministry of Finance with the power of operational management. Norges Bank's management activity is accountable to the Economic Policy Department, which drafts reports to the Minister of Finance, who presents them to the Storting (Norwegian Parliament).

5. The delegation of discretionary power through different levels of the supervisory hierarchy provides transparency of the policymaking process, and ensures the proper involvement of technocrats and proper weight to technocratic considerations as opposed to political ones in the decision making process of NRF's asset management.

6. Contrary to this principle, supervision of the Venezuelan Investment Fund for Macroeconomic Stabilization (which is not an impressive example of oil revenues management), is entirely entrusted to the Central Bank of Venezuela. The Central Bank concentrates all assets management power from deciding on operational rules and budget to setting investment policy, and reporting and approving disbursement from the Fund. In addition, there is no separate structure within the Central Bank (i.e. Board of the Central Bank of Venezuela is at the same time the Supervisory Body for the Fund).[5]

Transparency, Accountability, External Oversight (Audit)

7. Successful experiences with the NRF management suggest that transparent dissemination of information on the size of the Fund and regular reports on the management of its assets are prerequisites for legitimacy and public support.

8. Regular reports on the Fund's performance, both annual and inter-year, should be submitted to the legislature and made available to the public through the printed media and the internet. Performance reports should clearly state a comparison between the real and the projected performance of the Fund to make the evaluation easier for the public, as in reports of the Alaska Permanent Fund Corporation. Furthermore, the public should be equipped with the knowledge as to what are the sources and timing for this type of information. In Alberta, for example, prior to the release of any report or plan, an announcement is made on the Ministry of Revenue website and in the provincial media. This, along with the full publication of external audit reports, should be a basic minimum for information disclosure. The NRF best practices go far beyond this in expanding the degree of transparency, and the public is equally well-informed about the performance criteria for the Fund's future activities, investment guidelines, sizes of and

[5] Davis, Ossowski, Daniel, and Barnett, "Stabilization and Savings Funds for Nonrenewable Resources: Experience and Fiscal Policy Implications," p.26.

returns on the Fund's assets, flows into and out of the Fund, resource allocation, etc. Norges Bank's site on Petroleum Fund, for instance, contains detailed information up to the remuneration rules for the Petroleum Fund's managers.

9. **This needs to be underpinned by unambiguous regulations on reporting by the Fund's management.** Fund managers usually submit their report for review to the supervisory body, which in turn, presents it to the legislature. In Norway, it is a single individual, the Minister of Finance, who presents the annual report on the Fund's performance to the Parliament. In Alaska, the managers of Alaska Permanent Fund Corporation prepare a joint report together with the Board of Trustees (the supervisory body), which is then submitted, to the Governor and the public. Certain reporting requirements can be specifically articulated by the Fund's regulations, as in Norway, where any changes in the Fund's assets must be reported to the Ministry of Finance.

10. **Oversight of the Fund's operations is strengthened by governmental auditing agencies, and is often further complemented by independent audit companies, which perform both internal and external audits of the Fund's performance.** Audit reports, as well as management reports, are posted on the Internet and disseminated through the press. Independent audit reports can be submitted to the legislature directly (Norway) or attached to the management reports when submitted to the supervisory body or to the legislature (Alaska).

Governance of Revenue/Expenditure Rules

11. **The NRF should be coherently integrated within the budgetary process.** The resources of the Fund can be maintained on an identified account within the overall budget. This will ensure that spending decisions are taken within the budget. Integration within the consolidated budget would allow for the resource allocation decisions to pass the Parliamentary approval, thus, there would be no need to earmark expenditures from the Fund, since expenditures would continue to be executed by the relevant ministries. Any drawdown of the government's deposits (including the Fund's assets) would appear as deficit financing.

12. **Poor integration of the Fund with the budget (or extrabudgetary fund) complicates fiscal management, leading to an inefficient allocation of the government's total resources, and contributes to lack of transparency and governance problems.** When creating an extrabudgetary entity, it is argued that a new body, outside of the "corrupted" or inefficient system, can deliver better results. However, country experiences (Venezuela and Nigeria) suggest that it is unlikely that a subsystem of a poor budget system can be free of corruption, or of governance, or resource misallocation problems.[6]

13. **In some cases, the use of the Fund's revenue is subject to certain limitations or rules.** For instance, reasons for the statutory limitation can exist in cases of conflicts of interest, as in Alaska, or in cases of non-conformity with a certain policy priority, as in Norway, where investments should be made only in environmentally sound projects and can be immediately withdrawn if the project proves to be environmentally hazardous.

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[6] Davis, Ossowski, Daniel, and Barnett, "Stabilization and Savings Funds for Nonrenewable Resources: Experience and Fiscal Policy Implications," p.16-17.

Investment Strategy and Operational Management of Assets

14. **Allocation of the Fund's resources should be governed by a clear asset-management strategy.** As a common guideline, investment strategy should follow a "prudent investment" rule. However, more specific guidelines should be established with regard to the composition of the investment portfolio, which would also effectively reflect the purposes of the Fund. In other words, the maturity and liquidity of the Fund's assets should be dictated by whether the Fund primarily serves as a stabilization fund or a savings fund. In addition, as in the case of the Norway State Petroleum Fund, investment decisions of the Fund can conform to more specific rules, such as proportional shares for fixed and equity income instruments, and their geographic distribution and currency composition, which are statutorily defined.

15. **Once the asset allocation rules are set, their operational management can be entrusted to an internally established operational department or the Fund can engage external managers for the entire Fund portfolio or its specific parts.** Prudent oversight by the supervisory body should be in place to ensure that investment decisions correspond to established priorities and are economically beneficial. For instance, the Investment Operations Committee (IOC) of the Alberta Heritage Fund has a very strong private sector representation (3 out of 5 members). Appointment and dismissal of the IOC members is merit-based with the usual criteria as for any other professional service (i.e., experience, performance, platform, etc.). The Investment Committee sends its technical recommendations to the Board of Trustees, which does an initial evaluation of investment decisions and passes it further up to policymakers. A similar system exists in Alaska, where a specially established public corporation – the Alaska Permanent Fund Corporation – is entitled to manage and invest the assets of the Alaska Permanent Fund on behalf of the State of Alaska.

16. **In Norway, the Central Bank was charged by the Parliament with the responsibility to achieve the highest return on the Fund's portfolio.** To perform this function, and within its discretion over operational management of the Fund's assets, Norges Bank subcontracts the management of certain parts of the Petroleum Fund's portfolio to international investment banking companies. For instance, Deutscher Bank manages the bond portfolio, Merrill Lynch has the Norges Bank's mandate for Europe, etc. To provide proper oversight of the operational management of assets and to ensure that performance benchmarks are met, Norges Bank (with the authorization of the Ministry of Finance) established within its existing umbrella two new agencies: the Norges Bank Investment Management Agency and the Government Petroleum Insurance Fund. The first is responsible for overseeing investments and ensuring increases in the overall portfolio, while the Insurance Fund protects against declines in the portfolio performance. Both agencies are staffed by the employees of Norges Bank, who receive their appointments as part of their positions at Norges Bank.

17. Whichever model is chosen, it is important that decisions over the management of the investment portfolio are assigned to professional investment officers with proven expertise in finance and investment, while a clear allocation of responsibilities should be in place to ensure oversight over the investment decisions.

ANNEX 3. METHODOLOGY FOR TOTAL FACTOR PRODUCTIVITY (TFP)

1. **Our macroeconomic projections for Azerbaijan are based on a simple growth accounting model that decomposes growth in the non-oil sector.**[7] We assume a Cobb-Douglas production function with only two factors of production: physical capital (*K*) and labor input *(L)* employed in the non-oil sector:

$$Y_t = GDP_t^{Non-oil} = AK^{\alpha}{}_t L_t^{1-\alpha}$$

We also make an assumption about the capital share, *a,* of 30 percent, which results in the labor share, *1-a,* equal to 70 percent. We also assume a 3 percent depreciation rate, γ[8]. Taking logarithms and differentiating allow expressing the non-oil GDP growth rate as a sum of three components: (i) the rate of growth of physical capital; (ii) the rate of growth of labor input, and (iii) the rate of growth of total factor productivity.

$$g_t = \%\Delta GDP_t^{Non-oil} = a \cdot \%\Delta K_t + (1-a) \cdot \%\Delta L_t + \%\Delta TFP_t$$

2. **We can predict the non-oil GDP growth rates of capital stock by using the perpetual inventory method.** This method uses a capital stock estimate in the base year, assumptions on depreciation, and the flow of new investment so that the growth rate of capital can be represented as:

$$\%\Delta K_t = \frac{Inv_t}{K_{t-1}} - \gamma$$

We approximate the growth rate of labor input by the population growth rate. [9] What is more problematic is the link between gross investments and the capital growth rate, as it requires knowledge about its stock in the base year. For a transition economy such as Azerbaijan, such data are highly unreliable. Apart from the usual difficulties, official statistics tend not to account for the fact that many of the capital assets dating from Soviet times are obsolete in the new structure of the market economy. In addition, there is no available reliable breakup of fixed assets between the resource extraction sector and the rest of the economy.

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[7] The dynamics of oil extraction are excluded from this analysis as they have origins in oil and gas recoveries, extraction strategies, market demand, and transport routes rather than in the accumulation of factors of production or productivity levels.

[8] For a justification for using such a specification of the production function and the related analysis of the character of growth and contraction in the FSU countries, see De Broeck and Koen (2000b).

[9] This assumption is appropriate as the oil sector accounts for only less than 1 percent of total employment. However, this measure may underestimate substantially the growth rate of labor input, as it does not account for factors such as the improved quality of the labor force. This in turn will lead to an overestimation of the total factor productivity growth rate.

3. **The total factor productivity growth rate, however, is the most important assumption for this growth accounting exercise.** Klenow and Rodriguez-Clare (1997), and Easterly and Levine (2000) report that cross-country differences in income levels and growth rates are mostly due to differences in productivity. In particular, growth based on TFP improvements rather than on rapid capital accumulation allows for consumption growth rate, needed to reduce poverty in Azerbaijan. Without productivity gains, high rates of growth need to be supported by heavy investments and savings. But growth strategies based on forcing factor accumulation at the expense of consumption are usually not suitable for market economies and especially not in a country with widespread poverty and underutilized productive capacities.

4. **When projecting future growth rates for the non-oil sector in Azerbaijan, we assume that the key factor behind this growth will be substantial TFP growth.** The experience of other transition economies shows that in the shorter term substantial productivity gains are possible. In fact the V-shaped pattern of total factor productivity is one of stylized facts about successful transition economies. TFP declined sharply during the reform-induced recession but then it recorded considerable acceleration as shown by Table 1.[10] For Poland the growth of TFP was for some years in excess of the overall growth rate, which suggests that productivity gains may fuel growth during the recovery period even when factor contribution is negative. Overall, we were witnessing a transition from an extensive to an intensive growth pattern, with TFP growth playing an increasingly important role in the Visegrad countries (Firdmuc at al., 2001).

Table 1. TFP: Decline in Azerbaijan and V-Shaped Pattern in Advanced Transition Economies

	Czech Republic	Hungary	Poland	Slovak Republic	Azerbaijan
		Transitory recession*			
Average TFP decline	-4.5%	-7.1%	-7.5%	-6.8%	-12.6%
Cumulative TFP decline	-12.9%	-13.7%	-14.4%	-24.6%	-61.0%
		Recovery period**			
Average TFP growth	1.0%	2.2%	3.8%	4.2%	NA
Cumulative TFP growth	5.9%	16.3%	29.6%	23.1%	NA

* Czech Republic 1990-1992, Hungary 1990-1991, Poland 1990-1991, Slovak Republic 1990-1993, Azerbaijan 1990-1996.
** Czech Republic 1993-1998, Hungary 1992-1998, Poland 1992-1998, Slovak Republic 1994-1998.
Sources: Own calculations based on De Broeck and Koen (2000a) and De Broeck and Koen (2000b).

