People's Democratic Republic of Algeria
A Medium-Term Macroeconomic Strategy For Algeria
Sustaining Faster Growth With Economic and Social Stability

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Preface

This study is part of a series of analytical works on Algeria prepared in parallel by the World Bank, with the aim of laying out the framework and facilitating the dialogue for the elaboration of the Bank’s Country Assistance Strategy for Algeria. Companion studies include: A private sector development strategy note; A diagnostic on foreign direct investment in Algeria (FIAS). This report builds on consultations that took place in April 2002, a review of the preliminary report with the Algerian Counterpart Team in September 2002, and a review in the context of the CAS consultations in April 2003.

On private sector development issues, the report builds on the findings and recommendations of the companion studies. Please refer to each of these studies for details on the analysis, the methodology, the diagnostics and the recommendations. A policy note was also issued to synthesize the main messages and recommendations from these reports, into a coherent and comprehensive medium-term growth strategy.

It should be noted that the focus of the two-pillar strategy elaborated in this report—securing fiscal sustainability and promoting a favorable investment climate for medium-term growth—is not intended to overshadow equally crucial policy agendas for long-term growth and poverty reduction in Algeria, especially in the social sectors and the rural sector.

Moreover, it should be acknowledged that a number of the proposed policy measures are actually being implemented, to various degrees, by the Government of Algeria, and the proposed strategy’s emphasis is on strengthening and accelerating these policies while complementing them with broader reforms.

This report is divided into three parts. It first presents a diagnostic of the slow growth performance, by benchmarking Algeria’s performance against other comparator countries, with the aim of identifying the key bottlenecks to better long-term growth performance in Algeria. Building on this analysis, experience from transition economies, and the diagnostics in the companion reports, the second part reviews options in structural reforms to encourage the development of the private sector, by strengthening the investment climate and furthering Algeria’s transition to the market. The third part examines options to strengthen the fiscal framework, to insulate the fiscal stance from volatile hydrocarbon fiscal revenues and secure fiscal sustainability, so as to achieve a sustained acceleration of growth. More technical background material of the analysis is presented in annexes, in a separate volume.
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Executive summary

Thanks to successful stabilization since 1994, steps taken in structural reform, and favorable hydrocarbon prices, Algeria is now experiencing a mild resumption of growth. But growth, led by the non-hydrocarbon sector, will need to accelerate further, to absorb high unemployment and help reduce poverty. Structural and macroeconomic policies will have to address a simultaneous challenge: (i) Enabling the "new economy, led by the private sector, to gain strength in the non-hydrocarbon sector, by improving the investment climate and furthering Algeria’s transition to the market; (ii) Strengthening the fiscal framework, to better manage volatility and secure medium-term fiscal sustainability. Completing the transition to the market would call for removing still remaining constraints to the efficient use of resources. This will boost total factor productivity—whose poor performance accounts for a large part of Algeria’s "missing long-term growth"—and encourage the growth of the "new economy". In Algeria, as elsewhere in transition countries, the "new economy" outperforms the "old economy", dominated by public enterprises, in terms of profitability and output growth. Facilitating access to finance and to backbone productive inputs, while further lowering the administrative barriers to doing business, would encourage the emergence of the "new economy", but would have to go in tandem with reforms that enforce market discipline on the "old economy". Insulating the fiscal stance from volatile hydrocarbon fiscal revenues is equally important, as fiscal policy in Algeria has been procyclical, thus exacerbating the impact of terms-of-trade volatility on the rest of the economy, and contributing to Algeria’s "missing growth". Strengthening fiscal management would call for implementing a multi-year, integrated fiscal framework, with the aim of de-linking expenditures from the volatile hydrocarbon revenues. The fiscal framework should be underpinned by appropriate, medium-term targets for the primary non-hydrocarbon fiscal deficit. Securing fiscal sustainability would require saving part of hydrocarbon revenues, in the context of an active asset and liability management strategy.

Following years of economic downturn, from the mid 1980s to the mid 1990s, due to low oil prices, slow and hesitant reforms, and civil violence, Algeria is now experiencing a resumption of growth. Successful stabilization since 1994, cautious monetary and fiscal policies in the face of volatile oil prices, and progress in structural reform, have laid the groundwork for a mild growth recovery. GDP grew by 2.5 per cent per year, on average, from 1999 to 2002, while the non-hydrocarbon, nonagricultural sector grew at a faster pace, by 2.9 per cent. The increase in the price of oil since 1999 has provided financial resources to support increased domestic demand, and helped turn current account and budget deficits into sizeable surpluses. Growth has recently been sustained also by stepped up public sector investment, directed to improving social and economic infrastructure. But private investment has yet to recover, owing to the still weak investment climate and the incomplete structural reform agenda.
However, growth will need to accelerate further, in order to absorb unemployment, improve living standards, and strengthen social cohesion. Despite the resumption of growth, unemployment remains very high, at an estimated 27 percent in 2001—although the magnitude of labor market slack may be overestimated because of the existence of a large informal sector. Moreover, around 6 out of 10 young people are unemployed, and a fast growing labor force is putting additional pressure on the labor market. To reduce the unemployment rate by half in ten years, and make a significant dent on poverty, GDP would have to grow by 6 per cent per year—a significant acceleration from its current pace. A more drastic reduction of unemployment would call for faster growth—or for increasing the employment content of growth through stronger diversification to labor-intensive sectors.

A sustained increase in investment in the non-hydrocarbon sectors is needed to reduce unemployment, because the hydrocarbon sector and the downstream industries contribute little to job creation. The hydrocarbon sector accounts for about 30 per cent of Algeria’s GDP, more than 95 percent of export earnings, and 75 percent of fiscal revenues, but directly contributes only to 3 per cent of job creation. To reduce unemployment, growth would have to rely on the diversification of the non-hydrocarbon sector, driven by labor-intensive industries and services that are able to compete in open markets. Competitive diversification of the non-hydrocarbon sector would call, in turn, for stronger productivity growth, which would lay the ground for a sustained increase in investment, led by the private sector. Achieving faster productivity growth would only be possible if the remaining constraints to the efficient use of all production factors are reduced by furthering Algeria’s transition to the market.

Foregone GDP growth in Algeria over the past three decades is estimated at about 2.3 percent per year, mainly owing to weak performance of total factor productivity (TFP). TFP growth weakened since the late 1970s, and slipped into negative territory during the 1980s and up until the mid 1990s. TFP growth has somewhat improved thereafter, as a result of the structural reforms implemented since 1994. TFP performance was impaired by large relative price distortions during the command economy period; policies that often exacerbated volatility in the face of large external shocks; and limited openness to non-hydrocarbon trade and attractiveness to foreign direct investment. Part of the recent productivity improvement reflects the increasing role of the private sector in industry and services since 1994—as private enterprises in Algeria outperform public enterprises. Poor productivity performance hampers the competitiveness of manufacturing, because it raises relative unit labor costs, while it also squeezes the profitability of the non-hydrocarbon industry.

Algeria’s growth collapsed for a decade since the mid-1980s, due to the adjustment to the oil price slump and disruptions associated with a difficult transition from the command economy to the market. Poor productive efficiency also contributed to the protracted collapse of growth. The drop in TFP growth accounted for about half of the 4.2 percentage points decrease in GDP per capita growth since 1985, relative to the previous 15-year period. Shrinking public sector investment in the face of the slump in hydrocarbon revenues accounted for the rest of the collapse of growth. Shortages of intermediate inputs
and imported capital, owing to the balance-of-payments crisis and the devaluation of the dinar in the late 1980s, exacerbated inefficiencies in the non-hydrocarbon sector and worsened the productivity slump. The failure to diversify non-hydrocarbon exports, stimulate domestic investment, and attract foreign direct investment also largely explain the weak resumption of growth since the mid 1990s.

**High exposure to volatility has also impaired output growth and deterred private investment.** Algeria has been exposed to large external volatility—among the highest in a group of oil-producing countries. The resulting swings in domestic demand have been reflected in high volatility in non-hydrocarbon output. High exposure to volatility has impaired output growth and deterred private investment. Volatility has likely deterred domestic investment in the industrial sector, because it heightened investor risk in an already weak business environment. Growth in agriculture has been by far more volatile, in large part reflecting continued vulnerability of agriculture to shifts in weather conditions, as in other Maghreb countries. However, agriculture was also the best performing sector during 1976-2000, with an average annual growth rate of 3.9 percent.

**Volatility, weak institutions, social instability, and a large share of government in the economy, have had a mutually reinforcing adverse impact on productivity and growth.** Their interaction cost Algeria an estimated 2 percentage points in average annual growth since the mid-1980s. The absence of supporting institutions, to help build social consensus, greatly reduced the government’s ability to respond to volatility, due to the adverse impact of the adjustment to shocks on social stability. The fiscal retrenchment and exchange rate devaluation, implemented in response to the collapse in the price of oil in the mid-80s, were followed by severe social and political unrest in the country. This greatly diminished the capacity of the government to maintain policy restraint in the face of shocks, while at the same time keeping up the pace of costly reforms needed to complete the transition to the market. The delayed restructuring and privatization of public enterprises has had, in turn, adverse consequences on manufacturing activity, investment, and the soundness of the banking system—which was crippled by bad debts.

**Long-term growth has been also adversely affected by relatively weak development of human capital.** Education indicators continue to under-perform regional and income-group averages, while, until recently, population growth and fertility rates were among the highest in the world. Despite low levels, human capital indicators are in an improving trend. However, experience—especially from MENA countries—suggests that improvements in education do not lead to higher growth in the absence of a conducive environment in which the educated labor is employed. Algeria’s improving trends in human capital bode well for future growth, but they will have to be combined with concomitant improvements in other factors of growth, especially the investment climate and market institutions.

**With a tradition of high savings, improving educational attainment, abundance of hydrocarbon resources, and an advantageous geographic location, Algeria has good potential for growth.** In the past, growth has fallen short of this potential because of large external shocks, institutional weaknesses, a hesitant transition to the market that perpetuated
price distortions, lack of openness to foreign trade and investment, and a large and intrusive government. Moving forward, achievement of this potential will depend on how effectively these impediments to growth are being tackled.

In the medium term, promoting fast, broad-based growth requires simultaneous action on both the structural and macroeconomic policy fronts:

- **Encouraging the development of the private-sector, by strengthening the investment climate and furthering Algeria’s transition to the market.** This calls for “second generation” structural reforms, to remove inefficiencies in public service delivery, as well as in the markets for credit, industrial land, and the labor market. Such reforms call for a fundamental redefinition of the role of the State in the economy:
  (i) Increasing the State’s capacity to regulate markets; enforce decisions; ensure a level playing field among all participants; provide effective and reliable public services and market institutions;
  (ii) Reducing the State’s intervention in areas where private operators should progressively take over—especially in the production of goods and services that do not exhibit public good or strategic features.

- **Strengthening the fiscal framework, to insulate the fiscal stance from volatile hydrocarbon fiscal revenues, and secure fiscal sustainability in the face of expenditure pressures and the contingent liabilities of the public sector.** Strengthening fiscal management would call for a multi-year, integrated fiscal framework, with the aim of de-linking expenditures from the volatile hydrocarbon revenues, while saving part of the hydrocarbon revenues in the context of an active asset and liability management strategy.

Despite steps taken to date, Algeria’s transition to the market remains incomplete. To complete the transition to a dynamic market economy, Algeria would need to establish discipline on the “old economy” managed by the public sector, while enabling the “new economy”, led by the private sector, to grow. Establishing market discipline on the public enterprises is key, so that these enterprises face the incentive to restructure and become more productive and able to compete in a market-based system. This would eventually call for significantly stepping up the privatization program. Enabling new enterprises to emerge and expand is crucial for resuming growth and absorbing currently idle resources and those that could be released by the old sector—in particular offering employment opportunities to workers affected by liquidation and restructuring.

Experience from transition economies suggests that, despite the costs involved, policies to encourage the emergence of the “new economy” have to go hand-in-hand with enforcing discipline on the “old economy”. There is no evidence that slow downsizing of the old sector could provide a viable “cushion”, until the new sector has grown enough to offset the pain of liquidation and restructuring of public enterprises. Encouragement without discipline has not worked, because often the old sector has absorbed resources that would otherwise have flown into new enterprises. In Algeria, resources of oversized public enterprises (such as, for example, industrial real estate) are not put to efficient use, while weak management incentives lead to poorly performing enterprises, unutilized resources and depreciating machinery.
Slow restructuring and privatization in the Algerian industry entails an opportunity cost, because private companies over-perform public enterprises in terms of profitability and output growth across all manufacturing industries. With the acceleration of reforms to encourage private sector development since 1994, industrial production of private enterprises has rebounded across all Algerian manufacturing industries—particularly so in light manufacturing. In industries where the public enterprises accumulate sizeable losses, private enterprises have been in good financial shape. Because distressed public enterprises lack the incentives and the means to modernize and expand capacity, investment in Algerian manufacturing has been low, denying the economy the benefit of a multiplier impact on non-oil GDP and slowing job creation.