5. **Obviously the high rates of TFP in transition countries should not be identified with technological progress.** Large total factor productivity gains result from a resource shift from less productive to more productive firms, perhaps as a result of economic reforms or if more productive firms simply grow faster, even in the absence of technical progress at the firm level (World Bank, 2002). TFP increases may also be associated with increasing capacity utilization that follows transitory recession. Furthermore, the non-oil sector is expected to benefit from the oil-related FDI that will be invested to increase the economy's oil potential. These considerations justify why the TFP growth rates in the non-oil sector of Azerbaijan may be substantial and comparable to those recorded by more advanced transition economies. Azerbaijan experienced a much deeper output and productivity losses during the first years of transition, which implies that

[10] Annual TFP dynamics beyond 1998 are not readily available. We are also not aware of the study that analyzes TFP improvements in the post-crisis growth in CIS countries.

even very high TFP growth rates are not likely to return the economy to its pre-transition productivity level in the medium term. Meanwhile, this target is being achieved by advanced transition economies relatively quickly. Capital and labor under-capitalization seems also to be larger in Azerbaijan. Therefore, room for TFP improvement seems large even from a medium term perspective. Indeed, our crude estimates suggest that the average TFP growth rate in Azerbaijan between 1997 and 2001 was 6.0 percent and it is likely to accelerate to almost 8 percent in 2002.

Table 2. Decomposition of Growth in the Non-oil Sector in Azerbaijan

	1997	1998	1999	2000	2001
Contribution of growth of employment	0.1%	0.1%	0.0%	0.1%	0.0%
Contribution of growth of capital*	0.7%	3.3%	-6.6%	2.0%	2.8%
TFP	6.0%	1.1%	8.8%	10.8%	3.5%
Non-oil GDP growth rate	6.8%	4.6%	2.2%	12.8%	6.3%
Capital-output ratio	4.72	4.66	4.26	3.85	3.72

*The figure for the growth rate of capital employed in thenon-oil sector is highly speculative. First overall figures of fixed assets in the economy might misrepresent the total productive capital stock due to measurement problems and in particular problems of valuation of obsolete capital stock that are characteristic for transition economies. Second, statistical data does not allow for the methodologically reliable break-down of capital between oil and non-oil sector. To arrive at the reported figure assuming the breakdown in line with structure of the overall GDP.

Source Own estimations based on Statistical Office and assumptions about production function as described above.

6. **The continuation of the TFP recovery, however, would only be possible if structural reforms are further implemented, inducing the restructuring of existing enterprises and the entry of de novo firms.** In our framework we assume that the TFP growth rates would average 5.4 percent between 2002 and 2005 and would decline to average 3.4 percent between 2006 and 2010. Beyond 2010 we make a conservative assumption of either a flat or a slowly growing TFP. While transition recovery provides a rationale for high initial TFP growth rates, these are fundamental improvements in technology that underpin growth in the long run. For that reason there are likely to be natural limits to the gains from structural change once resources have been reallocated to the most productive use and excess capacity is eliminated. Although we choose not to predict high TFP growth rates in the longer term, the successful implementation of structural reform might lay the ground for long-term growth and help to change this conclusion.

ANNEX 4. OPTIMAL INTERTEMPORAL ALLOCATION OF OIL WINDFALL: IMPLICATIONS FOR PUBLIC EXPENDITURE ENVELOPE

1. **During the second half of this decade, the economy will experience a massive windfall with a concomitant fiscal gain.** This fiscal gain, however, is a result of the depletion of country's oil and gas reserves. Long-term sustainability, therefore, requires that a part (or all) of the resource rents have to be re-invested productively, to compensate this reduction in natural resource capital by the accumulation of other forms of assets, such as physical capital or human capital. Since oil rents are to a large extent concentrated in the public sector, the question of how should the oil and gas revenue be spent and distributed across present and future generations becomes a cornerstone to successful economic development. Furthermore a surge in natural resource revenue may stimulate an inefficient domestic spending and waist of petroleum resources. Too rapid domestic spending may give raise to excessive real appreciation and structural shift towards non-tradable sectors. Finally, if the budgetary process is not transparent and the institutional setting gives raise to severe governance and corruption problems, the budget would not be an adequate fiscal policy instrument.

2. **This annex provides a theoretical framework and illustrative calculations for the optimal allocation of the oil and gas fiscal revenues over time, based on an objective function, and subject to an inter-temporal budget constraint.** The methodology of derivation is close in spirit to the framework presented by Engel and Valdes (2000). The authors argue that while intergeneration transfers usually do not take place, policy makers have to make explicit decisions about the intergenerational distribution of revenues related to the extraction of exhaustible resources. The natural starting point for such a consideration is the permanent income hypothesis. Under this hypothesis economic agents should spend only the permanent component of their current income. As the immediate implication of the permanent income framework for resource-rich country Liuksila, et al. (1994) recommends that a prudent government should keep the value of total wealth constant over time. This can be achieved through a full conversion of the oil-wealth into net financial assets, so that future interest payments compensate future generation for depleted oil resources. Current government consumption out of oil is therefore equal to the implicit interest earned on oil-wealth of the country.

3. **Permanent income hypothesis is generally too restrictive as it rules out intergemerational transfers of the oil related wealth (Engel and Valdes (2000)).** The correct approach, therefore, is to spread the oil revenues "not by giving every generation the same amount of public good...but by choosing among all possible policies that are Pareto improving, the one that increase SWF (social welfare function) the most." The model presented in this annex fulfills these requirements.[11] Furthermore, the model shows that the requirement of preserving the oil wealth constant in per capita terms (permanent income hypothesis) can be strictly optimal when the non-oil GDP per capita is expected to be flat in the long run. If the non-oil GDP per capita is expected to increase over time, saving oil resources for future generations that will be

[11] On the contrary extension to the permanent income hypothesis suggested by Davoodi (2002) in which oil wealth is kept constant as a share of GDP implies that oil expenditures are benefiting more (in dollar terms) generations of higher income, what clearly is not optimal.

richer anyway need not to be justified on intergenerational equity grounds. On the contrary if the decline in per capita non-oil GDP is expected to decline over time (for example due to rapid growth of population) the optimal fiscal strategy requires an increasing rather than constant real per capita net wealth over time. Although the recommendation of constant net wealth is only a special case in the optimization problem, it is the most robust to assumptions, offers a simple rule of thumb, and therefore might be attractive for actual policy-making.

4. **The government's objective function is to maximize welfare of its citizens living within the time horizon through smoothing the disposable income per capita.** For the purpose of this analysis, the disposable income is defined as the after-tax non-oil GDP per capita[12] plus oil-financed government expenditure per capita. Transfers to population increase directly the disposable income, whereas public consumption is assumed to be equivalent to private consumption. The focus on disposable income allows avoiding the explicit modeling of private sector saving/consumption decision. This simplification is desired as almost all the revenues from the oil extraction accrue to the government, and the problem of allocation of these revenues dwarfs possible consumption smoothing undertaken by the individuals. In addition, private opportunities for shifting consumption in time are constrained by the undeveloped financial institutions and the lack of collateral.

5. **It is assumed that oil-related expenditure is equivalent to public consumption or transfers to population.** Treating public investments as consumption reflects well-documented skepticism about the efficiency of public investment programs. The risk of failed investments is particularly high when a rapid surge in the available financing due to oil extraction is not met by an adequate institutional capacity to select and implement only the most profitable projects. The resulting public expenditure ceiling, therefore, should not be binding for some particular investment projects that yield a very high rate of return, because as those can be treated as substitutes for investment in financial assets. Such projects, however, need to be evaluated on a case-by-case basis. Only in the case of particularly profitable and reliable projects it is possible to assume the rate of return is higher that the one earned on financial assets.

6. **Formally, the optimal rule for public expenditure is derived from maximizing the government's objective function, combined with the inter-temporal budget constraint.**

Inter-temporal government utility function has the form:[13]

$$U = \sum_{t=1}^{T} \beta^t \ln I_t = \sum_{t=1}^{n} \beta^t \ln\left(\frac{GDP_t^{Non-oil}(1-\tau_t) + E_t^{Oil}}{N_t}\right)$$

where β is the time preference factor and I_t is the proxy for the disposable income per capita defined as a sum of after-tax non-oil GDP ($GDP_t^{Non-oil}$) per capita and oil-financed government

[12] In the empirical application of the framework to the case of Azerbaijan, after-tax non-oil GDP per capita accounts also for non-oil related transfers (constant share of non-oil GDP at 8.4 percent) and workers remittances from abroad (constant share of non-oil GDP at 1.7 percent).

[13] Compare footnote 2. We do not show workers remittances and non-oil budgetary transfers for the sake of transparency of the presentation.

expenditure E_t^{Oil} per capita. N_t is the size of the population, τ_t is the effective tax rate on non-oil GDP. This utility function is maximized subject to the inter-temporal budget constraint.

7. **The inter-temporal government budget constraint implies that the net present value of all future revenues must be equal to the net present value of all future expenditures and change in the net present value of debt.** This inter-temporal budget constraint is derived in the following three steps: (i) we specify the government budget constraint in each period, (ii) we specify the relation between the oil-related fiscal revenues and the rate of oil reserves depletion, and (iii) we derive the inter-temporal budget constraint by iterative substitution across the time horizon.[14] Fiscal sustainability implies that the inter-temporal budget constraint has to be satisfied over the entire future, i.e. over the infinite number of years. In some scenarios it is also allowed that the shortsighted government is planning to satisfy the constraint over explicitly defined finite period of time. In such case it is imposed that deficit is equal to zero in every period after the end of time horizon.[15] Such approach yields results that are virtually identical to infinite budget constraint, if time horizon is very long.

8. The government budget constraint in each period simply states that the budget deficit has to be covered by a decline in net government assets.

$$\left[E_t^{Oil} + E_t^{Non-oil} + i \cdot D_{t-1}\right] - \left[R_t^{Oil} + R_t^{Non-oil} + i \cdot FA_{t-1}^{Oil}\right] = \left[D_t - D_{t-1}\right] - \left[FA_t^{Oil} - FA_{t-1}^{Oil}\right]$$

where $E_t^{Non-oil}$ is non-oil-financed and non-interest government expenditure, R_t^{Oil} stands for revenues from oil extraction that are appropriated by the budget and Oil Fund, $R_t^{Non-oil}$ are budgetary non-oil revenues. i is the real interest rate, D_t is public debt, and FA_t^{Oil} represents financial assets accumulated out of oil-revenues. The distinction between debt and oil-based financial assets is somehow artificial. However it is further assumed that debt to GDP is hold constant as a share of non-oil GDP, while the path of oil-based assets is optimized, therefore this distinction is useful.

9. **The relation between the oil-related fiscal revenues and the rate of oil reserves depletion** is given by the change of the (current) value of future oil revenues from extraction to be appropriated by the budget and Oil Fund V_t^{Oil} from period t-1 to period t:

$$V_t^{Oil} = (1+i) \cdot V_{t-1}^{Oil} - R_t^{Oil}$$

It is also possible to define total oil-related wealth W_t^{Oil} as the sum of value of remaining oil revenues to be appropriated by the budget and Oil Fund and accumulated oil related assets.

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[14] Similar derivation is given by Davoodi (2002).

[15] Only if time horizon is shorter than time necessary for the full depletion of oil resources we allow the government to spend net present value of remaining oil resources. In the following periods government is still assumed to have zero non-oil deficit, however it runs overall budget surplus equal to current oil revenues.

$$W_t^{Oil} = V_{t-1}^{Oil} + FA_t^{Oil}$$

Which allows rewriting the budget constraint in every period as:

$$\left[E_t^{Oil} + E_t^{Non-oil} + i \cdot D_{t-1}\right] - \left[R_t^{Non-oil}\right] = \left[D_t - D_{t-1}\right] - \left[W_t^{Oil} - W_{t-1}^{Oil}\right] + i \cdot W_{t-1}$$

This identity shows that the non-oil deficits (that is overall budget deficits without revenues related to oil - extraction or interest earned on oil-related assets) are financed by interest earned on total oil wealth (permanent income out of the oil wealth) and changes in oil wealth and public debt.

10. **The inter-temporal budget constraint is then derived by iterative substitution for financial assets in identity from paragraph 8 across the entire time horizon.** However, it is necessary to make a few simplifying assumptions about non-oil revenues, expenditures and debt. Specifically, it is assumed that non-oil expenditures (including public debt service) in each period are equal to non-oil revenues and are a constant share of non-oil GDP. This assumption would imply that the government can only shift its oil related fiscal revenues across generations to increase the income of the generations that are worse off.[16] Furthermore, public debt is assumed to remain constant as a share of the non-oil GDP.[17] With these assumptions it is possible to show that:[18]

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[16] Too much redistribution across time, including the non-oil tax revenues seem to give results that are of less practical importance.

[17] It is possible to include some debt dynamics in the analysis, in particular to analyze the situation when the government decides to redeem all or part of public debt using the oil revenues or use oil revenues for debt service. However, since we take the net asset view, it is actually irrelevant whether one is borrowing to finance its expenditures, or depleting its oil wealth. It should be also noted that public debt constitutes only a small fraction of value of oil assets in Azerbaijan.