Distressed public enterprises also pose risks to the Algerian economy by burdening the public banks with non-performing debt. Although this appears to have been less the case recently, the financing requirements of state-owned enterprises have been largely covered by bank borrowing, despite the willingness by the authorities to sever the links between state-owned enterprises and public banks. Bank loans to state enterprises have represented sizable contingent liabilities for the Algerian government. Over 1993-97, the cost of the buy-back of bad loans to state enterprises represented close to 30 percent of average GDP—the major part of the domestic debt in Algeria. A fresh buy-back of non-performing loans, along with recapitalization of two banks, took place in 2001, to complete the cleanup of public banks' balance sheets. It cost an estimated 15 per cent of GDP.

The fiscal and quasi-fiscal cost of the bailouts of public banks in Algeria is at the high end of the range seen in other transition economies. The cost is comparable to that in Bulgaria and the Czech Republic (42 and 26 per cent of GDP) and much higher to that seen in the Baltics and the CIS. Bailouts of public banks in Algeria suffered from similar weaknesses as in the Central and Eastern European Countries, with financial cleanup de-linked from deeper operational restructuring of banks and—most importantly—restructuring of distressed public enterprises. In transition economies this approach typically led to the recurrence of non-performing loans, and it did not prove successful in reducing the risk of renewed bank failures.

Because of their superior performance, accelerated development of private-sector enterprises would help Algeria rise to the challenge of international competition. The Association Agreement with the EU and the upcoming membership to WTO open a new era in Algeria's participation in global trade. Trade liberalization will call for bold adjustments in import-competing industries, in order to improve efficiency and withstand competition. But with the right business environment in place, Algeria could face competition, take advantage of export opportunities, and attract foreign direct investment in the non-hydrocarbon sector. Because of low wage costs, the Algerian manufacturing sector could be well-positioned in a number of labor-intensive industries—although unit labor costs still surpass those in potential competitors. Unit labor costs in manufacturing are, on average, lower in the private sector, reflecting a better productivity performance—especially in light industries such as textiles, leather, and footwear.
Improving access to and lowering the cost of key productive inputs and business services—especially finance and industrial land—and strengthening the legal, judicial, and governance framework, are key elements of an enabling environment for the creation of new enterprises, willing and able to compete in domestic and export markets. Despite a recent improvement, access to finance remains a key constraint. It remains difficult, time consuming, and unreliable—especially for small and medium enterprises. While the private sector represents now approximately 50 percent of GDP and 60 percent of bank deposits, bank loans to the private sector still represent only about one-third of total credit allocation to the enterprise sector. Although lending conditions to public enterprises appear to have tightened—possibly as a result of the introduction of the “Performance Contracts” with public banks—they are still easier than lending conditions to private enterprises of comparable size.

The difficult access to credit partly reflects weaknesses of the banking sector and partly shortcomings on the business side. Banks are bureaucratic, not business-friendly, and poorly equipped. The long-standing lending links between public banks and state-owned enterprises have also shaped the credit culture towards less risk taking. Economic information is scarce and unreliable, only 53 per cent of private companies have audited accounts, credit history databases are inexistent, and many SME managers lack the qualifications to present sound business plans. Moreover, the judicial system is slow, unreliable, and still dominated by judges lacking knowledge of commercial matters; making it impossible for banks to credibly secure collateral. Credit bottlenecks are exacerbated by the lack of specialized financial institutions (such as leasing, factoring) and venture capital, catering to the financing needs of Small and Medium-sized Enterprises and business start-ups.

As severe a bottleneck is the high cost of industrial land in Algeria. Out of the 600 firms surveyed in 2002, 38 percent have been looking for a plot of land, for a period of time of almost five years on average, to invest and expand. About half of the industrial estate is kept unused, in the face of considerable pent-up demand. The process of acquiring industrial land is thus lengthy, costly and uncertain, hindering the growth of private enterprises. Most unused land in industrial zones is entitled to former state-owned enterprises that ceased to operate. Lack of proper land ownership titles impedes freeing unused industrial land.

Despite the positive change in Government policy toward the private sector, the attitude of the public administration is often business unfriendly and the administrative barriers to doing business remain high. Entrepreneurs still face unfriendly bureaucratic behavior, red tape, cumbersome and opaque regulations and endless delays to obtain clearances and authorizations. Barriers are pervasive in all areas of business activity. Most frequently mentioned are the procedures to clearing imported goods through customs, in particular through Algiers’ harbor; obtaining a building permit; registering an enterprise. Pervasive administrative barriers in doing business and weaknesses in the legal and judicial framework perpetuate what is often perceived as unfair competition (from the informal sector; illegal imports; private import monopolies), and make it hard to enforce the anti-trust legislation.
Foreign investors have sidestepped Algeria, owing to the lack of attractiveness of local partners, the poor overall business environment, and to security concerns. The foreign perception of the country has also been negatively affected by the perceived hesitations in implementing the reforms, particularly the privatization program. Evidence from the transition countries indicates that a strong investment climate, underpinned by a strong commitment to reforms, has been a key determinant of FDI inflows. Improvements to the overall business environment would also strengthen the FDI climate in Algeria. In addition to bottlenecks in access to finance and industrial land, obstacles that should be addressed include: a) administrative barriers to doing business; b) weaknesses in the legal, judicial, and governance framework; c) high cost and unreliable quality of key infrastructure and business services. A ranking of Algeria's performance across 42 infrastructure indicators indicates a weak performance.

Due to the dominant position of hydrocarbon revenues in total fiscal revenues, oil price swings have been transmitted to the fiscal stance. Maintaining low fiscal deficits in the face of declining hydrocarbon revenues has been associated with expenditure compression, with the brunt of the adjustment borne by capital spending. By contrast, increasing hydrocarbon revenues have often boosted government expenditures, even though higher hydrocarbon revenues have proven temporary. Thus, the stance of fiscal policy has been pro-cyclical, as suggested by the close association between the non-hydrocarbon primary fiscal deficit and the hydrocarbon fiscal revenue. By following the cycle of oil, fiscal policy exacerbated the impact of terms-of-trade shocks on the rest of the economy.

Macroeconomic policy has supported stabilization, aided by favorable oil prices, but challenges for fiscal sustainability lie ahead. Expenditure compression has been the cornerstone of Algeria's painstaking fiscal consolidation during the 1990s, which supported macroeconomic stability in the face of a volatile external environment. This has ensured a comfortable fiscal position in the medium term. On current tax and expenditure policies, if oil prices were maintained at levels similar, on average, to those seen in the 1990s, the standard foreign indebtedness indicators would perform favorably. The rising trend in foreign reserves, combined with a declining external debt portfolio, would translate into a net asset position for the country. However, the existing fiscal latitude and external debt dynamics are sensitive to the projected size of the hydrocarbon revenues.

The contingent liabilities of the public sector pose a risk to medium-term fiscal sustainability in Algeria. In the current corporate and bank governance environment, the bulk of contingent liabilities in Algeria will continue to originate in the non-performing loans to public enterprises, accumulated in the portfolios of public banks. Guarantees for credits extended by financial institutions and for deposits in those institutions also pose risks. Contingent liabilities may arise also from the financial situation of the pension system, with cumulative financing requirements projected at about 6 per cent of GDP over 2002-08.

The current budget procedures do not facilitate a clear assessment of the Government's financial situation and the management of fiscal risks associated with contingent liabilities. There is widespread scattering of current and capital budget
allocations not reflected in the budget. Spending scattering dilutes public policies, provides incentives to perpetuate multiple activities for which line departments accumulate resources, and impairs prioritization of expenditures. Resource dispersion is compounded by a multiplicity of financial management instruments for public expenditure. There are over 300 active special accounts that intermediate expenditure financing, most of which are not integrated in the budget.

Challenges also exist for maintaining the sustainability of the primary non-hydrocarbon fiscal deficit in the face of exhaustible hydrocarbon revenues in the long run. On current fiscal trends, the non-hydrocarbon fiscal deficit would be sustainable under a high-case scenario for hydrocarbon revenues, where “permanent hydrocarbon income” is estimated at 20.6 per cent of 2001 GDP. That would not be secured in a mid-case scenario, with “permanent hydrocarbon income” estimated at about 17 per cent of GDP, in view of the upward trend in the non-hydrocarbon primary deficit.

Strategic Challenges and Policy Options

The interactions of policies and institutions documented in the analysis suggest the need for a wide-ranging growth strategy. To create the right framework for a sustained acceleration of Algeria’s growth, policies to manage macroeconomic volatility and secure fiscal sustainability would need to go hand in hand with structural reforms to remove bottlenecks to private sector activity and improve competitiveness. Yet, the strategy would need to be focused, by addressing the key medium-term structural and macroeconomic policy challenges, and promoting measures that mutually reinforce each other. The strategy should be built around two pillars:

- Fostering private sector development by improving the investment climate
- Strengthening the fiscal framework, to better manage volatility and secure medium-term fiscal sustainability

The Algerian Government has already taken steps in a number of these directions, but further progress would be needed to strengthen policies and reap the benefits of past initiatives.

A full-fledged discussion of the options outlined below is provided in this report; the Private Sector Development Strategy; the investment climate assessment by the Foreign Investment Advisory Service; and the Synthesis Policy Note on the Medium-Term Growth Strategy for Algeria.
Challenge 1: Fostering private sector development by improving the investment climate

1. Establish market discipline on public enterprises and foster the privatization agenda
   - Accelerate transparent privatization, based on existing legal framework and send strong, credible signals by achieving key ‘success stories’
   - Accelerate public enterprise restructuring by selling non-performing assets, terminating non-viable activities, and concentrating public enterprises on their core business
   - Enforce hard budget constraints on public enterprises and replace bank credit to loss-making enterprises by transparent subsidies in the budget

2. Accelerate the comprehensive reform of the financial sector
   - Reduce the State’s direct involvement in the financial sector by preparing for the privatization of the banking sector, while upgrading the State’s regulatory role
   - Facilitate the development of new financing instruments that fit the needs of the private sector—especially SMEs (Leasing and factoring companies; venture capital funds; Export financing; reform of housing finance)
   - Improve access to market and credit information and increase consulting and training support to SMEs
   - Strengthen the technical infrastructure of the financial sector
   - Foster judicial reform (collateral legislation, bankruptcy etc.)

3. Reform the institutional set-up of the industrial land market to increase supply of land slots at market rates
   - Increase the supply of available public land, while selling or conceding at auction major shares of public land to unify the dual land market
   - Review the institutional set-up of the land market to limit the State’s involvement to its regulatory function
   - Foster private participation in development and management of industrial parks

4. Strengthen the business environment by reforming the institutional and regulatory framework for private sector investment
   - Reduce administrative bottlenecks, especially to streamline customs procedures and facilitate enterprise registration
   - Foster business information—all laws, implementation decrees, and regulations should be published and made available to the public
   - Further facilitate private participation in infrastructure services; to mobilize needed capital; and, to attract management skills needed
   - Launch pilot Export Processing Zones
5. Improve the functioning of the labor market to foster formal employment and job creation
   - Reduce the high level of non-wage costs, due to the high rates of social security contributions, especially for the low-skilled and low-paid workers
   - Ease restrictive employment regulations that hurt more vulnerable worker groups and the youth and feed the informal labor market
   - Audit existing active labor market programs with the aim of improving targeting and facilitating monitoring

Challenge 2: Strengthening the fiscal framework, to better manage volatility and secure medium-term fiscal sustainability

1. Take steps to de-link public expenditures from short-run movements in oil prices and the resulting volatility in hydrocarbon revenues
   - Set cautious reference prices for oil in the budget
   - Anchor the fiscal framework on an indicator that is unaffected by the short-run changes in hydrocarbon revenues, such as the non-hydrocarbon primary fiscal deficit, measured as a ratio to non-hydrocarbon GDP
   - Implement a multiyear expenditure planning, based on a rolling medium-term expenditure framework
   - Integrate the “Fonds de Régulation des Recettes” into the budgetary process and improve transparency in the goals, rules, and operations of the fund

2. Secure the sustainability of the non-hydrocarbon fiscal deficit in the medium and long term
   - Implement a savings strategy over time, to meet the challenge of long-run depletion of hydrocarbon fiscal revenues
   - Over the medium term, keep the non-hydrocarbon primary deficit below a prudent estimate of the “permanent hydrocarbon income stream”, and save excess hydrocarbon fiscal revenues to offset the depletion of hydrocarbon revenues in the long term or help face future calls on the budget
   - Implement an active asset and liability management strategy with the aim of reducing net debt, giving priority in the short term to prepaying most expensive foreign debt and reducing the debt service ratio. Over the medium term, construct a portfolio of financial assets that hedges the risk of protracted declines in the price of oil
   - Promote efficient government debt markets through the establishment of reference interest rates and yield curves, regular debt issuance (including in the international capital market), and modernization of the regulatory framework of securities markets
3. **Strengthen the transparency of fiscal accounts and the role of the budget as an instrument for improved medium-term macroeconomic management**

- Step up the modernization of the preparation and formulation of the Budget by:
  
  a) Enhancing coordination among information collecting institutions
  b) Strengthening the capacity by Government agencies to formulate better projects and programs for public investment
  c) Establishing a fully integrated Budget framework, including a unified, multi-annual, and rolling Budget for 3-year periods
  d) Ensuring thorough coverage ("exhaustivité") of all fiscal and expenditure accounts within the Budget.
  e) Consolidating the evaluation and monitoring of contingent liabilities

- Strengthen ex-post Audit/Control of Budgetary Expenditure
- Establish an independent system for impact evaluation of public policies
CHAPTER 1

FACTORS OF LONG-TERM GROWTH AND MACROECONOMIC VOLATILITY
IN ALGERIA

1. Economic performance in Algeria since 1980 has been characterized mainly by weak growth and a large exposure to external shocks and volatility. After seeing a decade of relative prosperity in the 1970s, when GDP grew at an average annual rate of 6.8 percent, Algeria witnessed virtual economic stagnation. From 1980 to 1994 GDP grew, on average, by 1.7 percent per year—less than the rate of population growth. Thus, despite a growth revival since 1995, real per-capita GDP in 2000 (in constant US dollars and international prices) stood at about US$2,800, just 2 percent higher than in 1980 (Figure 1.1a). Moreover, growth has been volatile: ten years during the past two decades saw negative per-capita growth (Figure 1.1b). External volatility arises mainly from sharp movements in hydrocarbon revenues, on which Algeria is heavily reliant: hydrocarbon revenues currently account for 95 percent of the country's exports, 30 percent of GDP, and 75 percent of fiscal revenues. Terms-of-trade volatility has been among the highest in the world. Volatility has been inadequately managed and has had a disproportionate impact on GDP growth.

Figure 1.1: The growth collapse since the early 1980s has been followed by a timid recovery since the mid-1990s

![Graph of average standard of living and per-capita GDP growth rates](image)

Note: Per capita GDP is measured in constant international dollars, using purchasing power parity rates
Source: World Bank staff

2. Since 1994, the government has successfully carried out important fiscal consolidation, adopted cautious monetary and fiscal policies in the face of volatile oil prices, and achieved some progress in structural reform. These measures have laid the groundwork for future growth. Algeria is now experiencing a mild resumption of growth, seeing 5 consecutive years of positive per-capita growth for the first time in the past two decades (Figure 1.1b). GDP grew by 2.5 per cent a year, on average, from 1999 to 2002, while the non-hydrocarbon, nonagricultural sector grew at a faster pace of 2.9 per cent. Boosted by rapidly growing domestic demand, thanks to the Economic Recovery Program implemented in 2002, growth in the non-hydrocarbon sector reached 4 percent in 2002. Consumer price inflation remained
tamed, despite a spike to about 4 per cent in 2001. Growth was supported by rapid expansion of the hydrocarbon-sector, thanks to the increase in the price of oil since 1999. Growth in the non-oil sector has been revitalized but still remains insufficient to absorb the high level of unemployment (especially in the non-oil industrial sector—Table 1.1). The weak responsiveness in the non-oil sector growth shows that the agenda is far from complete. The increase in the price of oil has helped Algeria improve its external and internal balances. The current account switched to a sizeable surplus of 16.7 percent of GDP in 2000, which gradually declined to 9 percent in 2002.

3. Growth will need to accelerate further in order to absorb the high unemployment that was estimated at 27 per cent of the labor force at the end of 2001. Because of the existence of a large informal labor market the estimated rate of unemployment overstates the true magnitude of labor market slack. However, informal labor market jobs do not provide as productive jobs as in the formal sector, do not contribute much to the development of workers' skills, and thus do not support a strong growth of household incomes. With new entrants to the labor market growing by about 1.7 percent per year—and assuming an average elasticity of employment to output growth of 0.5—to reduce the unemployment rate by half in ten years, GDP would have to grow by 6 per cent per year. A more drastic reduction of unemployment would call for faster growth—or for increasing the employment content of growth through diversification to labor-intensive sectors as explained later.

4. Broad-based growth is also critically important to make a dent on poverty. According to the 1995 data, 14 percent of the population was below the poverty line; up from 8 percent in 1988. Although most recent estimates of poverty incidence are not yet available, preliminary evidence from national accounts data and household surveys suggests that the trend of increasing poverty may have been reversed. Per capita consumption in constant prices grew by 1.1 percent per year, on average, from 1995 to 2000. At the same time, contrary to the early 1990s, consumption growth of the low-income groups seems to have been more resilient. According to recent household survey data, while in 1988 the first five deciles of the population accounted for 24.2 percent of total household expenditures, that share had risen to 27 percent in 2000. Each of the lower deciles saw an increase in expenditure shares, in both rural and urban areas.

5. Overall, after ten years of transition to the market, inequality in Algeria does not seem to have worsened. Clearly more in depth research is needed to validate these trends and study the underlying factors of poverty and inequality. However, the recent pattern of expenditure inequality may partly reflect the maintenance of the social safety net. Moreover, the elimination of distortions (such as the realignment of prices and exchange rates, reduction of tariffs and import barriers) may have also played a role in improving the consumption possibilities of the low-income groups. Further promoting labor-intensive growth and improving the quality of public services would be a prerequisite to consolidate gains in poverty reduction.

6. By examining the determinants of long-term growth trends, and benchmarking Algeria's performance against other oil-dependent comparator countries, this chapter seeks to identify the key bottlenecks to better long-term growth performance in Algeria. The chapter
also draws the main linkages between growth and volatility in Algeria, by analyzing the impact of volatility on long-run growth, and identifying the channels which propagate the impact of shocks and volatility to growth.

7. Overall, results show that long-term growth has suffered from relatively large exposure to external volatility, a low human capital base, relative price distortions, and weak institutions. Algeria's growth collapsed for a decade since the mid-1980s, due to the adjustment to the oil price slump—exacerbated by an unsustainable foreign debt—and disruptions associated with a difficult transition from the command economy to the market. The interaction between large shocks and weak institutions has greatly contributed to the growth crash, which was further worsened by the persistence of macro instability until the mid 1990s. The lack of success in diversifying exports, stimulate domestic investment, and attract foreign direct investment in the non hydrocarbon sector largely explain the weak resumption of growth since the mid 1990s.

8. As further explained in chapter 2, strengthening the investment climate and easing constraints to the efficient use of resources would foster private sector development, enhance medium-term growth, and help reduce the high level of unemployment. However, with hydrocarbons at the heart of the Algerian economy, the strategic management of the hydrocarbon sector will also shape growth potential. The impact of changes in hydrocarbon revenues on the rest of the economy will be determined in great part by the efficiency with which these revenues are intermediated by the government. Strengthening the fiscal framework, to insulate the fiscal stance from volatile hydrocarbon fiscal revenues, so as to better manage macroeconomic volatility and secure fiscal sustainability will be key in helping achieve a sustained acceleration of growth.
1.1. **Growth and macroeconomic volatility in Algeria: A comparative perspective**

9. With the hydrocarbon sector at the heart of the Algerian economy, economic performance since independence has in large part been shaped by oil price movements. Algeria shares the growth pattern of other oil-producing countries and MENA countries. However, the economy’s ability to respond to the reverse oil shock was impaired by the rigidities of the command economy system, while exposure to volatility has also been stronger. Contrary to patterns seen elsewhere, and largely due to the civil violence and the slow transition to the market, Algeria has lagged behind other developing countries in the growth recovery seen in the 1990s.

**A growth boom has been followed by a protracted bust—**

10. During the 1970s, high oil prices resulted in an economic boom that benefited almost the entire group of oil producers (Figure 1.2a and Annex 1.1). In the 1980s, the growth boom came to an end, as oil prices collapsed in 1986, and falling export earnings led to a sharp contraction in domestic demand—especially in investment (Figure 1.2b). Emerging from the oil price slump in the 1980s, and experiencing persisting weaknesses in oil prices, growth performance within the group was more varied in the 1990s. Mexico and Indonesia were able to achieve reasonable growth, despite their exposure to severe financial crises. In contrast, per-capita growth remained negative in Algeria, Ecuador, Nigeria and Venezuela.

**Figure 1.2: Long-term growth trends in Algeria have been shaped by oil revenues**

![Figure 1.2a](image1.png)  ![Figure 1.2b](image2.png)

*Source: World Bank staff*

11. Algeria’s growth performance follows that seen in other oil producing countries, but was also shaped by the rigidities of the command economy. After the healthy growth seen in the 1970s, in the early 1980s growth was already running out of steam, as the drawbacks of the centralized planning were holding back productivity and yields in public enterprises and state farms (Figure 1.1b). Growth of demand was mainly fuelled by consumption subsidies and money growth, but supply shortages gave rise to increasing rationing on the official market and a sizeable parallel market premium on the official foreign exchange rate (Nashashibi et al. 1998). With hydrocarbon revenues dropping by 50 percent in 1986, Algeria witnessed significant budget and external imbalances. Budget deficits were largely
monetized, while current account deficits led to the buildup of foreign debt—with the debt service ratio rising from 35 percent of exports in 1985 to 78 percent in 1988. The debt crisis triggered by the reverse oil shock was followed by a collapse of growth, which lasted for a decade.

12. Macroeconomic adjustment efforts were put in place in 1989 and 1991, and were resolutely strengthened by an adjustment program introduced in 1994. To achieve macroeconomic stabilization, the 1994 program relied on strong fiscal adjustment (see chapter 3), supported by tight monetary policy, exchange rate adjustment, and a strict incomes policy. At the same time, to revitalize growth, the government initiated structural reforms aimed at accelerating the transition to the market and improving resource allocation through the realignment of relative prices and gradual liberalization of foreign trade. Thanks to successful stabilization and debt rescheduling, foreign debt was put on a sustainable path, with the debt service ratio declining to about 30 percent of exports by 1997.

13. Growth in the industrial and services sectors has largely mirrored overall growth performance (Figure 1.3a). Growth in agriculture has been by far more volatile, in large part reflecting continued vulnerability of agriculture to shifts in weather conditions, as in other Maghreb countries. However, agriculture was also the best performing sector during 1976-2000, with an average annual growth rate of 3.9 percent (Table 1.1). The non-hydrocarbon industrial and services sectors grew on average at about the same rate as GDP. Moreover, movements in the oil price have been transmitted to non hydrocarbon GDP growth: the simple correlation between the annual non hydrocarbon GDP (excluding agriculture) growth and changes in real price of oil during 1975-2000 was 0.4 (Figure 1.3b).

<table>
<thead>
<tr>
<th>Table 1.1: Growth Rates Output Components</th>
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<tbody>
<tr>
<td>GDP Growth</td>
</tr>
<tr>
<td>Agriculture Sector Growth</td>
</tr>
<tr>
<td>Industrial Sector Growth</td>
</tr>
<tr>
<td>Non-Oil Industrial Sector</td>
</tr>
<tr>
<td>Oil Sector</td>
</tr>
<tr>
<td>Services Sector Growth</td>
</tr>
<tr>
<td>Aggregate Consumption Growth</td>
</tr>
<tr>
<td>Private Consumption</td>
</tr>
<tr>
<td>Government Consumption</td>
</tr>
<tr>
<td>Fixed investment Growth</td>
</tr>
<tr>
<td>Private investment</td>
</tr>
<tr>
<td>Public investment</td>
</tr>
<tr>
<td>Exports Growth</td>
</tr>
<tr>
<td>Imports Growth</td>
</tr>
</tbody>
</table>

Source: World Bank staff

14. Owing to the collapse in hydrocarbon revenues in the mid-80s, the growth of demand in the services sector, the non-oil industry, and construction, took a big hit. During 1986-90, growth fell by 5 percent in the services sector and by 8 percent in the non-oil industries relative to the previous 5 years. Growth in the two sectors has remained relatively weak since. The mild recovery in GDP growth since the mid-1990s has been led mostly by the oil
sector. However, the non-oil industrial sector has also seen a modest resumption of growth, after 10 years of contraction, in response to the structural reforms implemented since 1994.

Figure 1.3: Sectoral long-term growth trends

(a) (b)

Growth in value added, in per cent per year

Source: World bank staff

15. On the demand side, the recent growth recovery has been driven by a large increase in public sector investment, directed to expanding the oil sector and the resulting pick-up in hydrocarbon export growth. Private investment has yet to recover, owing to the still weak investment climate and the incomplete structural reform agenda. Private consumption growth has remained subdued since the mid-1980s, reflecting the exceptionally high unemployment and the weak growth in household incomes.

—partly owing to poor total factor productivity growth

16. Total factor Productivity (TFP) growth in Algeria was largely negative during 1979-94, recovering somewhat during the late nineties (Figure 1.4a). TFP growth rates are closely linked with non-hydrocarbon GDP growth rates (Figure 1.4b). Weak TFP performance and a steady decline in capital accumulation have been the main factors behind the negative growth of output per worker. The human capital measure has been improving steadily over the past 3 decades. But its impact on growth has been more than offset by slow capital accumulation and negative TFP growth, resulting in low GDP growth rates.
17. Analysis later in this chapter suggests that relative price distortions, exposure to large external shocks and institutional weaknesses may have contributed to the weak TFP performance over the entire 1970-2000 period. Also, TFP growth since the mid-80s seems to have suffered from volatility caused by macro policy slippages (which were corrected after 1994), and lack of openness to external trade and investment. A factor of particular importance was the severe shortage of intermediate inputs and imported capital, owing to the balance-of-payments crisis and the devaluation of the dinar in the late 1980s, triggered by the collapse in the price of oil. Moreover, the debt crisis squeezed financing for investment projects, both in the enterprise sector and for public investment in infrastructure, thus exacerbating inefficiencies in the non-hydrocarbon sector and worsening the productivity slump.