[18] With simplifying assumption stated in paragraph 10, the identity form paragraph 8 can be expressed as:

$$\frac{E_t^{Oil} - R_t^{Oil} - g_t D_{t-1} + FA_t^{Oil}}{(1+i)} = FA_{t-1}^{Oil}$$

Forwarding this identity forward by one period we get (again assuming debt at a constant share of non-oil GDP) we get:

$$\frac{E_{t+1}^{Oil} - R_{t+1}^{Oil} - g_{t+1}(1+g_t) D_{t-1} + FA_{t+1}^{Oil}}{(1+i)} = FA_t^{Oil}$$

We use this result to eliminate FA_t^{Oil} from the first identity:

$$\frac{E_t^{Oil} - R_t^{Oil} - g_t D_{t-1}}{(1+i)} + \frac{E_{t+1}^{Oil} - R_{t+1}^{Oil} - g_{t+1}(1+g_t) D_{t-1} + FA_{t+1}^{Oil}}{(1+i)^2} = FA_{t-1}^{Oil}$$

By forwarding the original identity by two periods we can similarly eliminate FA_{t+1}^{Oil} in the last equation. By repeating the substitution successively we can eliminate FA_{t+2}^{Oil}, FA_{t+3}^{Oil} and so on. This sequence of steps leads us to constraint:

$$\sum_{t=1}^{T} \frac{E_t^{Oil}}{(1+i)^t} = \sum_{t=1}^{T} \frac{R_t^{Oil}}{(1+i)^t} + \frac{(1+i)g}{(1+g)(i-g)} D_0 = W_{t-1} + NPV(\Delta D)$$

This equation states that the net present vale of oil-financed expenditure must be equal to the sum of net present value of all oil-revenues and present value of future increases in nominal debt. This is the inter-temporal budget constraint that government faces in its optimization decision about allocation of oil spending.

11. **Optimization of the utility function of the government subject to the inter-temporal budget constraint yields the following optimal path of disposable income:**

$$I_{t+1} = \frac{(1+i)}{(1+\beta)} I_t$$

By substituting the I_t in the equation, we obtain the following recursive rule for expenditure financed out of the oil wealth as a share of the non-oil GDP:

$$\frac{E_{t+1}^{Oil}}{GDP_{t+1}^{Non-oil}} = \frac{(1+i)(1+n)}{(1+\beta)(1+g_{t+1})} \left[1 + \frac{E_t^{Oil}}{GDP_t^{Non-oil}} - \tau_t \right] + \tau_{t+1} - 1$$

where g_t is rate of growth of non-oil GDP and n_t is rate of growth of population. The path of oil-financed expenditures consistent with this rule and with budget constraint is derived numerically. It should be noted that with permanent non-oil per capita growth the optimal rule that implies constant disposable income per capita can be supported only for the finite number of years. In this case we follow the algorithm suggested by Engel and Valdes (2000). Oil wealth is used to raise the income of the poorest generation until it equals the second poorest. If it does not exhaust oil wealth, the income of two poorest generations is raised until it equals that of third poorest. We repeat this algorithm until oil wealth is fully exhausted. Afterwards disposable income is raising at the rate of growth of non-oil GDP per capita.

12. **Based described methodology, the optimal total expenditure, the optimal consolidated budget deficit and the optimal non-oil budget deficit as ratios to non-oil GDP are derived.** Results are highly sensitive to two main sets of parameters:

(i) parameters that characterize government preferences: time horizon and time preference factor; and

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$$\sum_{t=1}^{T} \frac{R_t^{Oil} - E_t^{Oil}}{(1+i)^t} - D_{t-1} \sum_{t=1}^{T} \frac{g_t (1+g_{t-1})^{t-1}}{(1+i)^t} = FA_{t-1}^{Oil} + \frac{FA_T^{Oil}}{(1+i)^T}$$

Since we assume that initial stock of oil related assets is equal to zero and from terminal (or tranversality) condition we know the same is true about last element of the last equation, the right hand side of the constraint disappears, what leads us to the constraint as shown in the paragraph 10 (for simplicity of exhibition it is further assumed that growth rate is constant throughout time).

(ii) parameters beyond direct control of the government: population growth, international interest rates, growth rates of non-oil GDP, and oil price changes.

13. **Intuitively, the first set of parameters, time horizon together with time preference factor represents the impatience of the government and its willingness to expatriate all rents from oil extraction (and to smaller degree also non-oil revenues) for nearer periods of time.** If interest rate were equal to the time preference factor, government would ensure that disposable income per capita is constant throughout targeted time horizon. However, if interest rate were lower, the government would tend to shift consumption forward. Similarly, if the rate of growth of the non-oil GDP is the same as the rate of growth of population, the non-oil part of disposable income is constant throughout time, which implies that it is optimal for the government to distribute the oil revenues equally in each period. When the rate of growth of the non-oil GDP is faster, however, it would be optimal to also shift the oil revenues forward.

14. **Adjustment costs.** Optimal public spending path derived above does not take into account the difficulties in rapid adjustments in **expenditures** and the limited capacity of economy to absorb such adjustments. In the extension to basic model above these adjustment costs are accounted for in line with methodology **suggested** by Engel and Valdes (2000). More specifically the modified utility function is:

$$U = \sum_{t=1}^{T} \beta^t \left[\ln I_t - k \cdot (\ln I_t^{OPT} - \ln I_{t-1})^2 \right]$$

where I_t^{OPT} is optimal disposable income per capital as derived in the basic model. Engel and Valdes (2000) prove that the maximization of this utility function subject to the original intertemporal budget constraint can be approximated by the simple rule:

$$\ln I_t - \ln I_{t-1} = \alpha \cdot (\ln I_t^{OPT} - \ln I_{t-1})$$

where α is the speed of adjustment towards optimal path of income and it is derived as a function of parameters of utility function:

$$\alpha = \frac{1 - k(1-\beta) + \sqrt{1 + 2k(1+\beta) + k^2(1-\beta)^2}}{1 + k(1-\beta) + \sqrt{1 + 2k(1+\beta) + k^2(1-\beta)^2}}$$

15. Intuitively, the government that in the absence of adjustment costs would immediately increase spending to the optimal level, would introduce increases more gradually and converge to optimal path only after several years of adjustment in the presence of these costs. Parameters that underlie presented results imply the speed of adjustment α equal to 25 percent, which means that a quarter of the gap between actual and optimal path of disposable income is covered in each year. As path of after-tax non-oil GDP is exogenous this rule allows for the derivation for modified path of government oil-financed expenditures. In practical exercises we sometimes introduce simple limit to annual growth of government as a share of non-oil GDP.

16. All presented scenarios are sustainable as they satisfy ex-ante the inter-temporal budget constraint. It should be noted, however, that too optimistic assumptions would lead to the choice of path that ultimately can prove to be unsustainable when less favorable outcomes would undermine fiscal stance of the government.

17. **However, the political risk is a major limitation in the application of this approach.** While large deficits in next few years are consistent with optimal (and sustainable) fiscal path of relatively impatient government, the optimality of this path requires very substantial surpluses in longer-term perspective. This, however, may not be feasible, as the ability of the current government to commit future government to actually run such large surpluses is very low. In particular the fiscal path that is optimal (and sustainable) ex ante may prove to be unsustainable ex post, when future governments would be systematically avoiding fiscal adjustment. Scenarios reported below present optimal path that would be chosen by relatively conservative government with infinite time horizon and time preference discount equal to the interest rate. Scenarios differ with respect to the assumed non-oil growth rates. Results of sensitivity analysis in respect to oil prices and interest rates are also reported.

18. **We first consider two basic scenarios that correspond to constant and increasing non-oil GDP per capita to illustrate the character of choices that government needs to make.** The first basic scenario is the most conservative as it assumes that the non-oil GDP per capita is constant over time and the government is assumed to care for current and all future generations. Results reproduce the Permanent Income Hypothesis. The second basic scenario shows the optimal fiscal strategy when non-oil GDP per capita is increasing over time. Tables 1 and 4 as well as Figures 1 and 2 summarize the following fiscal sustainability implications for these illustrative scenarios: (i) the path of the disposable income per capita reported at constant US dollar prices; (ii) associated public spending, the non-oil fiscal deficit and overall budget deficits as a share of the non-oil GDP; (iii) the time path of financial asset accumulation in the Oil Fund as a share of the non-oil GDP. Note that those scenarios should only be seen as an illustration of how the optimal inter-temporal allocation of oil revenues should be made and what are the issues that need to be considered when designing a fiscal framework for public expenditure. Scenarios that are exactly in line with our macro projections presented in Section A of Chapter 4 are more complex in character and account for varying growth rates and expenditure adjustment costs. Results of these scenarios are presented in detail further below.

19. **The first scenario, or the case of flat non-oil GDP per capita implies optimal path of spending that is identical to the permanent income hypothesis, assuming an infinite time horizon.** To construct this scenario, we assume that the real non-oil GDP growth is equal to the population growth rate (one percent) over the infinite time horizon. Furthermore, we assume that the real annual interest rate is equal to the rate of time preference (4 percent), and the underlying oil price, including transport and other costs is equal to US$18 per bbl after 2006. Finally, we assume that the effective tax rate on the non-oil economy is constant as a share of the non-oil GDP and equal to 23 percent of the non-oil GDP. The results shown in Table 1 suggest, that given the projected extraction rates and the amount of fiscal revenues accruing to the government, the optimal non-oil deficit that can sustain a constant disposable income per capita

over the entire time horizon is 13.5 percent of the non-oil GDP per annum.[19] This allows for keeping disposable income constant infinitely at its highest viable level just above US$570 per capita.

20. **The total expenditure that the government** can sustain over the time horizon is therefore equal to 36.5 percent of the non-oil GDP. Under this scenario, the government can consume only the annuity fraction of its net wealth, thus keeping the net wealth constant at about 450 percent of the non-oil GDP forever. This implies that during the first four years (2002–2005) the government can increase the overall deficit that will peak at 8.2 percent of the non-oil GDP in 2004, in order to allow the current generations to consume the permanent income fraction out of the future oil wealth, financing this excess consumption by borrowing. Afterwards, as the large production volumes would materialize, the government needs to save a larger fraction of its oil proceeds thus returning to a balanced budget in 2006 and then running a large surplus, which will peak at slightly around 47 percent of the non-oil GDP in 2013. As soon as the oil reserves are depleted, in 2024, the government needs to run a permanent budget surplus that allows keeping financial assets per capita constant (population growth requires continuing asset accumulation). Although this condition might seem restrictive, interest earned on accumulated financial assets still allows financing the non-oil deficit at 13.5 percent of the non-oil GDP forever.

21. **Permanent income hypothesis is not optimal if the non-oil GDP per capita is increasing.** To illustrate this point we present a second and more optimistic basic scenario, in which the real non-oil GDP is growing faster than the population. This scenario is presented in Table 4 We keep all the assumptions the same as in our base case, except for the non-oil GDP growth rate, which is assumed at two percent per annum forever. Under these assumptions it is optimal to spend faster the oil wealth in order to increase the welfare of the current generations, as future generations will be benefited by the non-oil growth. This allows keeping the disposable income just above US$690 per capita until 2035, when the accumulated effects of non-oil GDP growth compensates the depletion of oil revenues, and thereafter the disposable income per capita can increase forever. This is as much income smoothing that the government can achieve unless it is allowed to perform intergenerational transfers of the non-oil income.

22. **The share of public expenditure in total non-oil GDP in scenario of increasing per capita non-oil GDP increases up to above 50 percent during the initial period and is declining gradually to 23 percent in 2035.** Expenditures will stay at this level permanently. As a result, the sustainable non-oil deficit will be now much higher in the initial period, reaching 33 percent of GDP in 2003, which implies that the overall deficit to the non-oil GDP will reach 28 percent. Later on, when the rapid oil production takes place and the non-oil growth benefits the population, the non-oil deficit will decline gradually to zero in 2036. This path implies substantial surplus on the overall budget, reaching 25 percent in 2013, which turns into a deficit when oil resources are depleted before finally converging to zero percent in 2036. By this time oil-related financial assets will also be fully depleted.

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[19] This ratio is not directly comparable to budgetary figures presented in the PER. This is because the denominator (non-oil GDP) in the latter case is much larger due to higher growth before 2010. As it is shown below the corresponding figure under high non-oil GDP is just below 10 percent of non-oil GDP.