18. TFP growth has shown a positive albeit subdued response to the structural reforms implemented since 1994: the average TFP growth picked up to 0.3 percent per worker during 1995-99, compared to -4.3 during the previous 5-year period. As explained in chapter 2, part of this increase in productivity may be explained by the increasing role of the private sector in industry and services since 1994. But TFP performance remains constrained by a weak investment climate that prevents a stronger resumption of private investment. Moreover, markets for labor and credit, as well as the delivery of public services to enterprises, all suffer from severe inefficiencies, leading to underutilization of production factors and to a growing informal sector that prevent a genuine revival of TFP growth.

19. The performance of TFP growth is consistent with the experience of other oil-exporting countries (Figure 1.5). The majority of countries in the group saw positive TFP growth in the 1970s: most likely due to the positive impact on productivity of increased investment in infrastructure. During 1980-85, TFP growth collapsed in all countries, as the balance-of-payments crises that were triggered by the oil price crash caused widespread disruptions in production and the efficient use of resources. But poor TFP growth also reflected the low quality of massive investments carried out during the oil boom. The fallout
of the oil slump since the mid eighties was more mixed. Indonesia, Ecuador, and Venezuela used the crisis period to step up structural reforms and experienced a rebound in TFP growth. Egypt and Mexico have also seen some gains from progress on structural reforms since the mid-1990s. Algeria suffered the most, with negative (and lowest in the group) TFP growth during 1986-90.

Figure 1.5: Total factor productivity performance in Algeria has been weak

![Graph showing average annual TFP growth rates in Algeria, Ecuador, Egypt, Indonesia, Mexico, Nigeria, and Venezuela from 1971-79, 1980-85, 1986-90, 1991-95, and 1996-00.]

Source: World Bank Staff

Algeria has been exposed to high macroeconomic volatility

20. Over the 1970-2000 period, the outcome of external shocks and domestic policy responses for Algeria was growth volatility at the high end of other oil-producing countries and transition economies—at least twice as large as the MENA average over any period of time (Figures 1.6a-1.6d, based on a methodology outlined in Annex 1.3). Out of a total sample of 144 countries, only 9 countries had higher terms-of-trade volatility than Algeria during 1971-1999. The strong impact of terms-of-trade volatility on GDP also reflects the poor diversification of the Algerian economy out of hydrocarbons. However, in the 1990s, volatility of GDP growth receded, as Algeria compares favorably with other oil-producing countries and the average (see Annex 1.3). This partly reflects the somewhat lower exposure to terms of trade variability in the 1990s, but is also attributable to strengthened macroeconomic management and successful stabilization since 1994.
21. The Agricultural sector has been the most volatile due to its vulnerability to recurrent changes in weather conditions (Figure 1.7). Hydro-carbon output has been the least volatile, reflecting constraints imposed by production quotas. By contrast, changes in domestic demand, as a result of terms of trade volatility and policy responses, have been reflected in high volatility in non-hydrocarbon industrial output. Increased volatility is likely to deter domestic investment in the industrial sector, as it increases risks in a sector already plagued with substantial uncertainty, due to persisting violence and to increasing exposure to foreign competition.
Evidence suggests that higher volatility hampers the long-run growth process (Ramey and Ramey, 1995; Aizenman and Marion 1995, 1996; Serven 1998). Across a large group of countries, average growth performance over 1981-2000 is, indeed, negatively related to the volatility in the changes of terms of trade (Figure 1.8).5

However, individual country performances vary significantly around the average. The impact of volatility on a country is likely to depend on government policies, and the quality of the underlying social and economic institutions. Stronger financial systems will be in a position to better cushion the impact of volatility, by allowing better inter-temporal smoothing of expenditure and more efficient allocation of resources across economic sectors in the face of greater uncertainty. Flexible labor markets would also help absorb the incidence of shocks to employment, thus preventing steep increases in unemployment that may amplify the impact of shocks on domestic demand and growth. Most importantly, prudent fiscal policies are key to insulating the economy from external shocks. Prudent fiscal policies provide room for absorbing the shocks, without placing excessive strains on domestic demand in order to maintain a sustainable external position. Analysis later in this chapter and in chapter 3 confirms that, because of weak institutions and pro-cyclical fiscal
policies, volatility has been mismanaged and has had an adverse impact on growth in Algeria.

1.2. **Assessing Algeria’s long-term growth potential: strengthening assets and removing bottlenecks to growth**

24. Drawing on cross-country empirical evidence, this section examines the social, structural, and macro economic determinants of Algeria’s long-term growth performance. The section first examines the reasons for the weak growth performance in the past, especially, for the protracted slowdown since the mid-80s. This analysis forms the basis for an assessment of Algeria’s growth potential over the next decade or so, conditional on removing the key bottlenecks that have constrained growth so far.

**Accounting for Algeria’s “missing long-term growth”**

25. If Algeria had achieved growth performance similar to Indonesia’s (another oil-dependent economy), per-capita GDP in constant US dollars would have been US$4,400, such that the living standard of an average Algerian could have been 60 percent higher. According to a more accurate empirical estimation (see Box 1 for main results and Annex 1.4 for details), based on Algeria’s investment ratios, human capital, population growth, and initial level of per capita income, the country’s per capita income should have grown on average by about 3.2 percent per year over the past three decades. However, actual growth during 1971-2000 has been only 0.9 per cent on average per year, suggesting a “growth gap” of about 2.3 per cent. What are the factors accounting for Algeria’s “missing growth” over the past three decades?

26. Further empirical analysis (Box 1 and Annex 1.4) shows that this “missing long-term growth” is explained almost fully by Algeria’s large relative price distortions during the command-economy period; weakness of its market-supporting institutions; weak human capital indicators; and exposure to large external shocks. When these factors are accounted for, predicted per-capita average growth for Algeria’s is 1.3 percent, quite close to the actual performance.
Box 1.1: Assessing factors of long-term growth in Algeria

Following Mankiw, Romer and Weil (1992), we ran a regression of the average per-capita GDP growth (1971-2000) (y) on the average investment rate (INV), the initial income in 1970 (INI), the average population growth rate (POP), and the average level of secondary school enrollment during this period (SEC) as a measure of human capital. Results are reported below with the relevant t-statistics in parenthesis. The signs are as predicted: the sign on initial income is negative, suggesting conditional convergence.

\[
y = -6.2 + \ln(SEC)*0.77 + \ln(INV)*3.3 - \ln(INI)*0.6 - POP*4
\]
\[
(-3.3) (3.0) (6.4) (-2.2) (-2.0)
\]

Adjusted R\(^2\) = 0.44

According to this estimation, the average per-capita growth rate in Algeria during the 1971-2000 period should have been 3.2 percent, and not the 0.9 actually seen. This is mainly driven by a high average investment ratio in Algeria: one of the highest in the sample. These gains from capital accumulation are offset to some extent by the relatively high population growth rate and weak average human capital indicators—although these have improved significantly in recent years.

To account for the "missing growth" of 2.3 percent in Algeria we extend the regression to include broader measures of growth determinants, drawing on the empirical growth literature.

\[
y = 4.5 - SEC*0.02 - MORT*0.01 + \ln(INV)*2.3 - \ln(INI)*1.1 - FERT*0.4 - VOLAT*0.05 + ICRG*0.04 - BMP*0.001
\]
\[
(1.2) (-1.6) (-3.0) (-5.0) (-2.8) (-1.7) (-2.5) (2.2)
\]

Adjusted R\(^2\) = 0.64

where, SEC, MORT and FERT are human capital indicators and stand for the average secondary enrollment rate, the average mortality rate, and the average fertility rate respectively, VOLAT is a volatility measure (calculated as standard deviation of annual terms of trade growth during 1971-1999), ICRG is the average rating of political institutions over 1984-2000 by the ICRG, and BMP is the average black market premium. The relevant t-statistics are in the parenthesis.

All signs are as expected, except for enrollment to secondary education—which is not significant and has the wrong sign once additional measures of human capital are included. This framework predicts an average per-capita growth of 1.3 percent for Algeria, which is much closer to the actual performance of 0.9 percent. Therefore, much of the "missing growth" is accounted for by including proxies for market distortions, volatility, and institutions.

Source: World Bank staff
Table 1.2: Comparison of Algeria vis-à-vis Sample Average—volatility has been costly in terms of growth performance

<table>
<thead>
<tr>
<th></th>
<th>Algeria</th>
<th>Sample Average</th>
<th>Contribution to Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOT Volatility</td>
<td>24.4</td>
<td>11.1</td>
<td>-0.7</td>
</tr>
<tr>
<td>ICRG Ratings for Political Institutions</td>
<td>52.6</td>
<td>61.9</td>
<td>-0.4</td>
</tr>
<tr>
<td>Average Fertility Rate</td>
<td>5.4</td>
<td>4.0</td>
<td>-0.5</td>
</tr>
<tr>
<td>Average Mortality Rate (under-5, per 1,000)</td>
<td>92.8</td>
<td>81.3</td>
<td>-0.1</td>
</tr>
<tr>
<td>Average Black Market Premium</td>
<td>201.1</td>
<td>66.4</td>
<td>-0.1</td>
</tr>
<tr>
<td>Initial Per-Capita GDP (natural log)</td>
<td>7.5</td>
<td>7.7</td>
<td>0.2</td>
</tr>
<tr>
<td>Av. Gross Dom. Investment Rate (natural log)</td>
<td>3.5</td>
<td>3.1</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Source: World Bank staff

27. Comparisons with sample averages suggest that excessive volatility may have been the biggest contributor to Algeria’s “missing growth” (Table 1.2). Excess volatility cost Algeria close to 0.7 percentage points in average annual per-capita growth, while a loss of close to 0.4 percentage points may be attributable to weak institutions, 0.6 percentage points to poor human capital indicators and 0.1 percentage points to price distortions (captured by the “black-market” premium on the official exchange rate). The impact of these factors has been transmitted to growth through the weak or negative total factor productivity growth documented earlier. By contrast, comparatively large investments by the public sector have provided some limited support to growth, although insufficient to offset the drag of weak productivity on growth.

28. The role of institutions. Algeria’s performance with regard to institutional/governance variables is generally recognized as being weak (see also Dillman, 2000). The economic system has for long been characterized by an extensive state patronage system fed by distribution of oil rents and, until recently, a myriad of state controls and price distortions. This has typically provided more incentives for rent-seeking and predatory behavior by the private sector than for engagement in productive activity. The positive change in Government policy toward the private sector over the 1990s has not translated yet into significant change in the attitude of the public administration towards entrepreneurs, who still often face unfriendly bureaucratic behavior and red tape (see chapter 2). Simmering discontent with economic and political weaknesses, against a backdrop of lacking institutions that could provide people with voice and participation to enable the needed change, has contributed to a pernicious civil strife since 1992.

29. Two sources were used to benchmark Algeria against comparator countries on the performance of governance institutions: ICRG, and a compilation of rankings by various agencies (Kaufman et al; 2002). It should be stressed that such ratings convey the image of a country’s governance as perceived by foreign investors, but do not necessarily convey a fully accurate sense of ongoing reforms, as investors’ perceptions may be slow to change—due to entrenched perceptions and credibility concerns—or may be blurred by external events. It is thus important to strengthen the credibility of reforms so as to improve the country’s image on governance, as this is an important determinant of the attractiveness to foreign investors. The use of these ratings in the empirical estimates reported in this study is not meant to imply that The World Bank necessarily endorses their accuracy. The FIAS report provides more
evidence and explores policy options to strengthen the foreign investor climate on Algeria (World Bank, 2002d).

30. Algeria is perceived as performing poorly on most measures considered (Table 1.3). According to the ICRG ratings, among the 14 countries compared, Algeria’s rankings are particularly low on the Rule of Law and Order, and Democratic Accountability, while they are close to average on Corruption and Quality of Bureaucracy. On all indicators, but the Quality of Bureaucracy, Algeria’s score is below that of the MNA average. According to compiled rankings, (Kaufman et al, 2002), of the 14 countries compared, Algeria’s ranking varies between 9 and 14, while its performance is significantly worse than the MNA average along all six dimensions. On the two dimensions which arguably are the most critical for private investment, Regulatory Quality and Rule of Law, Algeria ranks last and second-last respectively.

Table 1.3. Algeria’s performance on Institutional Quality/Governance has been weak

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Bureaucracy</td>
<td>Law and Order</td>
</tr>
<tr>
<td>Algeria</td>
<td>3.33</td>
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<tr>
<td>Azerbaijan</td>
<td>1.67</td>
</tr>
<tr>
<td>Colombia</td>
<td>3.33</td>
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<tr>
<td>Ecuador</td>
<td>3.33</td>
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<tr>
<td>Egypt</td>
<td>3.33</td>
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<tr>
<td>Gabon</td>
<td>3.33</td>
</tr>
<tr>
<td>Hungary</td>
<td>6.67</td>
</tr>
<tr>
<td>Indonesia</td>
<td>4.35</td>
</tr>
<tr>
<td>Mexico</td>
<td>5.00</td>
</tr>
<tr>
<td>Nigeria</td>
<td>0.83</td>
</tr>
<tr>
<td>Poland</td>
<td>5.00</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>3.33</td>
</tr>
<tr>
<td>Syria</td>
<td>1.67</td>
</tr>
<tr>
<td>Venezuela</td>
<td>1.67</td>
</tr>
<tr>
<td>MNA Average</td>
<td>2.86</td>
</tr>
</tbody>
</table>

Source: World Bank staff

31. The role of human capital. Long-term growth in Algeria has been adversely impacted also by relatively weak human capital indicators. Education indicators continue to underperform regional and income-group averages (Table 1.4), while, until recently, population growth and fertility rates were one of the highest in the world. However, despite low levels, human capital indicators have considerably improved in recent years. For example, during the 1975-2000 period, the average years of schooling more than doubled while the fertility rate fell by more than half and life expectancy increased by 15 years. Primary enrolment is now almost universal and relatively equal across urban and rural areas (World Bank 1999).

32. Considerable scope for improvements in human capital remains nonetheless. In health, infant and child mortality rates, albeit considerably lower than in the 1970s and 1980s, have stagnated since the 90s. Improving the quality and targeting of health care services would
help expand health coverage to include poorer and rural sections of the society. Although the illiteracy rate is less than half its level in the 1970s, it remains considerably above the level in comparator countries and Algeria's income group. In addition, the recent trend of increasing repetition and dropout rates, especially at the secondary education level, needs to be reversed. Also, the quality of the education system needs major upgrading: there appears to be a serious mismatch between skill requirements of the market and skills being imparted by the system: this also lowers the returns to education and contributes to the high drop-out rates. Moreover, experience, especially from MENA countries, suggests that improvements in education do not lead to higher growth in the absence of a conducive environment in which the educated labor is employed (Pritchett, 1999). Therefore, the improving trends in human capital bode well for future growth in Algeria, but only if combined with concomitant improvements in other important growth determinants, especially the investment climate and market institutions.

Table 1.4: Select Human Development Indicators in Algeria and Comparator Countries

<table>
<thead>
<tr>
<th></th>
<th>Life Expectancy (years)</th>
<th>Fertility Rate (births per woman)</th>
<th>Under-5 Mortality (per 1,000 live births)</th>
<th>Gross Enrollment Rate of school-age pop.</th>
<th>Gross Secondary Enrollment Rate (%) of age group</th>
<th>Average Years of Schooling</th>
<th>Illiteracy rate, adult (% pop. 15 and above)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>56 71</td>
<td>7.3 3.2</td>
<td>139 39</td>
<td>93 107</td>
<td>20 63</td>
<td>2.0 5.4</td>
<td>72.4 33.3</td>
</tr>
<tr>
<td>Colombia</td>
<td>63 72</td>
<td>4.6 2.6</td>
<td>58 23</td>
<td>118 106</td>
<td>36 61</td>
<td>4.3 5.3</td>
<td>16.9 8.3</td>
</tr>
<tr>
<td>Ecuador</td>
<td>60 70</td>
<td>5.6 3.0</td>
<td>101 34</td>
<td>104 123</td>
<td>40 52</td>
<td>4.8 8.4</td>
<td>21.7 8.4</td>
</tr>
<tr>
<td>Gabon</td>
<td>46 53</td>
<td>4.3 4.2</td>
<td>89 102</td>
<td>.. ..</td>
<td>.. ..</td>
<td>.. ..</td>
<td>.. ..</td>
</tr>
<tr>
<td>Indonesia</td>
<td>51 68</td>
<td>5.0 2.5</td>
<td>125 51</td>
<td>86 113</td>
<td>20 51</td>
<td>3.0 5.0</td>
<td>37.1 13.1</td>
</tr>
<tr>
<td>Mexico</td>
<td>64 73</td>
<td>5.8 2.6</td>
<td>74 36</td>
<td>109 116</td>
<td>35 61</td>
<td>3.9 7.2</td>
<td>21.3 8.0</td>
</tr>
<tr>
<td>Nigeria</td>
<td>44 47</td>
<td>6.9 5.3</td>
<td>198 163</td>
<td>51 93</td>
<td>8 32</td>
<td>1.4 3.6</td>
<td>74.1 38.1</td>
</tr>
<tr>
<td>Venezuela</td>
<td>67 73</td>
<td>4.7 2.8</td>
<td>42 24</td>
<td>97 90</td>
<td>44 35</td>
<td>3.8 6.6</td>
<td>19.8 7.4</td>
</tr>
<tr>
<td>MENA Average</td>
<td>65 68</td>
<td>6.8 3.9</td>
<td>131 48</td>
<td>71 96</td>
<td>32 52</td>
<td>2.4 5.3</td>
<td>62.8 34.0</td>
</tr>
<tr>
<td>Lower-middle-income countries</td>
<td>63 69</td>
<td>3.6 2.1</td>
<td>81 41</td>
<td>114 112</td>
<td>44 67</td>
<td>.. 5.6</td>
<td>34.8 15.3</td>
</tr>
</tbody>
</table>

Source: World Bank staff

33. Factors affecting efficiency. Benchmarking also shows that exchange rate distortions, as reflected by the black market premium on foreign exchange and real overvaluation of the exchange rate, have been large in Algeria (Table 1.5). Algeria had the highest average black market premium and average real overvaluation during 1971-2000. These price distortions impaired the efficiency of the price system in guiding resource allocation. Hence, they impeded investment due to higher uncertainty, while reducing its efficiency as they artificially boosted the viability of industries making intensive use of imported intermediate inputs. Excessive distortions in the foreign exchange markets have been removed in recent years, although the black market premium still remains significant.
Table 1.5: Select Macro and Structural Indicators for Algeria and Comparator Countries

<table>
<thead>
<tr>
<th></th>
<th>Gross Dom. Inv. (GDP)</th>
<th>Govt. Cons. (GDP)</th>
<th>Budget Balance (GDP)</th>
<th>CPI Inflation (annual %)</th>
<th>Trade (X + M) (GDP)</th>
<th>FDI, net inflows (GDP)</th>
<th>Real Overvaluation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>34.4</td>
<td>16.3</td>
<td>-5.2</td>
<td>12.1</td>
<td>55.9</td>
<td>0.2</td>
<td>201</td>
</tr>
<tr>
<td>Colombia</td>
<td>19.1</td>
<td>11.7</td>
<td>-1.8</td>
<td>21.8</td>
<td>31.9</td>
<td>1.3</td>
<td>85</td>
</tr>
<tr>
<td>Gabon</td>
<td>21.4</td>
<td>11.5</td>
<td>-0.7</td>
<td>31.3</td>
<td>53.9</td>
<td>2.0</td>
<td>22</td>
</tr>
<tr>
<td>Indonesia</td>
<td>35.3</td>
<td>15.6</td>
<td>-2.9</td>
<td>7.7</td>
<td>96.5</td>
<td>0.9</td>
<td>2</td>
</tr>
<tr>
<td>Mexico</td>
<td>25.0</td>
<td>9.0</td>
<td>-1.4</td>
<td>13.4</td>
<td>50.2</td>
<td>0.6</td>
<td>5</td>
</tr>
<tr>
<td>Nigeria</td>
<td>22.6</td>
<td>9.8</td>
<td>-4.1</td>
<td>34.9</td>
<td>34.0</td>
<td>1.4</td>
<td>7</td>
</tr>
<tr>
<td>Venezuela, RB</td>
<td>24.1</td>
<td>9.9</td>
<td>-3.1</td>
<td>22.9</td>
<td>54.8</td>
<td>2.5</td>
<td>125</td>
</tr>
<tr>
<td>MNA Average</td>
<td>24.7</td>
<td>19.6</td>
<td>-5.4</td>
<td>9.6</td>
<td>72.0</td>
<td>1.1</td>
<td>39</td>
</tr>
<tr>
<td>Lower-middle-income countries</td>
<td>29.7</td>
<td>12.7</td>
<td>38.8</td>
<td>1.41</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: World Bank staff

34. International evidence has also shown that openness to trade and foreign direct investment are important determinants of productive efficiency and, hence, long-term growth. Algeria is in the middle of the group of comparators with respect to the trade-to-GDP ratio, while its ratio of FDI/GDP is the lowest in the group. The impact of trade on GDP growth may be weaker in Algeria however, as non-hydrocarbon exports are limited. Both trade and FDI shares of GDP fell significantly in the 1980s and 1990s relative to the 1970s, owing to the faltering performance of the oil sector and the lack of diversification. Oil exporters such as Mexico and Indonesia, that were able to diversify their economies away from oil, were more successful in taking advantage of the rapid growth in global trade and investment, and achieved higher per-capita growth as a result.

**Accounting for the protracted “growth crash” since the mid-1980s**

35. The changes in the macroeconomic and structural policy variables mentioned in the previous sections provide an incomplete explanation of the protracted growth crash in Algeria since the mid-80s. The average annual per-capita growth rate dropped by over 4.2 percent during 1986-2000, relative to the 15-year period before. This is a much larger drop than changes in the variables identified in the previous section would suggest. $^9$

36. International evidence suggests that external shocks are likely to be important drivers of “growth crashes” (e.g. Easterly et al 1993; Rodrik, 1999). Accordingly, a growth model was estimated to explain the growth differences between the periods 1971-1985 and 1986-2000, while accounting for the role of external shocks. The analytical framework is outlined in Annex 1.5 and the main results are presented in Table 1.6. The growth model explains about 70 percent of the variations in growth across countries over the two periods, and applies well to Algeria. Using alternative measures for terms-of-trade volatility, (V1 and V2 respectively, in regressions 1 and 2), $^{10}$ and accounting for changes in openness and the inflation rate, the predicted drop in per-worker GDP growth in Algeria is about 4.0 percentage points—very close to the actual drop of 4.2 per cent seen during the period. $^{11}$

37. Next, a synthetic indicator (V3—see regression 3) was constructed to account for the interaction among terms-of-trade volatility, improvements in institutions, and degree of political stability and violence in the society. The same caveats apply concerning the
interpretation of the indicators of institutional quality. The drop in per capita growth rate predicted for Algeria was estimated at 4.6 percentage points. According to this estimation, Algeria lost about 2 percentage points in average annual growth relative to an average country due to this interaction effect (Figure 1.9). Thus the adverse interaction of volatility, weak institutions, and social instability was by far the biggest contributor to the growth crash since the mid-80s.

38. Because of institutional weaknesses, the government’s ability to respond to volatility was been greatly reduced, due to the adverse impact of the adjustment to shocks on social stability. This has delayed restructuring and privatization of public enterprises, with adverse consequences on manufacturing activity and on the soundness of the banking system which was overburdened with bad debts (see chapter 2). Moreover, the fiscal retrenchment and exchange rate devaluation, implemented in response to the collapse in the price of oil in the mid-80s, were followed by severe social and political unrest in the country. This greatly diminished the capacity of the government to continue with policy restraint in the 1990s: while reducing capital expenditure, the government increased current expenditure by over 10 percentage points of GDP between in the 1990s. Overall, growth suffered not only from external shocks, but also because of the resulting social strife and increase in unproductive government consumption, largely reflecting the lack of supporting institutions.
Table 1.6: Regression results for growth-crash model

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Average Per-Worker Growth in 1986-2000 (%)</th>
<th>Average Per-Worker Growth in 1971-1985 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Llagged Growth</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td>(-0.75) (-0.71) (-0.78)</td>
<td>(-0.75) (-0.71) (-0.78)</td>
</tr>
<tr>
<td>Volatility Terms</td>
<td>V1</td>
<td>V2</td>
</tr>
<tr>
<td></td>
<td>(-0.05) (-0.002)</td>
<td>(-0.05) (-0.002)</td>
</tr>
<tr>
<td>Synthetical Indicators</td>
<td>V3 (-0.01)</td>
<td>V4 (-0.01)</td>
</tr>
<tr>
<td></td>
<td>(-4.1** (-2.6**)</td>
<td>-0.02 (-4.1**)</td>
</tr>
<tr>
<td>Decadal Changes in</td>
<td>FDI/GDP Ratio (2.8)** (2.4)** (2.3)**</td>
<td>FDI/GDP Ratio (2.8)** (2.4)** (2.3)**</td>
</tr>
<tr>
<td></td>
<td>(2.8)** (2.4)** (2.3)**</td>
<td>(2.8)** (2.4)** (2.3)**</td>
</tr>
<tr>
<td></td>
<td>(2.8)** (2.4)** (2.3)**</td>
<td>(2.8)** (2.4)** (2.3)**</td>
</tr>
<tr>
<td></td>
<td>(2.8)** (2.4)** (2.3)**</td>
<td>(2.8)** (2.4)** (2.3)**</td>
</tr>
<tr>
<td>Dummy for Oil-exporting countries</td>
<td>-0.27 (-2.2)**</td>
<td>-0.43 (-1.1)</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.68 (2.2)**</td>
<td>0.72 (-1.1)</td>
</tr>
<tr>
<td></td>
<td>0.75 (2.2)**</td>
<td>0.71 (0.7)</td>
</tr>
<tr>
<td>Value Predicted for Algeria</td>
<td>-3.66 (0.7)</td>
<td>-3.86 (2.0)</td>
</tr>
<tr>
<td></td>
<td>-4.03 (0.7)</td>
<td>-4.36 (2.0)</td>
</tr>
</tbody>
</table>

*, **, *** imply that the coefficient is significant at the 10, 5 and 1 percent levels.