23. Described below are two scenarios that are based on growth rates as projected in our macro framework in Section A. Accordingly, both scenarios assume higher non-oil GDP growth rate, on average 5.9 percent during 2003 -2010. The two projections, however, differ in their expectations about the non-oil GDP growth rate in the long-run (beyond 2010). The first scenario assumes flat non-oil GDP per capita after 2010, whereas the second scenario assumes per capita growth rate of 0.5 percent.[20] As initial growth is averaged 5.9 percent during 2003-2010, the optimal shift of resources would be large even if per capita non-oil GDP is expected to be flat in the long run. In the case of permanent per capita non-oil GDP growth after 2010, the optimal oil-financed consumption shifting would be very substantial. However, a dramatic increase of public expenditure for a brief period of time may lower their efficiency and have important political and economic risks. To take these adjustment costs into account, we introduce explicitly barriers to annual growth of government expenditures.[21] The results suggest that due to adjustment costs, the non-oil deficit and public expenditure are much lower during 2003-2010 and slightly higher in the rest of the time horizon as compared to results under the absence of adjustment costs.[22]

24. In analyzing these results it must be understood that optimistic assumptions about future growth and oil prices lead to the choice of more expansionary path of expenditures that ultimately might prove to be unsustainable when underlying predictions are not realized. In such a situation, the sharp adjustment in the fiscal policy would be necessary in the future in order to regain sustainability. It is therefore argued that government should tend to adopt conservative assumptions in order to avoid risks of major policy reversals. Accordingly, the scenario with rapid growth projected in medium term but with flat non-oil GDP per capita in the long run is picked as a base for fiscal sustainability analysis underlying this PER.

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[20] As it was illustrated above, growth implies that the government should choose to shift some oil-financed consumption forward as ten years of fast non-oil growth reduces the need for oil spending in the future.

[21] We usually assume a quadratic loss function for changes in public expenditure levels. For more details on the derivation procedure, see Engel and Valdes (2000). Results presented here are based on the limit to annual increases in public expenditures as a share of non-oil GDP of 1 percent before 2008. Given high initial rates of growth of non-oil GDP this restriction still allows for substantial increases in expenditures in absolute terms.

[22] In the absence of adjustment costs the average non-oil fiscal deficit between 2002 and 2007 would equal 31.1 percent of non-oil GDP in case of flat non-oil GDP per capita after 2006 and 39.6 percent in case with permanent growth. Consequently the expenditures would average 54.1 and 62.6 percent of non-oil GDP, respectively. Details can be found in Tables 19 and 20.

Table 1. Constant Non-oil GDP per Capita

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	573	573	573	573 constant
Public spending, share of non-oil GDP	36.5	36.5	36.5	36.5% constant
Non-oil budget balance, share of non-oil GDP	-13.5	-13.5	-13.5	-13.5% constant
Overall budget balance, share of non-oil GDP	-2.7	33.8	22.8	4.5% constant
Average Oil Fund assets, share of non-oil GDP	-19	170	410	454% constant

Assumptions: Annual population growth rate: 1%, non-oil GDP growth rate: 1%, time preference rate: 4%, interest rate: 4%, effective tax rate on non-oil GDP: 23%. International oil price is US$18 per bbl after 2006.

Table 2. Constant Non-oil GDP per Capita (Low oil prices)

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	551	551	551	551 constant
Public spending, share of non-oil GDP	32.5	32.5	32.5	32.5% constant
Non-oil budget balance, share of non-oil GDP	-9.5	-9.5	-9.5	-9.5% constant
Overall budget balance, share of non-oil GDP	-0.4	22.9	16.3	3.2% constant
Average Oil Fund assets, share of non-oil GDP	-7	124	288	320 % constant

Assumptions: International oil prices lower by 20% (US$14.4 per barrel), all other assumptions as in the base scenario.

Table 3. Constant Non-oil GDP per Capita (High oil prices)

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	596	596	596	596 constant
Public spending, share of non-oil GDP	40.4	40.4	40.4	40.4% constant
Non-oil budget balance, share of non-oil GDP	-17.4	-17.4	-17.4	-17.4% constant
Overall budget balance, share of non-oil GDP	-5.1	45.4	27.9	5.8% constant
Average Oil Fund assets, share of non-oil GDP	-31	228	533	587% constant

Assumptions: International oil prices higher by 20% (US$21.6 per barrel), all other assumptions as in the base scenario.

Table 4. Permanently Increasing Non-oil GDP per Capita

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	657	657	657	constant at 693 increasing at .5% after 2058
Public spending, share of non-oil GDP	49.4%	44.7%	40.2%	declining 23% after 2058
Non-oil budget balance, share of non-oil GDP	-26.4%	-21.7%	-17.2%	declining 0% after 2058
Overall budget balance, share of non-oil GDP	-16.5%	20.3%	9.9%	declining 0% after 2058
Average Oil Fund assets, share of non-oil GDP	-56%	24%	168%	declining 0% after 2058

Assumptions: Annual non-oil GDP growth rate: 1%, all other assumptions as in base scenario.

Table 5. Permanently Increasing Non-oil GDP per Capita
(Low oil prices)

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	625	625	625	constant at 625 increasing at .5% after 2048
Public spending, share of non-oil GDP	43.8%	39.4%	35.1%	declining 23% after 2048
Non-oil budget balance, share of non-oil GDP	-20.8%	-16.4%	-12.1%	declining 0% after 2048
Overall budget balance, share of non-oil GDP	-12.5%	11.5%	6.0%	declining 0% after 2048
Average Oil Fund assets, share of non-oil GDP	-38%	0%	84%	declining 0% after 2048

Assumptions: Annual non-oil GDP growth rate: 1%, international oil prices lower by 20% (US$14.4 per barrel),all other assumptions as in base scenario.

Table 6. Permanently Increasing Non-oil GDP per Capita
(High oil prices)

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	687	687	687	constant at 687 increasing at .5% after 2067
Public spending, share of non-oil GDP	54.6%	49.7%	45.0%	declining 23% after 2067
Non-oil budget balance, share of non-oil GDP	-31.6%	-26.7%	-22.0%	declining 0% after 2067
Overall budget balance, share of non-oil GDP	-20.4%	30.3%	13.0%	declining 0% after 2067
Average Oil Fund assets, share of non-oil GDP	-73%	66%	261%	declining 0% after 2067

Assumptions: Annual non-oil GDP growth rate: 1%, international oil prices higher by 20% (US$21.6 per barrel),all other assumptions as in base scenario.

Table 7. Fiscal Envelope I
Growth Rates from the PER until 2010 and Stabilization of Non-oil GDP per Capita Thereafter in the Presence of adjustment Costs

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	627	791	799	799 constant
Public spending, share of non-oil GDP	31.6%	34.9%	35.0%	35.0% constant
Non-oil budget balance, share of non-oil GDP	-8.6%	-11.9%	-12.0%	-12.0% constant
Overall budget balance, share of non-oil GDP	1.3%	23.1%	15.4%	1.7% constant
Average Oil Fund assets, share of non-oil GDP	9%	141%	310%	343% constant

Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% afterwards, maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, all other assumptions as in the base scenario.

Table 8. Fiscal Envelope I (Low Oil Prices)
Growth Rates from PER until 2010 and Stabilization of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	627	767	764	764 constant
Public spending, share of non-oil GDP	31.6%	32.0%	30.6%	30.6% constant
Non-oil budget balance, share of non-oil GDP	-8.6%	-9.0%	-7.6%	-7.6% constant
Overall budget balance, share of non-oil GDP	-0.4%	14.2%	10.9%	1.1% constant
Average Oil Fund assets, share of non-oil GDP	6%	80%	193%	217% constant

Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0 5% afterwards, maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, international oil prices lower by 20% (US$14.4 per barrel), all other assumptions as in the base scenario.

Table 9. Fiscal Envelope I (High Oil Prices)
Growth Rates from the PER until 2010 and Stabilization of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	627	811	836	836 constant
Public spending, share of non-oil GDP	31.6%	37.3%	39.5%	39.5% constant
Non-oil budget balance, share of non-oil GDP	-8.6%	-14.3%	-16.5%	-16.5% constant
Overall budget balance, share of non-oil GDP	2.8%	33.0%	18.8%	2.4% constant
Average Oil Fund assets, share of non-oil GDP	11%	214%	434%	474% constant

Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% afterwards, maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, international oil prices higher by 20% (US$21.6 per barrel), all other assumptions as in the base scenario.

Table 10. Fiscal Envelope II
Growth Rates from the PER until 2010 and 0.5 percent Growth of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	627	826	906	Constant at 910 Increasing at 0.5% after 2063
Public spending, share of non-oil GDP	31.6%	37.6%	41.9%	Declining 23% after 2063
Non-oil budget balance, share of non-oil GDP	-8.6%	-14.6%	-18.9%	Declining 0% after 2063
Overall budget balance, share of non-oil GDP	1.3%	19.4%	4.6%	Declining 0% after 2063
Average Oil Fund assets, share of non-oil GDP	9%	126%	226%	Declining 0% after 2063

Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% and 1% afterwards, respectively. Maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, all other assumptions as in the base scenario.

Table 11. Fiscal Envelope II (Low Oil Prices)
Growth Rates from the PER until 2010 and 0.5 percent Growth of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	627	819	849	Constant at 849 Increasing at 0.5% after 2049
Public spending, share of non-oil GDP	31.6%	36.7%	35.2%	Declining 23% after 2049
Non-oil budget balance, share of non-oil GDP	-8.6%	-13.7%	-12.2%	Declining 0% after 2049
Overall budget balance, share of non-oil GDP	-0.4%	8.3%	2.1%	Declining 0% after 2049
Average Oil Fund assets, share of non-oil GDP	6%	55%	96%	Declining 0% after 2049

Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% and 1% afterwards, respectively. Maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, international oil prices lower by 20% (US$14.4 per barrel), all other assumptions as in the base scenario.

Table 12. Fiscal Envelope II (High Oil Prices)
Growth Rates from the PER until 2010 and 0.5 percent Growth of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	627	826	920	Constant at 978 Increasing at 0.5% after 2077
Public spending, share of non-oil GDP	31.6%	37.6%	43.5%	Declining 23% after 2077
Non-oil budget balance, share of non-oil GDP	-8.6%	-14.6%	-20.5%	Declining 0% after 2077
Overall budget balance, share of non-oil GDP	2.8%	32.0%	12.2%	Declining 0% after 2077
Average Oil Fund assets, share of non-oil GDP	11%	208%	388%	Declining 0% after 2077

Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% and 1% afterwards, respectively. Maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, international oil prices higher by 20% (US$21.6 per barrel), all other assumptions as in the base scenario.

Table 13. Constant Non-oil GDP per Capita

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	591	591	591	591 constant
Public spending, share of non-oil GDP	39.1%	39.1%	39.1%	39.1% constant
Non-oil budget balance, share of non-oil GDP	-16.1%	-16.1%	-16.1%	-16.1% constant
Overall budget balance, share of non-oil GDP	-4.9%	33.3%	22.5%	2.3% constant
Average Oil Fund assets, share of non-oil GDP	-16%	164%	414%	463% constant

Assumptions: Annual population growth rate: 0.5%, non-oil GDP growth rate: 0.5%, time preference rate: 4%, interest rate: 4%, effective tax rate on non-oil GDP: 23%. International oil price is US$18 per bbl after 2006.

Table 14. Constant Non-oil GDP per Capita (Low interest rates)

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	572	572	572	572 constant
Public spending, share of non-oil GDP	35.9%	35.9%	35.9%	35.9% constant
Non-oil budget balance, share of non-oil GDP	-12.9%	-12.9%	-12.9%	-12.9% constant
Overall budget balance, share of non-oil GDP	-1.4%	36.3%	23.4%	2.6% constant
Average Oil Fund assets, share of non-oil GDP	-4%	205%	470%	520% constant

Assumptions: Interest rates and time preference at 3%, all other assumptions as in the base scenario. The time preference is modified for illustrative purposes in order to maintain the optimality of a fiscal strategy consistent with the permanent income hypothesis.

Table 15. Constant Non-oil GDP per capita (High interest rates)

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	604	604	604	604 constant
Public spending, share of non-oil GDP	41.6%	41.6%	41.6%	41.6% constant
Non-oil budget balance, share of non-oil GDP	-18.6%	-18.6%	-18.6%	-18.6% constant
Overall budget balance, share of non-oil GDP	-7.8%	30.6%	21.6%	2.1% constant
Average Oil Fund assets, share of non-oil GDP	-26%	129%	367%	414% constant

Assumptions: Interest rates and time preference at 5%, all other assumptions as in the base scenario. The time preference is modified for illustrative purposes in order to maintain the optimality of a fiscal strategy consistent with the permanent income hypothesis.

Table 16. Fiscal Envelope I
Growth Rates from the PER until 2010 and Stabilization of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	627	791	799	799 constant
Public spending, share of non-oil GDP	31.6%	34.9%	35.0%	35.0% constant
Non-oil budget balance, share of non-oil GDP	-8.6%	-11.9%	-12.0%	-12.0% constant
Overall budget balance, share of non-oil GDP	1.3%	23.1%	15.4%	1.7% constant
Average Oil Fund assets, share of non-oil GDP	9%	141%	310%	343% constant

Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% afterwards, maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, all other assumptions as in the base scenario.

Table 17. Fiscal Envelope I (Low Interest Rates)
Growth Rates from the PER until 2010 and Stabilization of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	627	774	774	774 constant
Public spending, share of non-oil GDP	31.6%	32.8%	31.9%	31.9% constant
Non-oil budget balance, share of non-oil GDP	-8.6%	-9.8%	-8.9%	-8.9% constant
Overall budget balance, share of non-oil GDP	1.2%	24.1%	15.9%	1.8% constant
Average Oil Fund assets, share of non-oil GDP	8%	145%	323%	357% constant

Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% afterwards, maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, interest rates and time preference at 3%, all other assumptions as in the base scenario. The time preference is modified for illustrative purposes in order to maintain the optimality of a fiscal strategy consistent with permanent income hypothesis.

Table 18. Fiscal Envelope I (High Interest Rates)
Growth Rates from the PER until 2010 and Stabilization of Non-oil GDP per capita Thereafter in the Presence of Adjustment Costs

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	627	806	823	823 constant
Public spending, share of non-oil GDP	31.6%	36.8%	37.9%	37.9% constant
Non-oil budget balance, share of non-oil GDP	-8.6%	-13.8%	-14.9%	-14.9% constant
Overall budget balance, share of non-oil GDP	1.4%	22.2%	14.9%	1.7% constant
Average Oil Fund assets, share of non-oil GDP	9%	137%	300%	332% constant

Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% afterwards, maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, interest rates and time preference at 5%, all other assumptions as in the base scenario. The time preference is modified for illustrative purposes in order to maintain the optimality of a fiscal strategy consistent with the permanent income hypothesis.

Table 19. Fiscal Envelope I
Growth Rates from the PER until 2010 and Stabilization of Non-oil GDP per Capita Thereafter in the Absence of Adjustment Costs

	2002-2007	2008-2018	2019-2024	after 2025
Disposable income per capita, USD	765	765	765	765 constant
Public spending, share of non-oil GDP	53.5%	31.7%	30.7%	30.7% constant
Non-oil budget balance, share of non-oil GDP	-30.5%	-8.7%	-7.7%	-7.7% constant
Overall budget balance, share of non-oil GDP	-23.3%	21.4%	14.8%	1.1% constant
Average Oil Fund assets, share of non-oil GDP	-83%	17%	188%	221% constant

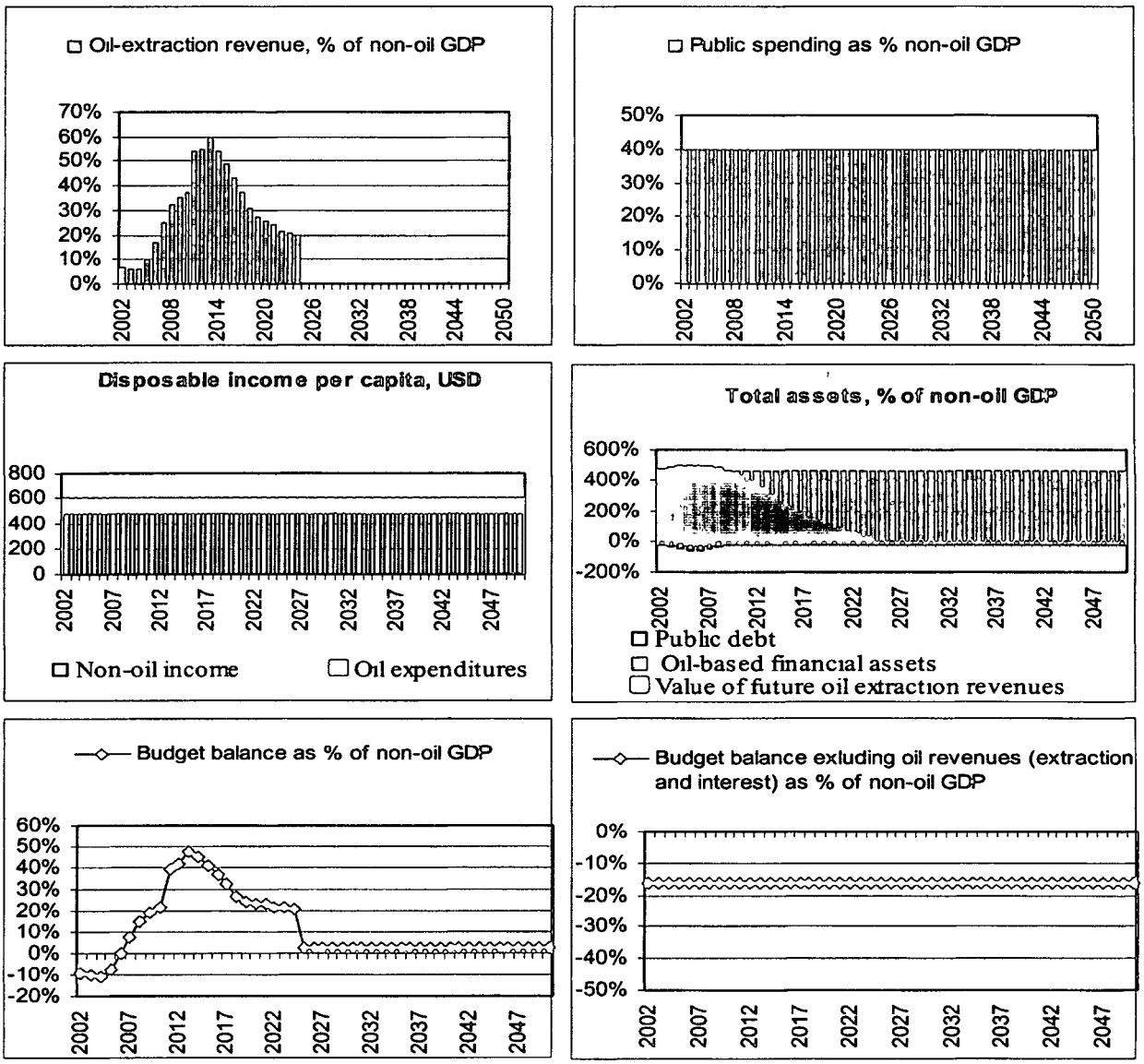
Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% afterwards, all other assumptions as in the base scenario.

Table 20. Fiscal Envelope II
Growth Rates from the PER until 2010 and 0.5 percent Growth of Non-oil GDP per Capita Thereafter in the Absence of Adjustment Costs

	2002-2007	2008-2018	2019-2024	After 2025
Disposable income per capita, USD	818	818	818	Constant at 840 Increasing at 0.5% after 2041
Public spending, share of non-oil GDP	61.7%	36.7%	31.6%	Declining 23% after 2041
Non-oil budget balance, share of non-oil GDP	-38.7%	-13.7%	-8.6%	Declining 0% after 2041
Overall budget balance, share of non-oil GDP	-32.2%	12.6%	7.1%	Declining 0% after 2041
Average Oil Fund assets, share of non-oil GDP	-112%	-74%	33%	Declining 0% after 2041

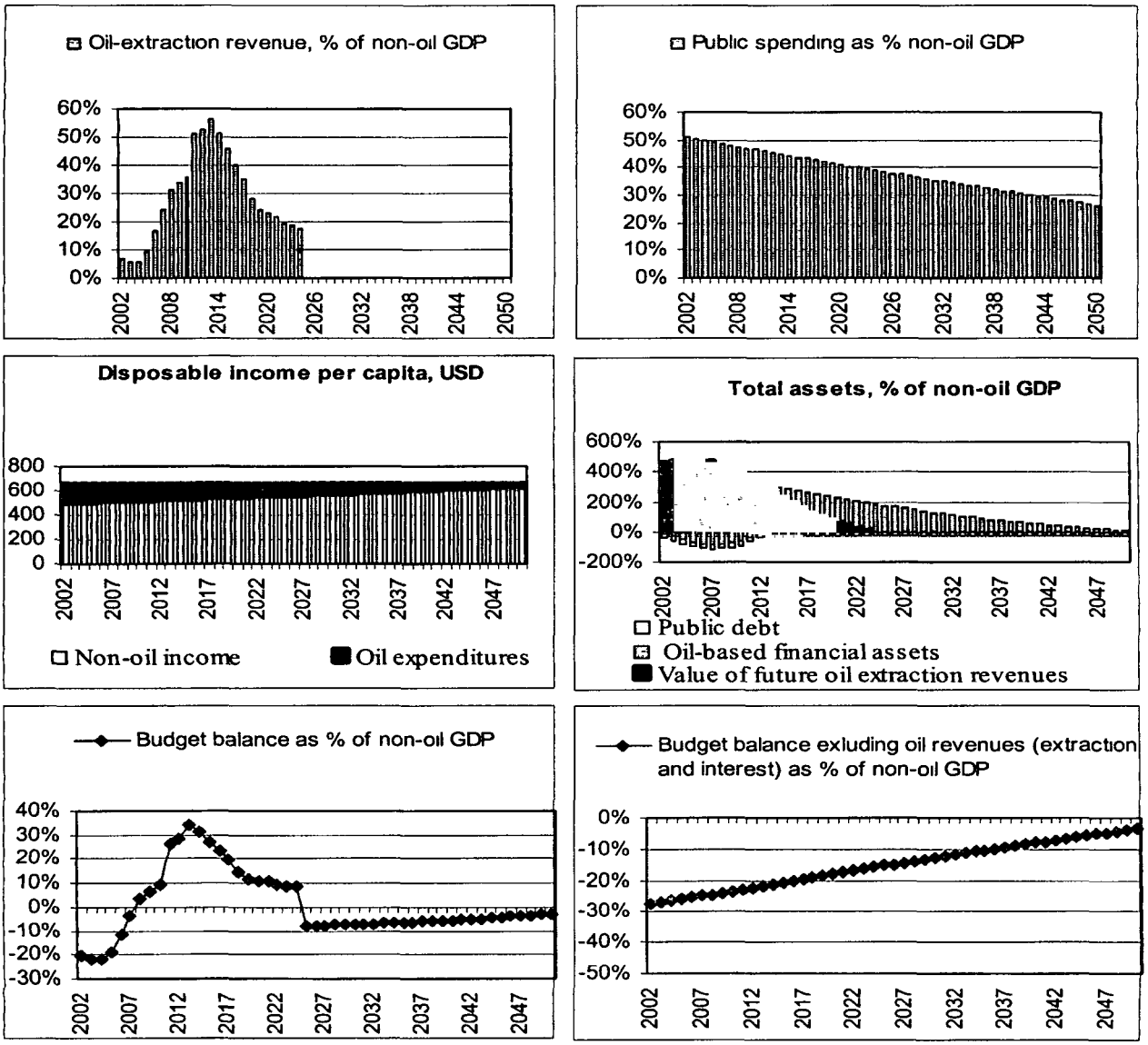
Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% and 1% afterwards, respectively, all other assumptions as in the base scenario.