Figure 1.9: Accounting for the protracted growth crash in Algeria: Management of volatility matters

Note: The Volatility 1 term reflects the interaction effect between terms of trade volatility, improvement in political institutions, and social stability.

Source: World Bank staff
Resuming the growth process in Algeria: Policy challenges

39. With a tradition of high savings, improving educational attainment, abundance of hydrocarbon resources, and an advantageous geographic location, Algeria has good potential for growth. In the past, growth has fallen short of this potential because of large external shocks, institutional weaknesses, and a hesitant transition to the market that perpetuated price distortions, lack of openness to foreign trade and investment, and a large and intrusive government. Moving forward, achievement of this potential will depend on how effectively these impediments to growth are being tackled.

40. The Government has pursued fiscal consolidation and followed a prudent monetary policy that contributed to stabilization, and at the same time has taken steps on the front of structural reforms. As a result, price distortions have eased, inflation has been tamed, and internal and external balances have improved. However, the incomplete transition to the market and weaknesses in market-supporting institutions still act as a break on growth of the non-hydrocarbon sector. These shortcomings have also prevented the economy from responding sufficiently to the reform measures taken thus far and also from benefiting from improvements in human capital. To tackle persisting social problems, especially high unemployment, it is imperative that the Government takes quick actions to facilitate private sector growth in the non-hydrocarbon sector (see Chapter 2), while continuing the efforts at fiscal consolidation, to preserve macroeconomic stability and secure fiscal sustainability in the medium term (see Chapter 3).

41. Findings in this chapter suggest that improvements in state institutions offer great potential in terms of higher growth. This is particularly important for Algeria given its large exposure to shocks and presence of social conflict that has manifested on numerous occasions in the recent past. Analysis suggests that by improving the quality of its institutions to the levels achieved by an average economy in the world, Algeria can add an additional 0.4 percent to its long-term growth. The per-capita growth bonus that would come with institutions at par with:
   - Mexico, would equal 0.7 percentage points;
   - A successful transition economy, such as the Czech Republic, would equal 1 percentage point;
   - Developed country standards, would equal 1.5 percentage points.

42. Better economic diversification could also bring a high growth dividend, by reducing Algeria’s vulnerability to external volatility. If exposure to external shocks could be brought down to the levels faced by Indonesia and Mexico (that used to be also disproportionately dependent on oil), growth could be enhanced by 0.5-0.7 percent. The steady improvements in human capital, which—under the right conditions—could potentially add about 1.3 percentage points to Algeria’s long term growth relative to past performance. Greater openness to foreign trade and investment in the non-hydrocarbon sector has the potential of adding another 1.5 percentage points to medium-term growth. These gains are only suggestive, based on cross-country evidence, but do point to areas that can bring the highest gains in terms of growth. Summing up, improving performance along these dimensions could increase Algeria’s long-term growth rate by about 3.8 percentage points.
43. Finally, because hydrocarbons are at the heart of the Algerian economy, the strategic management of the hydrocarbon sector may also shape long-term growth. Simulations suggest that, under the right conditions, the intermediation of hydrocarbon windfalls through the household and business sectors might produce superior economic performance in the long run (see Annex 1.6). When a temporary windfall is intermediated by the government, the impact is likely to die out almost completely in the long term, while with intermediation by the household and business sector the long-term increase in GDP might be sustained. This is because when the hydrocarbon revenues are exclusively intermediated by the state the pattern of expenditures and the amounts allocated to savings and investment are different from the patterns that would prevail under disbursement of rents to households and business. Hydrocarbon windfalls may be transferred to households and businesses through different channels—such as lower personal and corporate income taxes; lower indirect and payroll taxes; or direct transfers. Although these instruments have a different impact, when temporary hydrocarbon windfalls accrue to households and businesses savings may also increase concomitantly, funneling investment and directly expanding productive capacity and output in the long term. When the windfall accrues to the government, productive capacity increases only indirectly, to the extent public investment in infrastructure boosts private sector productivity, thus producing a more limited impact on output in the long run.

44. However, though increased private intermediation of hydrocarbon revenues could work for growth better, it would call for strengthening the investment climate. In real economic circumstances, higher household and business sector savings out of hydrocarbon windfalls would not be spontaneously converted into productive investment. This is especially so in Algeria, where weaknesses in the investment climate, constraints to the efficient use of resources, and still poorly functioning institutions hinder domestic investment. Shifting to a different model of intermediation of the hydrocarbon revenues would, thus, not be enough by itself to unlock the economy’s long-term productive potential. Encouraging private sector investment and the efficient use of resources would not only promote the diversification of the non-hydrocarbon sector, but would also improve the capacity of the economy to make hydrocarbon revenues work for growth in the long term.
CHAPTER 2

SUSTAINING FASTER MEDIUM-TERM GROWTH IN A COMPETITIVE ENVIRONMENT: THE CHALLENGE OF STRUCTURAL REFORM

45. Achieving faster GDP growth for a sustained period of time is a prerequisite to significantly reduce unemployment in Algeria. However, as long as the hydrocarbon sector remains the main driver of growth, it will be hard to significantly reduce unemployment, because the hydrocarbon sector and the downstream industries contribute little to job creation. To reduce unemployment, growth will have to rely on the diversification of the non-hydrocarbon sector, driven by labor-intensive industries and services that are internationally competitive.

46. To respond to competitive challenges, growth would need to be led by the private sector, by encouraging both domestic and foreign investment in labor-intensive non-hydrocarbon industries and services. This would call for a comprehensive program of mutually reinforcing structural reforms, with the aim of furthering Algeria's transition to the market so as to remove the remaining constraints to the efficient use of resources. Indeed, since 1994, Algeria has embarked on a program of reforms, with the aim of promoting private sector development and addressing the structural bottlenecks at the origin of slow growth and high unemployment.

47. But despite steps taken to date, Algeria's transition to the market remains incomplete. To be sure, the Algerian private sector's share in non hydrocarbon value-added increased to an estimated 76 per cent in 2000, from about 62 per cent in 1992, comparing favorably with the private sector's share in other transition economies, especially in oil-rich countries in the CIS (Figure 2.1a). However, private sector participation in Algeria remains much lower in the non-hydrocarbon industry. Moreover, the sizeable hydrocarbon sector remains in public hands, so that the private sector's share in total GDP remains compressed at below 50 per cent.

48. The shift from planned to market economies is a social and economic transformation of unprecedented magnitude. Although the specific design of policies, their sequencing and their speed are still subject to debate, there is a broad consensus that at the heart of the transition process are two major challenges: (i) Disciplining the "old economy", and (ii) enabling the "new economy" to emerge (World Bank, 2002b). The challenges faced by Algeria are examined in the first two sections of the chapter. Measures to strengthen the investment climate and remove bottlenecks to private sector development in Algeria are examined in more detail in the Enterprise and Private Sector Development Note (World Bank, 2002c) and in the Assessment of Foreign Investor Climate (World Bank, 2002d).

49. Establishing market discipline on the enterprises inherited from the command system is key, so that these enterprises face the incentive to restructure and become more productive and able to compete in a market-based system -- with failure to restructure successfully leading to liquidation. Enabling the creation of new enterprises that are willing and able to
compete in the market place is crucial for resuming growth and absorbing the resources released by the enterprises from the old sector—in particular offering employment opportunities to workers affected by liquidation and restructuring. Experience suggests a large performance differential between the old and new sectors in transition economies during 1996-99 (Figure 2.1b).

50. Experience suggests that the transition economies that have created an enabling environment for the emergence of the new sector have witnessed stronger overall growth and lower transition costs, because enterprises in the new sector are more productive, and they also invest and export more than enterprises in the old sector. In retrospect, it is the effectiveness of policies in disciplining the enterprises inherited from the old production system and enabling the emergence of a critical mass of new enterprises that best explains the wide disparity in growth, social welfare and resilience to shocks, across the transition countries of the Central and Eastern Europe and the CIS.

Figure 2.1: Enabling the emergence of the new sector helps reduce the cost of the transition to the market

A faster speed of privatization may alleviate the costs of the transition... ...because new enterprises outperform the state-owned enterprises

Source: World Bank staff, based on data from EBRD and Algerian National Accounts (ONS)

51. But at the same time, Algeria needs to rise up to the challenge of international competition, as the transition to the market involves lowering the protection of incumbent firms from foreign competition. The Association Agreement between the EU and Algeria opens a new era in Algeria's participation in global trade. With the right business environment in place, Algeria could take advantage of export opportunities and attract foreign direct investment in the non-hydrocarbon sector—which would help Algeria participate in cross-border production networks. Algeria's competitive potential in manufacturing is examined in section 3.
2.1. Furthering Algeria’s transition to the market: Disciplining the old sector

52. Experience from transition economies suggests that disciplining the old sector calls for imposing hard budget constraints on enterprises, providing exit mechanisms for insolvent enterprises, monitoring managerial behavior, and increasing product market competition—also by liberalizing foreign trade. Imposing hard budget constraints on enterprises and banks is not only a sine qua-non condition for restructuring the old sector but also for macroeconomic stability (Annex 2.1). This section looks at progress and challenges still to be met by Algeria in privatization of public enterprises, bank restructuring, and trade policy reform.

53. Managing the political economy of reforms is perhaps the single most important determinant of the success of transition to the market (Annex 2.2). This is because the transition to the market entails costs and benefits which are unevenly distributed. Disciplining the “old economy” entails short-term costs, while gains from the emergence of the “new economy” will require a longer term horizon to accrue. Moreover, winners tend to be a diffuse constituency (because of the longer term horizon of the gains from reforms), while losers are concentrated. The uneven time profile of costs and benefits, along with the uneven distribution of winners and losers, may reduce the pace of reforms needed to discipline the old sector.

54. However, experience from transition economies suggests that, despite the costs involved, policies to encourage the emergence of the “new economy” have to go hand-in-hand with enforcing discipline on the “old economy”. There is no evidence that slow downsizing of the old sector could provide a viable “cushion”, until the new sector has grown enough to offset the pain of liquidation and restructuring of public enterprises. On the contrary, encouragement without discipline has not worked, because often the old sector has absorbed resources that would otherwise had flown into new enterprises. The emerging economy may be impaired in various forms. For example, in Bulgaria and Romania using the banking sector to prop up state-owned enterprises led to a sharp increase in non-performing loans in the 1990s, which prevented the expansion of credit to new enterprises and eventually triggered a banking crisis. In a number of CIS countries (Georgia, Kyrgyz Republic, Moldova, Russia, Ukraine), protection of state-owned enterprises through tax and utility arrears meant that new and more efficient enterprises were penalized by higher taxes or charges to offset foregone revenues of the state (World Bank, 2002b). In Algeria, resources of oversized State Owned Enterprises (SOE) are not put to efficient use (such as, for example, land), as suggested by their sub-par economic performance documented in the following sections.

55. Moreover, weak discipline of the “old economy” and lack of development of the “new economy” may be mutually reinforcing. Lack of a vibrant new economy, led by the private sector, limits product competition, an essential element of a disciplining environment. It also limits opportunities that may attract workers and potential entrepreneurs from public enterprises. This situation may typically lead to a “low equilibrium trap”, characterized by a protracted transition to the market, slow growth, high unemployment, and worsening income distribution. A “reform freeze” scenario may then unfold, breaking the transition to the
market. To avoid “reform freeze” scenarios, it is important that reforms lead to a rapid establishment and effective functioning of the institutions that encourage entry and competition. It is also important to implement policies that offset the costs of the transition to vulnerable groups—such as social protection programs, including social insurance (pensions and unemployment benefits) and social assistance (family and poverty benefits). Civil society participation in the policy making, monitoring and evaluation is invaluable to the success of reforms in transition. Key among components of a vibrant civil society are NGOs, consumer and producer associations, and the media. Their participation tends to foster a public debate whereby the nature of the costs and benefits of reforms, as well as their respective horizons, are unveiled. Broad and genuine representation is also key to constrain the power of interest groups to capture the state during the transition (Annex 2.2).

**Privatization in Algeria has been elusive**

56. The presence of a command economy was overwhelming in Algeria up until 1994, with resource allocation governed by administrative decisions on prices, investment, and credit of state-owned enterprises and public banks. Government disengagement from commercial activities gained momentum in 1994 (IMF, 1998). However, until 1998 the main emphasis of reforms was on public enterprise restructuring, with the closure of more than 900 non viable enterprises. Between 1996 and 1998 the labor force of public enterprises was cut by 320,000—or by about 40 per cent. But financial rehabilitation of public enterprises that were deemed viable cost to the budget an estimated DA 840 billion over 1991-98 (about 20 per cent of 2000 GDP). The cost of restructuring was high, as out of 800,000 jobs in public enterprises only 480,000 were saved in 1998 (World Bank, 1999).

57. Labor force shedding, as a result of the restructuring of public enterprises, was reflected in a significant decrease in the wage bill paid by public sector, which was cut by half as a proportion of non-hydrocarbon GDP from 1989 to 2000 (Figure 2.2a). However, the public sector still distributes half of the total wage bill, despite the increase in the share of the private sector to 76 per cent of non-hydrocarbon GDP in 2000. Wages distributed by the private sector rose by only about 2 percentage points of non-hydrocarbon GDP since 1994, offsetting just about half of the decline in the public sector wage bill over the same period. This partly reflects the still anemic private sector economic activity, and partly the significant size of the informal sector.

58. Despite the downsizing of public employment, the process of privatization has been very slow to date. Significant progress was achieved only in commerce, transport and communications, and construction and public works (Figure 2.2b). Exploration and investment in the hydrocarbons sector remains dominated by the public sector, despite some opening to private sector investments. In the non hydrocarbon industry, the share of the public sector in value added still remained at about 65 per cent in 2000, after hovering around 80 per cent for most of the 1990s.
Despite the rise of the private sector, half of the wage bill is still distributed by the public sector. A slow retrenchment of the public sector from productive activities.

Source: World Bank staff, based on National Accounts data from ONS

59. However, in industry the disengagement of the public sector was uneven. In a number of manufacturing industries—such as food industries, textiles, leather and footwear—divestiture was swift, so that by 2000 the public sector accounted for between 20 and 40 per cent of value added (Figure 2.3a). But in capital intensive industries, private sector participation was slow, with the public sector accounting still for more than 70 per cent of value added in 2000 (Figure 2.3b).

Source: World Bank staff, based on National Accounts data from ONS
60. Main bottlenecks to privatization have been the scarcity of domestic savings that could be mobilized for privatization operations, in association with the weak investment climate—which has been also plagued by security concerns. However, privatization was also hindered by the administrative and legal framework for the operation of the holding companies, which was cumbersome and ineffective. A new legal framework was adopted in August 2001, aimed at streamlining and stepping up the privatization process.

61. In the new framework, the privatization strategy is laid out by the "Conseil des Participations de l'Etat" (CPE), with the operational support of the Ministry of State Participations. The privatization strategy is implemented by the 28 newly created "Societes de Gestion des Participations" (SGP) that manage, on behalf of the CPE, the equity of the public enterprises eligible for privatization. The SGPs encompass 674 public enterprises, according to a classification by economic sector, with the aim of improving the consistency of the privatization process within each sector and broadening the scope of privatization to sectors not eligible so far. Eligible for privatization are also eight industrial groups that have been singled out of the portfolio of the 28 SGPs, either because of their key economic role (Air Algérie), or because further restructuring is called for. The privatization process is also to encompass banks and insurance companies still in public hands, but according to a procedure specific to the realities of the financial sector.
Figure 2.4: Profitability of private-sector companies outpaces that of public enterprises across Algerian manufacturing industries

(a) Net profit of public and private sector enterprises (in per cent of value added by sector) Industrial chemicals, rubber and other plastic products

(b) Net profit of public and private sector enterprises (in per cent of value added by sector) Construction materials

(c) Net profit of public and private sector enterprises (in per cent of value added by sector) Food, Beverages and Tobacco

(d) Net profit of public and private sector enterprises (in per cent of value added by sector) Iron, Steel and other ferrous metal products (machinery included)

(e) Net profit of public and private sector enterprises (in per cent of value added by sector) Textile and Apparel

(f) Net profit of public and private sector enterprises (in per cent of value added by sector) Leather products and Gloves

Source: World Bank staff, based on National Accounts data from ONS
Figure 2.5: Contrasting performance of industrial output in Algerian private and public manufacturing

(a) Value added indices by sector (1989=100)
Value added indices by sector (1989=100)
Industrial chemicals, rubber and other plastic products

(b) Value added indices by sector (1989=100)
Construction materials

(c) Value added indices by sector (1989=100)
Food Products

(d) Value added indices by sector (1989=100)
Iron, Steel and other fabricated metal products (machinery included)

(e) Value added indices by sector (1989=100)
Textiles and Apparel

(f) Value added indices by sector (1989=100)
Leather products and footwear

Source: World Bank staff, based on National Accounts data from ONS
62. The new framework recognizes three categories of public enterprises—namely viable, potentially viable, and distressed—and aims to step up the disposal of financially viable enterprises and those that have been successfully restructured. The authorities have taken steps in the right direction, to extend privatization and streamline the divestment procedures, in line with the procedures that have proven more successful in the economies in transition (Annex 2.2). The new framework aims to streamline administrative procedures for the participation of strategic foreign partners in the capital of key industrial enterprises and public banks. This will help in the modernization and further development of the enterprise sector. At the same time, privatization through the public offer of equity on the stock market is to be limited to a small number of key enterprises, given the low absorption capacity of the stock market and the need to identify strategic partners. However, the privatization program still extends over a relatively long, ten-year horizon. The main progress to date was the sale to foreign investors of two-thirds of the equity in the steel corporation (and linked iron ore mines).

63. Public enterprises in a healthy financial position can be found in three Algerian manufacturing industries: (i) Chemicals and plastics; (ii) Construction materials; and (iii) Food industries. The profitability of public enterprises in chemicals and construction materials has been in line with that of companies in the private sector—though it fell significantly short of private-sector profitability in food industries (Figures 2.4.Xa,b,c).

64. By contrast, public enterprises in metal products and machinery; textiles and clothing; leather and footwear, have been accumulating sizeable losses since the mid 1990s, amounting to as much as their value added—and even surpassing it by far in the case of textiles and apparel (Figures 2.4.d,e,f). In 2000, distressed public enterprises in these three industries accounted for about 15 per cent of total value added in manufacturing, and they were employing about 110,000 persons (2 per cent of the labor force).

65. The sizeable losses accumulated by public enterprises in these three industries have been induced by a collapse in their output, which in the late 1990s fell to levels as low as 20 per cent compared to the beginning of the decade (Figures 2.5.d,e,f). The output of public enterprises was also halved in food products (Figure 2.5.c). By contrast, industrial production of public enterprises remained constant in chemicals and construction materials, thus helping to maintain a decent level of profitability (Figures 2.5.a,b).

Completing the transition to the market would bolster Algeria's potential in manufacturing

66. Contrary to the weak performance of public enterprises in most manufacturing industries, industrial production in the private sector held up well in the 1990s, suggesting that the collapse of Algerian manufacturing is not destiny. With the acceleration of reforms to encourage private sector development since 1994, industrial production of private enterprises rebounded across all Algerian manufacturing industries (Figure 2.5). The private-sector led industrial recovery was particularly sharp in light manufacturing—food products, textile, leather, and footwear—and in construction materials. By contrast, in capital-intensive industries the recovery was more modest.
67. Moreover, profitability of private companies over-performs that of enterprises in public hands across all manufacturing industries (Figure 2.4). Most notably, in the three industries where the public enterprises are accumulating losses, private enterprises are in good financial shape, with profits surpassing 40 per cent of value added (Figures 2.4.d,e,f). And while the losses of public enterprises have been soaring, the financial performance of private enterprises has been improving in the recent years, especially in labor-intensive industries such as textiles, leather and footwear. This pattern suggests that, with the right business environment in place, there is significant scope for growth in labor-intensive Algerian manufacturing—a finding also supported by evidence on relative international competitive positions examined in section 2.3.

68. The differences in performance between private and public enterprises—despite the existing bottlenecks to private sector development in Algeria—suggests that the troubles of public enterprises arise from their limited ability to meet the competitive challenges of the markets, rather than from competitive disadvantages of specific Algerian manufacturing industries. Creating an enabling environment for the growth of private enterprises holds thus the key to improving the overall performance of Algeria’s manufacturing. Stronger output growth and better profitability in private manufacturing would stimulate investment and job creation—as private enterprises fare better in labor-intensive industries. Given their superior performance compared to public enterprises, private companies would also stand a better chance to meet the challenges of reduced protection in the free-trade zone with the EU.

69. Restructuring and privatization of viable public enterprises would help accelerate the recovery of Algerian manufacturing because in all industries output performance and profitability of private companies over-performs that of enterprises in public hands. Lack of restructuring entails an opportunity cost, as the unprofitable public enterprises burden the Algerian economy in, at least, two ways: First, they saddle the public banks with non performing debt, as their financing requirements are largely covered by bank borrowing. At about DA 21.5 billion in 2000, annual losses of public enterprises in the three problematic industries, if compounded over a five-year period, would amount to a financing requirement of 2.5 per cent of GDP. Second, capacity utilization in distressed public enterprises is low, while these enterprises also lack the financial means to modernize and expand capacity. This results in a low level of investment in Algerian manufacturing, denying the economy the benefit of a multiplier impact on non-oil GDP and weakening job creation.

70. Given Algeria’s lag in privatization in industry and the differences in performance between private and public enterprises, the planned ten-year time horizon for privatization of enterprises still in public hands appears too cautious. The slow pace of privatization in Algeria also negatively affects the credibility of the Government reform agenda—especially for foreign investors. Privatization should go in tandem with establishing hard budget constraints on public enterprises, so as to facilitate restructuring. Hard budget constraints entail eliminating a wide range of explicit and implicit mechanisms to channel public resources to enterprises and banks, including tax exemptions, fiscal and financial subsidies, budget and tax offsets and directed credits.

71. During privatization, a coherent strategy should be put in place to manage public enterprises. Though this strategy should be worked out carefully, and in consultation with the
main stakeholders, international experience suggests that main directions in that process should be the following:

- **Enforce** hard budget constraints on public enterprises
  1. Accelerate public enterprise restructuring by selling non-performing assets and terminating non-viable activities, while liquidating the non-viable enterprises
  2. To facilitate restructuring, concentrate public enterprises on their core business, in particular by transferring responsibility for social services and management of social assets to small enterprises that may be created out of staff downsizing
  3. Replace directed credits to public enterprises by transparent fiscal subsidies, and establish a timetable for a quick phasing out of such subsidies

- **Accelerate** privatization of financially viable enterprises, preferably through the participation of strategic foreign partners who will help modernize and further develop the enterprise sector

72. The lessons from transition countries (see Annex 2.1 and World Bank, 2002b) suggest that small enterprises under state ownership (generally enterprises with fewer than 50 employees) should be sold quickly and directly through an open auction with no restriction on who may bid for the shares. Medium-size and large enterprises should be targeted for sale to strategic outside investors. The evidence indicates that privatization to concentrate outside owners such as investment funds, foreign strategic investors, and blockholders has facilitated restructuring. In contrast, privatization to diffuse owners and to enterprise employees has not been conducive to enterprise restructuring. However, enterprises controlled by strategic investors have performed better than those controlled by investment funds, holding companies or other financial institutions. Strategic investors are indeed able to provide more resources and skills for restructuring, and are better connected with international markets for technologies, inputs and products. The selection method of strategic investors also appeared to matter significantly. Enterprises sold through transparent tenders or auctions have generally attracted better owners, outperforming enterprises sold directly to politically connected parties, frequently at highly subsidized prices.

**Restructuring of public banks in Algeria has been costly and is still fraught with risks**

73. Algeria has one of the few remaining financial systems in the world that is largely dominated by the state, in terms of both credit allocation and ownership of financial institutions. The six state-owned banks are the hard core of the Algerian financial system. They represent more than 90 per cent of the banking system’s assets. Up until 1999, the public enterprises were absorbing more than 80 percent of domestic credit. More recently, the access of the private sector to credit was on the rise, with the share of the public sector to domestic credit declining to 65 percent in 2001 (Figure 2.6a). Preliminary estimates for 2002 attest to a further decline in the share of public sector to about 56 percent. Credit to the private sector increased thus to nearly 7 percent of GDP in 2001. Although the allocation of credit to the public sector (as a ratio to the GDP) is not significantly higher compared to other
countries in MENA, the share of the private sector remained compressed, on average over 1996-2000, to lower levels than those seen elsewhere in MENA (Figure 2.6b).

**Figure 2.6: Domestic bank credit in Algeria**

![Graph](image)

*The public sector still gets a major share of bank credit...* and credit to the private sector remains compressed

Source: World Bank staff based on data from Bank of Algeria; IMF, and Arab Monetary Fund.