Figure 1. Constant Non-oil GDP per Capita



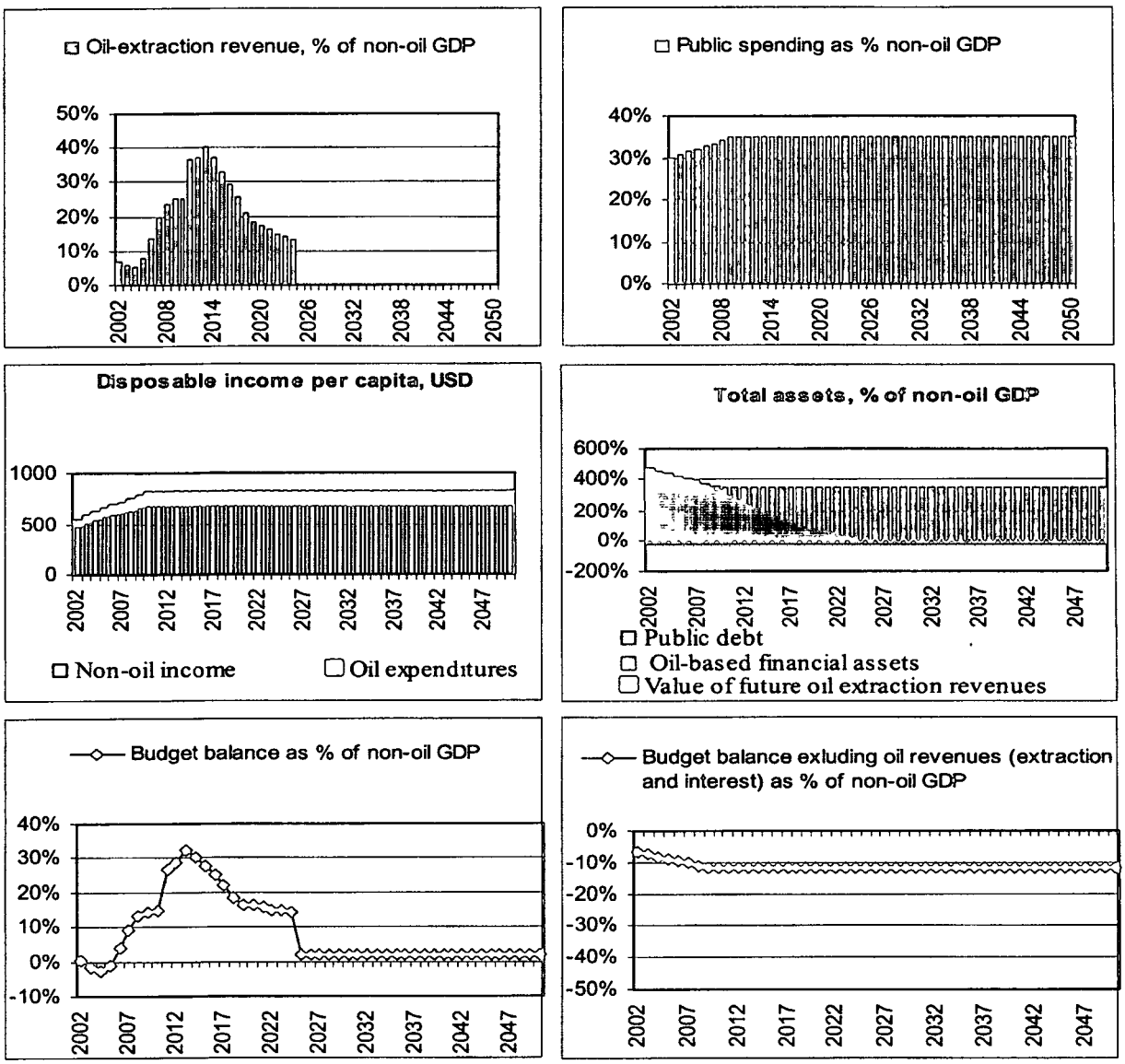
Assumptions: Annual population growth rate: 0.5%, non-oil GDP growth rate: 0.5%, time preference rate: 4%, interest rate: 4%, effective tax rate on non-oil GDP: 23%. International oil price is US$18 per bbl after 2006.

Figure 2. Permanently Increasing Non-Oil GDP per Capita



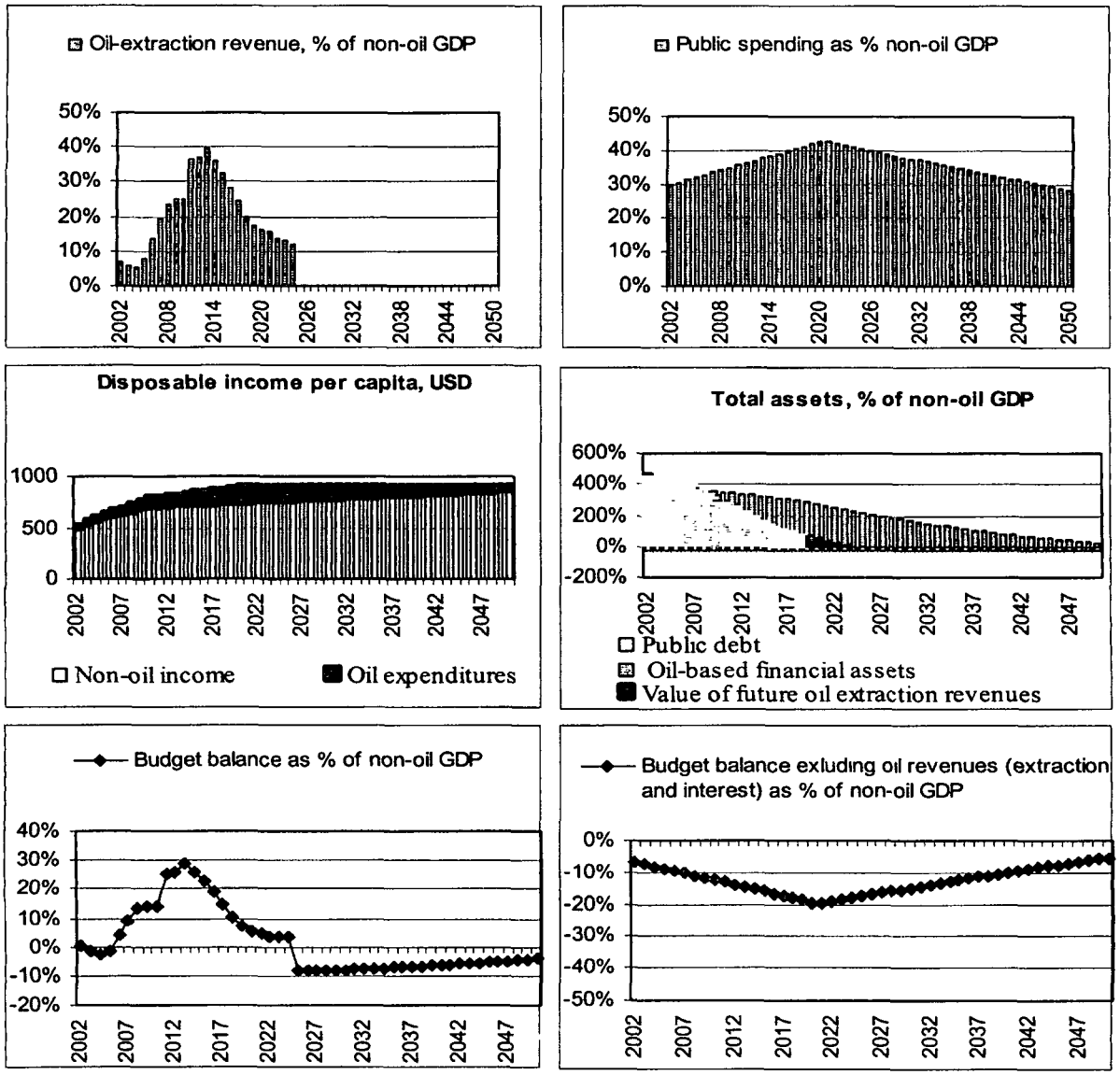
Assumptions: Annual non-oil GDP growth rate: 1%, all other assumptions as in the base scenario.

Figure 3. Fiscal Envelope I
Growth Rates from the PER until 2010 and Stabilization of Non-oil GDP per capita Thereafter in the Presence of Adjustment Costs



Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% afterwards, maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, all other assumptions as in the base scenario.

Figure 4. Fiscal Envelope II
Growth Rates from the PER until 2010 and 0.5 percent Growth of Non-oil GDP per Capita Thereafter in the Presence of Adjustment Costs



Assumptions: Annual population and non-oil GDP growth rate: taken from the PER before 2010 and 0.5% and 1% afterwards, respectively. Maximum annual increase in government expenditures as a share of non-oil GDP 0.7%, all other assumptions as in the base scenario.

ANNEX 5. STATISTICAL INDICATORS FOR AZERBAIJAN PUBLIC EXPENDITURE REVIEW

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
GDP Growth - Overall	6%	10%	7%	11%	9 9%	7.9%	7.3%	5.4%	15 1%	31.3%	25 9%	14.5%	7.5%	5.3%
GDP Growth - Oil/gas sector	0%	42%	31%	2%	20.5%	3.4%	4 0%	2.8%	38 0%	84.5%	49 3%	22 3%	9.3%	5.5%
GDP Growth - Non-oil sector	7%	5%	2%	13%	3.6%	9.0%	8 3%	7 0%	6 3%	3.3%	3.6%	4 7%	4 8%	5 1%
GDP Deflator Growth	9%	-1%	2%	12%	2 7%	2 6%	1 8%	2 0%	1 1%	-10 0%	-6.7%	-1 6%	0 7%	1 6%
Oil Price (US$/bbl) -- IMF assumption	19 3	13 1	18 0	28 3	24.3	23.0	22.0	21 0	21.0	18 0	18 0	18.0	18 0	18.0
Exchange rate, av. AZM per US$	3985	3869	4120	4472	4768	4917	4942	4942	4942	4943	4943	4943	4943	4943
GDP by Sources	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
GDP at market prices	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Net indirect Taxes	7%	4%	4%	6%	8%	9%	9%	9%	8%	7%	7%	7%	6%	6%
Agriculture	20%	18%	18%	16%	16%	16%	17%	17%	16%	14%	13%	12%	12%	12%
Industry	37%	35%	39%	43%	42%	41%	40%	39%	42%	48%	53%	55%	55%	55%
o/w oil and gas	15%	11%	19%	28%	27%	27%	25%	23%	28%	35%	41%	44%	45%	44%
Services	36%	43%	39%	35%	34%	33%	34%	36%	34%	30%	27%	26%	26%	27%
GDP by Uses	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Domestic Absorption	124%	132%	114%	98%	96%	114%	129%	130%	115%	93%	83%	74%	69%	67%
Total Consumption	90%	98%	87%	78%	75%	70%	72%	72%	67%	59%	53%	49%	48%	47%
Gross Domestic Investments	34%	33%	26%	21%	21%	44%	57%	58%	49%	34%	30%	24%	21%	20%
Resource Balance	-24%	-32%	-14%	2%	4%	-14%	-29%	-30%	-15%	7%	17%	26%	31%	33%
Exports GNFS	29%	23%	28%	40%	42%	39%	35%	32%	36%	45%	52%	56%	57%	56%
Imports GNFS	53%	55%	42%	38%	38%	53%	64%	62%	51%	37%	35%	29%	26%	23%
Real Non-oil Sector	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
NO GDP	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Consumption	100%	110%	109%	110%	105%	98%	99%	96%	94%	93%	92%	90%	88%	87%
Private Consumption	86%	93%	91%	88%	87%	79%	78%	76%	74%	74%	73%	72%	70%	69%
Public Consumption	14%	17%	19%	15%	14%	15%	15%	15%	15%	14%	14%	14%	13%	13%
Investment	12%	13%	17%	22%	24%	30%	32%	34%	34%	32%	31%	31%	32%	32%
Non-oil Private Investment	10%	11%	16%	18%	19%	21%	27%	27%	27%	24%	23%	23%	23%	23%
Public Investment	2%	2%	1%	4%	5%	9%	5%	6%	7%	8%	8%	9%	9%	9%
Non-oil Resource Balance	-11%	-23%	-26%	-32%	-29%	-28%	-31%	-30%	-28%	-24%	-23%	-21%	-20%	-18%
Non-oil Exports	20%	14%	13%	14%	12%	14%	13%	12%	12%	15%	17%	18%	18%	18%
Non-oil Imports	31%	37%	39%	46%	42%	42%	44%	42%	41%	40%	40%	39%	38%	36%
Memorandum Items	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Private consumption growth per capita	-4.0%	13.0%	0.1%	7.9%	2.0%	0 1%	7.3%	3 2%	2 9%	3.3%	4.1%	1 9%	2 4%	2.4%
Non-oil GDP per capita in US$	455	503	459	491	492	522	577	633	687	722	761	809	861	916
GNP per capita in US$	497	560	568	612	644	689	753	811	919	1038	1177	1296	1390	1480
GNP adjusted per capita in US$	497	486	417	421	572	622	688	751	822	875	936	994	1063	1138

Balance of payments, US$ mln	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
I Current Account	-971	-1356	-601	-124	-73	-1088	-2119	-2275	-1603	-37	768	1930	2662	3227
Trade Balance	-567	-1038	-406	338	581	-167	-829	-1042	-299	1011	2221	3405	3905	4291
Service Balance	-384	-369	-228	-225	-375	-670	-1077	-1067	-963	-320	-327	-36	319	564
Income (net)	-66	-17	-48	-310	-356	-344	-291	-241	-416	-810	-1210	-1524	-1649	-1717
Current Transfers (net)	46	69	81	73	76	94	78	75	75	83	84	86	87	89
II Capital Account	1114	1297	753	182	166	1059	2169	2325	1715	101	-640	-1901	-2619	-3203
FDI (net)	1093	1024	550	119	265	1134	2062	2170	1638	307	-193	-1151	-1740	-2256
Public Sector M&LT borrowing (net)	11	49	207	239	140	145	127	129	131	100	95	90	87	100
Other ST capital	9	224	-4	-176	-19	-79	101	70	62	100	100	100	100	100
Oil Fund outflow	0	0	0	0	-221	-141	-121	-44	-116	-406	-641	-941	-1066	-1147
III Overall balance	143	-59	152	58	93	-29	49	50	112	64	129	29	43	24
IV Financing	-143	59	-152	-58	-74	19	-50	-111	-133	-64	-129	-29	-43	-24
Change in NFA (increase -)	-143	59	-152	-58	-74	19	-50	-111	-133	-64	-129	-29	-43	-24
V. Financing Gap	0	0	0	0	-19	10	0	60	21	0	0	0	0	0
Memorandum Items	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Gross official res in months of imports	2 3	2 8	4 0	3 8	3.5	2 3	1 9	2 0	2.3	2 4	2 3	2.3	2 4	2.5
Current account balance to GDP ratio	-25%	-30%	-13%	-2%	-1%	-18%	-33%	-32%	-20%	0%	7%	15%	19%	22%
External debt to GDP ratio	13%	16%	23%	23%	23%	23%	23%	24%	22%	19%	17%	15%	15%	15%
Consolidated Budget, AZM bln	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Total Revenues incl. Grants	3023	3370	3487	5007	5713	6748	7249	7727	8865	11349	13905	16296	17856	19229
o/w Oil Fund revenues	0	0	0	655	1001	850	800	804	1255	2816	4095	5123	5756	6221
Oil tax revenues	184	367	400	506	499	754	880	933	926	1554	2389	3209	3563	3833
Non-oil revenues	2839	2991	3026	3846	4213	5143	5568	5990	6684	6979	7421	7965	8537	9176
Total Expenditure	3280	4082	4447	5160	5403	7398	7431	8403	9471	10515	11351	12266	13209	14185
Current	2988	3767	3754	4224	4460	5581	6133	6708	7481	8170	8719	9317	9966	10662
o w consumption	2846	2846	3324	2478	2603	3165	3645	3973	4324	4377	4414	4674	4969	5255
o.w transfers	984	1093	1349	1598	1665	2155	2259	2511	2924	3556	4047	4357	4713	5112
Capital	293	316	693	936	943	1817	1298	1695	1990	2345	2632	2949	3243	3523
Consolidated Deficit	-257	-675	-895	-153	310	-651	-182	-676	-606	834	2554	4030	4647	5044
Financing	257	675	895	162	-310	651	182	676	606	-834	-2554	-4030	-4647	-5044
Foreign	318	443	1329	838	675	775	703	558	805	1171	616	619	622	624
Domestic	-61	233	-434	-676	-984	-124	-521	118	-198	-2006	-3170	-4650	-5269	-5668
Oil Fund	0	0	-103	-1134	-1107	-705	-599	-215	-573	-2006	-3170	-4650	-5269	-5668
Banking system	-81	124	-308	438	74	479	26	26	28	0	0	0	0	0
Non-bank	0	0	0	50	19	133	150	250	250	0	0	0	0	0
Other	21	108	-23	-30	30	-31	-98	57	97	0	0	0	0	0
Memorandum Items	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Deficit excl Oil Fund revenues, AZM billion	-257 0	-675 2	-894 8	-808 9	-691 1	-1501	-982	-1480	-1861	-1982	-1540	-1093	-1109	-1176
Oil Fund assets, US$ million	0 0	0 0	23 5	270 0	490 5	631 5	752.7	796 3	912 3	1318.1	1959 4	2900 0	3966.0	5112 5
External debt (P&PG), US$ million	235 9	313.1	493.3	463 0	609 0	735	806	843	852	843	823	788	750	711
GDP, nominal AZM billion	15791 4	17203 1	18875.4	23591.0	26620	29480	32218	34636	40304	47603	55873	62952	68144	72924
GDP, US$ million	3962 3	4446 4	4581 1	5269 5	5583.7	5996	6519	7008	8155	9631	11304	12736	13785	14752
Exchange rate, av AZM per US$	3985 4	3869 0	4120 2	4 5	4 8	4 9	4 9	4 9	4 9	4 9	4 9	4.9	4 9	4 9
Non-oil deficit	-441.4	-1091 6	-1420 9	-1314	-1190	-2255	-1863	-2413	-2787	-3536	-3930	-4301	-4672	-5009
Non-oil GDP, AZM billion	14217	15392	15084	16649	19038	21047	23602	26111	28581	30306	32264	34582	37137	39867

Consolidated Budget, as a share to non-oil GDP	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total Revenues incl Grants	21 3%	21 9%	23.1%	30.1%	30 0%	32 1%	30 7%	29 6%	31.0%	37.4%	43 1%	47.1%	48 1%	48 2%
o/w Oil Fund revenues	0.0%	0.0%	0 0%	3 9%	5 3%	4 0%	3.4%	3.1%	4 4%	9.3%	12.7%	14 8%	15 5%	15 6%
State budget Oil revenues	1 3%	2 4%	2.6%	3 0%	2 6%	3 6%	3 7%	3 6%	3 2%	5 1%	7.4%	9 3%	9 6%	9 6%
Non-oil revenues	20.0%	19.4%	20 1%	23 1%	22.1%	24 4%	23 6%	22 9%	23 4%	23 0%	23 0%	23 0%	23 0%	23 0%
Total Expenditure	23.1%	26 5%	29 5%	31 0%	28 4%	35.2%	31 5%	32 2%	33 1%	34.7%	35 2%	35.5%	35.6%	35 6%
Current	21 0%	24 5%	24 9%	25 4%	23 4%	26 5%	26 0%	25 7%	26 2%	27.0%	27 0%	26.9%	26 8%	26 7%
o w consumption	20.0%	18 5%	22 0%	14 9%	13 7%	15 0%	15 4%	15.2%	15 1%	14 4%	13 7%	13 5%	13 4%	13 2%
transfers	6.9%	7.1%	8 9%	9 6%	8.7%	10.2%	9 6%	9 6%	10 2%	11 7%	12 5%	12.6%	12 7%	12 8%
Capital	2 1%	2 1%	4.6%	5 6%	5.0%	8.6%	5 5%	6.5%	7.0%	7.7%	8 2%	8 5%	8 7%	8 8%
Projected Deficit excl SOF revenues	0 0%	0 0%	0 0%	-0 9%	1 6%	-3 1%	-0 8%	-2.6%	-2 1%	2 8%	7.9%	11.7%	12 5%	12.7%
Financing (I+II)	1 8%	4 4%	5.9%	1 0%	-1.6%	3 1%	0.8%	2 6%	2 1%	-2.8%	-7 9%	-11.7%	-12.5%	-12.7%
I Foreign	2 2%	2.9%	8 8%	5.0%	3 5%	3.7%	3 0%	2 1%	2 8%	3 9%	1.9%	1.8%	1 7%	1 6%
II Domestic	-0.4%	1 5%	-2 9%	-4 1%	-5 2%	-0.6%	-2 2%	0 5%	-0.7%	-6.6%	-9 8%	-13 4%	-14 2%	-14 2%
Oil Fund	0.0%	0.0%	-0 7%	-6.8%	-5.8%	-3 4%	-2 5%	-0 8%	-2 0%	-6.6%	-9 8%	-13 4%	-14 2%	-14 2%
Banking system	-0 6%	0 8%	-2.0%	2.6%	0 4%	2 3%	0 1%	0.1%	0 1%	0 0%	0 0%	0.0%	0.0%	0.0%
Non-bank borrowing	0 0%	0.0%	0.0%	0.3%	0.1%	0 6%	0.6%	1 0%	0 9%	0 0%	0 0%	0 0%	0.0%	0 0%
Other	0 1%	0 7%	-0 2%	-0.2%	0 2%	-0 1%	-0 4%	0.2%	0 3%	0 0%	0 0%	0.0%	0 0%	0 0%
Memorandum Items	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Oil Fund revenues to GDP non-oil ratio	0 0%	0 0%	0.0%	3 9%	5 3%	4.0%	3.4%	3 1%	4 4%	9.3%	12 7%	14 8%	15 5%	15.6%
Non-oil deficit to non-oil GDP ratio	-3 1%	-7.1%	-9 4%	-7 9%	-6 3%	-10.7%	-7 9%	-9.2%	-9.8%	-11 7%	-12 2%	-12 4%	-12.6%	-12 6%
Non-oil revenues to non-oil GDP	20 0%	19 4%	20 1%	23 1%	22 1%	24 4%	23 6%	22 9%	23.4%	23 0%	23.0%	23 0%	23.0%	23 0%
Oil revenues to GDP non-oil	1 3%	1 3%	1 5%	3 0%	7.9%	7 6%	7 1%	6 7%	7 6%	14.4%	20 1%	24 1%	25.1%	25 2%
Consolidated deficit to non-oil GDP	-1 8%	-4 4%	-5 9%	-0 9%	1 6%	-3.1%	-0 8%	-2 6%	-2.1%	2 8%	7 9%	11 7%	12 5%	12 7%

Oil and Gas BOP, US$	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
I Current account	565	377	843	957	1012	49	-716	-793	-47	1381	2167	3323	4064	4618
Exports	1150	1009	1282	1598	1841	1743	1667	1551	2209	3375	4770	5843	6458	6812
Imports GNFS	-566	-602	-384	-301	-468	-1361	-2102	-2096	-1833	-1183	-1391	-993	-742	-473
Interest Earnings on SOF	0	0	0	0	0	14	33	45	49	36	53	78	116	159
Profit Repatriation	-19	-30	-54	-340	-361	-348	-314	-293	-472	-848	-1265	-1607	-1768	-1879
II Capital account	1115	1023	487	-127	45	877	1815	1992	1380	-266	-1028	-2314	-3059	-3689
FDI	1115	1156	843	688	844	1574	2474	2532	2312	1527	1682	1242	868	474
Capital repatriation	0	-133	-333	-569	-579	-555	-538	-497	-816	-1387	-2069	-2616	-2861	-3017
SOF assets invested abroad	0	0	-24	-247	-221	-141	-121	-44	-116	-406	-641	-941	-1066	-1147
III Overall balance	1680	1400	1330	829	1057	926	1098	1199	1332	1115	1139	1008	1005	929
Memorandum Items	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Oil CAB to GDP ratio	14 3%	8 5%	18 4%	18 2%	18 1%	0 8%	-11.0%	-11 3%	-0.6%	14.3%	19 2%	26.1%	29 5%	31 3%
Oil BOP contribution to GDP ratio	47.1%	35.2%	36 3%	15 7%	18 9%	21.0%	22 9%	22 7%	23 0%	18 2%	17 4%	14.4%	13 4%	11.5%
Total CAB to GDP ratio	-24 5%	-30 5%	-13 1%	-2 4%	-1 3%	-18 1%	-32.5%	-32.5%	-19 7%	-0 4%	6 8%	15.2%	19 3%	21 9%
Non-oil CAB/GDP ratio	-38 8%	-39 0%	-31.5%	-20 5%	-19 4%	-19 0%	-21 5%	-21 1%	-19 1%	-14 7%	-12 4%	-10 9%	-10.2%	-9.4%
Non-oil CAB	-1535 9	-1732 8	-1444 5	-1080 9	-1085 1	-1136 6	-1403.1	-1481 7	-1555 7	-1417 4	-1398 2	-1392 5	-1401 9	-1391 4
Total CAB to no-GDP ratio	-27.2%	-34.1%	-16 4%	-3 3%	-1 8%	-25 4%	-44.4%	-43 1%	-27.7%	-0 6%	11 8%	27.6%	35 4%	40.0%
Oil CAB to no-GDP ratio	15 8%	9 5%	23 0%	25 7%	25.3%	1 1%	-15 0%	-15.0%	-0 8%	22 5%	33 2%	47.5%	54 1%	57 3%
Non-oil CAB/non-oil GDP	-43 1%	-43 6%	-39 5%	-29 0%	-27 2%	-26 6%	-29 4%	-28.0%	-26.9%	-23 1%	-21 4%	-19 9%	-18.7%	-17 3%
S - I pr Non-oil / non-oil GDP	-40 0%	-36 5%	-30.0%	-21 2%	-20 9%	-15 8%	-21 5%	-18 8%	-17.2%	-11 4%	-9 2%	-7.5%	-6 1%	-4 7%
S-I g, non-oil /non-oil GDP	-3 1%	-7 1%	-9.4%	-7.9%	-6 3%	-10.7%	-7 9%	-9 2%	-9.8%	-11 7%	-12 2%	-12.4%	-12 6%	-12 6%
Capital repatriation to non-oil GDP	0 0%	-3 3%	-9.1%	-15.3%	-14 5%	-13 0%	-11 3%	-9 4%	-14 1%	-22 6%	-31 7%	-37.4%	-38.1%	-37 4%
Oil & Gas Fiscal Revenues, US$ million	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
I Oil Fund revenues	0	0	0	147	221	173	162	163	304	695	878	1086	1214	1308
II. Oil Fund expenditure	0	0	0	0	1	15	34	46	50	37	53	79	117	159
III Oil fund net inflow	0	0	0	147	221	158	128	116	254	658	825	1007	1098	1149
Memorandum Items														
Oil Fund assets	0	0	24	270	491	632	753	796	912	1318	1959	2900	3966	5113
Oil Fund assets to non-oil GDP	0%	0%	1%	7%	12%	15%	16%	15%	16%	21%	30%	41%	53%	63%

Memorandum Items	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Money supply growth	34%	-9%	9%	27%	31%	11%	16%	14%	16%	15%	18%	12%	10%	10%
NFA growth	42%	-31%	42%	12%	13%	-6%	7%	11%	12%	4%	11%	2%	4%	2%
NDA growth	-8%	22%	-33%	16%	27%	22%	13%	2%	5%	18%	15%	18%	12%	14%
NFA contribution to MS growth	25%	-10%	28%	7%	14%	-4%	7%	13%	14%	5%	10%	1%	2%	1%
NDA contribution to MS growth	-3%	15%	-11%	6%	17 1%	16%	9%	1%	3%	10%	8%	11%	7%	9%
M2 to GDP ratio	13%	11%	11%	11%	13%	13%	14%	14%	14%	14%	14%	14%	14%	15%
M2 to non GDP	15%	12%	15%	22%	18%	18%	19%	19%	20%	22%	24%	26%	26%	27%
Credit to the economy growth	8%	6%	4%	-2%	24%	0%	16%	1%	6%	23%	18%	22%	14%	16%
Credit to the economy/non-oil GDP	14%	14%	13%	13%	11%	10%	10%	9%	9%	10%	11%	13%	14%	15%

BIBLIOGRAPHY

Alier, Max and Martin Kaufman. 1999. "Nonrenewable Resources: A Case for Persistent Fiscal Surpluses." IMF Working Paper WP/99/44.

Auty, Richard. 1993. "Sustaining Development in Mineral Economies: the Resource Curse Thesis." London, Routledge.

Auty, Richard. 1997. "Does Kazakhstan Oil Wealth Help or Hinder the Transition?" Development Discussion Paper No. 615, Harvard Institute for International Development, Harvard University.

Auty, Richard. 2001. "Transition Reform in the Mineral-Rich Caspian Region Countries." Resources Policy, 27, pp. 25-32.

Auty, Richard and Raymond F. Miksell. 1999. "Sustainable Development in Mineral Economies." Oxford University Press.

Auty, Richard, P. Collier, and A. Gelb. 2002. "Best Practice for Economic Diversification in Mineral Economies." World Bank. (Mimeo).

Broeck, de Mark and Vincent Koen. 2000a. "The 'Soaring Eagle': Anatomy of the Polish Take-Off in the 1990s." International Monetary Fund, WP/00/6.

Broeck, de Mark and Vincent Koen. 2000b. "The Great Contraction in Russia, the Baltics and the Other Countries of the Former Soviet Union: A View from the Supply Side." International Monetary Fund, WP/00/32.

Buiter, Willem. 1995. "Measuring Fiscal Sustainability." International Monetary Fund. (Mimeo).

Buiter, Willem. 1993. "Consistency Checks for Fiscal, Financial and Monetary Policy Evaluation and Design." Yale University. (Mimeo).

Buiter, Willem. 1985. "A Guide to Public Sector Debt and Deficits." *Economic Policy*, 1, pp. 13-79.

Campos, Nauro and Fabrizio Coricelli. 2002. "Growth in Transition: What We Know, What We Don't, and What We Should." William Davidson Institute Working Paper, No. 470.

Chalk, Nigel. 1998. "Fiscal Sustainability with Non-Renewable Resources." IMF WP/98/26.

Corbacho, Ana and Gerd Schwartz. 2002. "Mexico: Experiences with Pro-Poor Expenditure Policies," IMF WP/02/12.

Corden, W. M.. 1984. "Booming Sector and Dutch Disease Economics: Survey and Consolidation." *Oxford Economic Papers*, vol. 36.

Cuddington, John. 1988. "Fiscal Policy in Commodity-Exporting LDCs," The World Bank, Working Paper 33. Background paper for the *1988 World Development Report.*

Cuddington, John. 1996. "Analyzing the Sustainability of Fiscal Deficits in Developing Countries."

Daniel, J. A.. 2001. "Hedging Government Oil Price Risk." IMF WP/01/185.

Davis, Jeffrey, R. Ossowski, J. Daniel, and S. Barnett. 2001. "Stabilization and Savings Funds for Nonrenewable Resources: Experience and Fiscal Policy Implications." IMF Occasional Paper 205.

Desai, P. and B.K. Chaturvedi. 2001. "Azerbaijan: Developing a Budget Systems Law." IMF-FAD.

Easterly, William and Ross Levine. 2000. "It's Not Factor Accumulation: Stylized Facts and Growth Models." World Bank.

Eastwood, R. and A. Venables. 1982. "The Macroeconomic Implications of a Resource Discovery in an Open Economy." *Economics Journal*, vol. 92.

EBRD. 2001. "Energy in Transition," Chapters 3 and 4.

El Serafy, Salah. 1989. "The Proper Calculation of Income from Depletable Natural Resources." In Yusuf J. Ahmad, et al. *Environmental Accounting for Sustainable Development.* World Bank.

Engel, E. and R. Valdes. 2000. "Optimal Fiscal Strategy for Oil Exporting Countries." IMF Working Paper WP/00/118.

Everhart, Stephen and R. Duval-Hernandez. 2000. "Mexico: The Management of Oil Windfalls." World Bank.

Fasano, Ugo. 2000. "Review of the Experience with Oil Stabilization and Savings Funds in Selected Countries." IMF WP/00/112.

Fasano, Ugo and Q. Wang. 2001. "Fiscal Expenditure Policy and Non-Oil Economic Growth: Evidence from GCC Countries." IMF WP/01/195.

Firdmuc, Jarko and Julius Horvath. 2001. "Visegrad Economies: Growth Experience and Prospects." Prepared for the GDN Global Research Project. (Mimeo).

Fitch Co.. 2001. Sovereign Report: Azerbaijan.

Gelb, Alan and Associates (1988) "Oil Windfall: Blessing or Curse?." Oxford University Press.

Government of Azerbaijan Sector Note, "Rural Infrastructure Services in Azerbaijan," January 2001.

Handy, Howard. 1988. "Egypt: Beyond Stabilization, Toward a Dynamic Market Economy." IMF Occasional Paper 163.

Hausmann, Ricardo, A. Powell and R. Rigobon. 1993. "An Optimal Spending Rule Facing Oil Income Uncertainty (Venezuela)." in Engel, et al.: *External Shocks and Stabilization Mechanisms,* Inter-American Development Bank, CIEPLAN, Chile.

Heilbrunn, John. 2002, "Governance and Oil Funds." World Bank. (Mimeo).

Heller, P. and A. Tait. 1984. "Government Employment and Pay: Some International Comparisons." IMF Occasional Paper No. 24.

IMF. 2002. "Azerbaijan Republic: 2001 Article IV Consultation, First Review Under the PRGF, and Request for Waiver of Performance Criteria," EU II and PDR.

IMF. 2002. "Russian Federation – Selected Issues."

Isham, J., L. Pritchett and M. Woolcock. 2002. "The Varieties of the Rentier Experience: How Natural Resource Endowments and Social Institutions Affect Economic Growth." World Bank. (Mimeo).

Klenow, Peter and Andres Rodriguez-Clare. 1997. "The Neoclassical Revival in Growth Economics: Has it Gone Too Far?" *NBER Macroeconomics Annual* 12: 73–103.

Koeva, P. 2001. "Time-to-Build and Convex Adjustment Costs." IMF WP/01/9.

Lane P. and A. Tornell. 1995. " Power, Growth and the Voracity Effect." *Journal of Economic Growth,* vol 1(2).

Liuksila, Claire, A. Garcia and Sheila Bassett. 1994. "Fiscal Policy Sustainability in Oil-Producing Countries." IMF WP/94/137.

Mansur, A. and V. Treichel. 1999. "Oman Beyond the Oil Horizon: Policies Toward Sustainable Growth." Ch. IV, pp.19-30. IMF Occasional Paper # 185.

Neary, J. Peter and S. van Wijnbergen. 1986. "Natural Resources and the Macroeconomy." MIT Press.

Oxford Economic Papers. 1984. "Booming Sector and Dutch Disease Economics: Survey and Consolidation."

Pradhan, Sanjay. 1996. "Evaluating Public Spending: A Framework for Public Expenditure Reviews." World Bank WDP 323.

Rosenberg, Christoph and T. Saavalainen. 1998. "How to Deal with Azerbaijan's Oil Boom? Policy Strategies in a Resource-Rich Transition Economy." IMF WP/98/6.

Sachs, Jeffrey D. and Andrew M. Warner. 1995. "Natural Resource Abundance and Economic Growth." National Bureau of Economic Research, NBER Working Paper 5398

Schiller, Christian, G. Inchauste and J. Walliser. 2000. "Azerbaijan: Continuing Public Expenditure Reforms." IMF Fiscal Affairs Department.

Schwartz, A. and G. Stevenson. 1990. "Public Expenditure Reviews for Education: The Bank's Experience." World Bank WPS 510.

Steigum, E. and C. Gjersem. 1999. "Generational Accounting and Depletable Natural Resources: The Case of Norway," in Auerbach, et al, *Generational Accounting Around the World,* University of Chicago Press, Ltd., London.

Steigum, E. and O. Thogersen. 1995. "Petroleum Wealth, Debt Policy, and Intergenerational Welfare: The Case of Norway."

Wakeman-Linn, John, P. Mathieu and B. van Selm. 2002. "Oil Funds in Transition Economies: Azerbaijan and Kazakhstan." International Monetary Fund. (Mimeo).

Woodward, David. 2001. Azerbaijan Business Unit. BP Amoco, Baku.

World Bank. 1998. *Azerbaijan Poverty Assessment Report.*

_____.1999. "Azerbaijan: Public Sector Strategy." January. (Draft).

_____.2000a. "*Kazakhstan: Public Expenditure Review.*" ECA-PREM.

_____.2000b. "Azerbaijan Republic Energy Sector Quasi-Fiscal Deficit Assessment." November. (Mimeo).

_____.2001a. *Albania: Public Expenditure and Institutional Review*, Vol. II: Main Report. ECA-PREM.

_____.2001b. *Bolivarian Republic of Venezuela: Investing in Human Capital for Growth, Prosperity, and Poverty Reduction.*" LAC.

_____.2001c. "Improving the Effectiveness of Public Expenditure Strategy." April. (Draft).

_____.2002a. "Azerbaijan Second Institution Building Technical Assistance." (Mimeo).

_____.2002b. "Azerbaijan Poverty Assessment Report."(Draft).

_____.2002c. "Kyrgyz Republic Public Expenditure Review." (Mimeo).

_____.2002d. *Proposed Structural Adjustment Credit to the Republic of Azerbaijan*, ECA-PREM.

_____.2002e. *Transition: The First 10 Years – Analysis and Lessons for Eastern Europe and the Former Soviet Union.*" ECA

World Economic Outlook: Focus on Transition Economies. October 2000. IMF.

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