74. For the Algerian government, bank loans to state enterprises have represented sizable contingent liabilities, which have raised government financing needs to levels well above budget deficit financing requirements over the last ten years. Financial restructuring of banks and public enterprises came in two rounds in the past, in 1991-94 and 1995-98. The total cost of this cleanup, including the bank recapitalization of 1996 and the recapitalization of CNEP in 1997, came to an estimated than DZ 840 billion. The cumulative buy-back of bad loans to state enterprises represented more than 50 percent of the average amount of outstanding loans to the economy, and gave rise to a significant domestic public debt. In total, about 90 per cent of the domestic debt in Algeria (about 20 per cent of GDP) is composed of government bonds issued for the repurchase of non performing loans, in order to rehabilitate the financial position of public banks. (World Bank, 2000).

75. A new buy-back of non-performing loans was carried out in 2001 to complete the cleanup of public banks’ balance sheets. Bad loans were swapped for Treasury bonds with a 20 year maturity, carrying a 6 per cent interest rate. The repurchase of non-performing loans amounted to DZ 346 billion. An additional DZ 167 billion was spent to repurchase bad loans in real estate held by the CNEP, while consolidation of past operations cost DZ 224 billions. The total cost of the last clean up amounted thus to about 15 per cent of GDP, spread over 20 years. In order to meet the capital adequacy ratios, two banks were recapitalized in 2001 (BEA and BDL), and the recapitalization of a third one is planned for 2002 (BNA). The cost of these operations is estimated at DZ 50 billions. The authorities estimate that this last cleanup has completed the financial restructuring of public banks. According to staff’s estimates—which, however, were not confirmed by a detailed examination of the public
banks' balance sheets—additional amounts of about DZ 130 billions may need to be committed, to cover still existing non-performing loans and improve provisioning, especially for the BADR, BEA and BNA.

76. The fiscal and quasi-fiscal cost of the bailouts of public banks in Algeria is at the high end of the range seen in other transition economies—comparable to that in Bulgaria and the Czech Republic (42 and 26 per cent of GDP) and much higher to that seen in the Baltics and the CIS. Bailouts of public banks in Algeria suffered from similar weaknesses as in the Central and Eastern European Countries, with financial cleanup de-linked from deeper operational restructuring of banks and—most importantly—restructuring of distressed public enterprises (Annex 2.3). Experience from transition economies suggests that this approach typically led to the recurrence of non-performing loans, and it did not prove successful in reducing the risk of renewed bank failures.

77. Until recently, in Algeria the majority of loans to state enterprises took the form of bank overdrafts. They were for the most part undocumented, and were not based on explicit loan contracts with binding maturity dates. Efforts since 1996 have been devoted to reducing the use of overdrafts and fostering more transparent and objective loan practices. The recapitalization of banks was thus accompanied by the introduction of “performance contracts” between the government and bank managers. Performance contracts intend to hold the bank managers responsible for respecting the capital adequacy ratios established by the Bank of Algeria, thus separating the management from the ownership of the public banks. By granting public banks increased leeway with respect to the allocation of credit according to commercial criteria, the performance contracts could be a step towards improving bank incentives to actively seek new market niches away of public enterprises.

78. However, the transparency of these “performance contracts” is open to question, as is their effectiveness in permanently redressing incentives in public bank lending to state-owned enterprises and minimizing the fiscal costs of bad loan repurchases. Since the introduction of the performance contracts, when public banks extend directed loans to public enterprises, these loans are provisioned by a transfer of funds by the Treasury to the bank. Though the link between the banks and the public enterprises is not yet severed, there is some progress, because the new procedures convert the government’s implicit contingent liabilities into an “off-budget” subsidy to public enterprises, intermediated by the state-owned banks. If certain loss-making public enterprises were to be kept in operation for social or other sectoral policy reasons, it would be important that public bank loans (even provisioned by the Treasury) be replaced by transparent subsidies in the budget, so as to effectively sever the links of these enterprises with the banks and help restore the soundness of the banking system on a permanent basis.

79. Eventually, the quality of the public banks’ loan portfolios will not improve unless the financial situation of their largest customers—mostly state enterprises—is significantly improved. As documented earlier, a significant part of public enterprises in Algerian manufacturing are still financially distressed. A rough estimate puts the current indebtedness of the major state enterprises at about DA 200 billion—but this figure is increasing due to the large operating losses documented earlier. Once more, some of the outstanding bank loans to
state enterprises may have to be repurchased by the Treasury in the coming years, either due to insolvency, or as part of restructuring plans for state enterprises or public banks prior to privatization. Therefore, reform of the financial sector must be accompanied by a sustained effort to restructure and privatize state enterprises, in order to reallocate their resources to profitable investments and allow the emergence of sound private enterprises.

Financial clean up of public banks should go in tandem with operational restructuring and privatization

80. Along with public enterprise reform, the Algerian banking system must undergo a radical operational restructuring in order to restore its soundness on a permanent basis. Strengthening corporate governance of Algerian public banks, and upgrading information on financial performance to stock market disclosure requirements would help reduce the risks of recurrence of non-performing loans. Financial institutions must be granted full responsibility for their credit allocation and investment decisions. This would require strengthening the role of the supervisory authorities, to preserve the integrity and soundness of the banking system—especially in view of the increased presence of private banks.

81. However, the ability of the existing banking system, dominated by public banks, to cater to the needs of an economy that relies increasingly on the private sector should be strengthened, notably by improving the risk assessment capabilities of banks. This calls for a significant revision of the role and size of the state presence in the financial system. It is unlikely that the overall efficiency of the banking sector will change much in the short term without a sale of one or more state-owned banks to a private group or to foreign strategic investors.

82. Bank restructuring may lead to closing down public banks, or to privatization—partial or total. Privatization may involve two basic approaches: (i) a market flotation; (ii) sale to a strategic investor. Market flotation allows participation by small investors but raises concerns because of weak governance structures. In most developing countries, stock market privatizations have led to poorly performing banks. Bank managers have tended to take excessive risks, manipulated credit policies, favored related parties, and often used the resources of the banks to interfere in the political system. The failure of the OTP (former national savings bank) of Hungary is a well-known example of such practices. Privatization through a sale to strategic investors with managerial control would be more promising and should be used for some of the state banks. The use of a fully transparent process with experienced international advisers, competitive bidding, and “due diligence” is key to successful privatization.

Trade liberalization has progressed, but protection in Algeria remains high compared to other transition economies

83. A number of reforms were recently introduced to Algeria’s tariff policy (in the complementary budget for 2001 and the new tariff regulation introduced in August 2001). Tariff reform measures aimed at rationalizing the tariff system. This led to reducing the
number and level of rates, and to dismantling administered values.\textsuperscript{15} The measures intended to improve the consistency of the tariff system, promote competitiveness, remove the anti-export bias of the foreign trade regime, reduce high rates of effective protection of many import-substitution industries, and narrow the considerable variation of effective protection across industries. Reforms also aimed to prepare for the negotiations on Algeria's Association Agreement with the EU (AAEU—signed in December 2001) and facilitate ongoing efforts to gain WTO membership.\textsuperscript{16}

84. The complementary budget for 2001 has three main provisions. First, it provided for reduction of the maximum rate from 45 to 40 percent and eliminates administered values. The average tariff rate—including the Temporary Additional Duty—declined slightly, from 23.9 to 22.1 percent. Second, in order to facilitate adjustment among local enterprises, a Temporary Additional Duty on imports ("Droit Additionel Provisoire", or DAP) was introduced. The DAP was set at 60 percent from July 1, 2001 with a phase-out timetable of five annual reductions (of 12 percentage points each) for its eventual complete elimination on January 1, 2006. The first reduction of the DAP to 48 percent was made on January 1, 2002. Third, the law eliminates the ad hoc Specific Additional Tax (TSA) and replaces it, for a limited number of goods, with the existing Internal Consumption Tax (TIC).

85. The 2002 budget and the complementary budget law for 2002 introduced further tariff changes, while broadening the list of products subject to the DAP. The second reduction of tariff rates, introduced in early 2002, brought about a more significant decline in the maximum tariff rate from 40 percent to 30 percent, and correspondingly reduced the average tariff rate (excluding the DAP) to 17.3 percent.

86. Despite these reforms, protection in Algeria remains high, compared to other transition countries—though not higher than elsewhere in the region (Figure 2.7; see also Annex 2.4). This is so particularly due to the DAP, and to a lesser extent to the TIC. The DAP was extended to other products (mainly to equipment goods), subsequent to the initialing of the EU association agreement in December 2001. The recently signed Euro-Med Association Agreement with the EU provides for the gradual elimination of tariffs on most industrial goods between Algeria and the EU over a twelve-year period. However, as the reduction in tariffs for final goods is back-loaded while tariffs on intermediate imports and equipment will occur in the early stages of the process, the effective protection of Algerian producers is likely to increase over the medium term. Effective protection will decline in the later stages of the association process, when the tariffs on final goods are eliminated.

87. Compared to the average tariff rate reductions (unweighted) achieved in the early years of transition in Hungary and Poland, Algeria's pace of trade liberalization has been more gradual and spread out over a longer period, as opposed to large one-off reductions, at least in the initial years (Table 2.1; see also Annex 2.4). This has delayed adjustment, as it prolonged the life of inefficient public enterprises without providing strong enough incentives for more ambitious restructuring.
Figure 2.7: Patterns of trade protection: Algeria vs. comparators

Table 2.1. Comparison of average tariff rate reduction paths

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<tr>
<td>Algeria</td>
<td>24.8/24.2</td>
<td>23.9</td>
<td>22.1</td>
<td>17.3</td>
<td>n.a.</td>
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<tr>
<td>Poland</td>
<td>n.a.</td>
<td>11.7</td>
<td>11.7</td>
<td>8.5</td>
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<tr>
<td>Hungary</td>
<td>24.0</td>
<td>12.6</td>
<td>n.a.</td>
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<td>DC Average</td>
<td>27.2</td>
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Sources: World Bank staff

88. On the fiscal front, the loss of tariff revenue has to be compensated by new tax income, requiring a better tax collection and tax base broadening by containing the scope of the informal sector. The loss of tariff income from the Association Agreement with the EU is estimated at between 1 percent of GDP and 2.5 percent of GDP.

2.2. Making most of the market: Policies to encourage private sector-led growth

89. Market discipline is a necessary condition for the transition to the market but does not guarantee steady growth. Market discipline forces uncompetitive public enterprises (or sheltered private ones) to release assets and labor, which then can be potentially absorbed by restructured enterprises and business start ups. Creating an enabling environment for the growth of restructured and new enterprises is the key for improving growth performance and reducing the costs of the transition. This requires a strong investment climate, along with companion policies that that remove bottlenecks and encourage the creation of new enterprises willing and able to compete in domestic and export markets. Improving access to and lowering the cost of key productive inputs and business services—especially finance and industrial land—and strengthening the legal, judicial, and governance framework, are key elements of such an enabling environment for private sector development.
90. The diagnostics draw on the findings of the investment climate survey carried out for the Report on Private Sector Development and the FIAS (World Bank 2002c; 2002d). Fully-fledged policy options are provided in these reports and the companion synthetic Policy Note. Key findings and policy options are also highlighted below, as they constitute the backbone of the medium-term strategy for a sustained recovery of growth in Algeria based on private-sector development. The investment climate survey conducted on 600 firms in nine Wilayas, together with the interviews of 56 potential European investors, convey a sense of the main constraints identified by economic operators—whether private, public, foreign, or local firms. Overall, limited access to credit and to industrial land, and unfair competition from the sizeable informal sector appear to be key constraints to growth (Figure 2.8).

**Figure 2.8: Obstacles to doing business in Algeria—summary evidence from enterprise surveys**

![Figure 2.8: Obstacles to doing business in Algeria—summary evidence from enterprise surveys](image)

*Source: World Bank staff*

**Strengthening the investment climate and reducing the cost of business services**

91. A strong investment climate is key to attract foreign direct investment. Geography (proximity to the EU) has been an important factor of FDI flows to the Central and East European Countries during the early years of transition. However, over time, other factors became more significant, and countries that were first neglected during the initial stages of transition due to their greater distance to the EU, also became significant recipients of FDI (Annex 2.5).

92. Survey data across the transition countries indicate that countries with high institutional performance ratings captured the highest cumulative net FDI inflows in per capita terms (Figure 2.9a). But FDI is footloose, and thus especially sensitive to risk. The greater the degree of perceived risk in a given country, the lower the cost of delaying entry in the country. As uncertainty is often driven by government policies, strong commitment to reforms greatly improves the investment climate.
93. Improvement in the perceived investment environment is also observed in the ratings for Algeria in the second half of the 1990s, according to a pattern that follows closely that of Bulgaria (Figure 2.9b). However, despite its size and market potential, Algeria has been to date sidestepped by foreign investors, contrary to other countries in the region, like Tunisia and Morocco, that have taken advantage of their proximity to the European market and of their Association Agreement with European Union. FDI inflows to Algeria have been notoriously concentrated in the oil sector.

Figure 2.9: Foreign Direct Investment and the investment climate in transition economies

![Graph showing FDI inflows and the investment climate in transition economies](image)


94. The limited FDI inflows to the Algerian non-hydrocarbon sectors partly reflect security concerns and partly the lack of attractiveness of local partners and the poor overall business environment. In addition to these, the foreign perception of the country is negatively affected by the perceived hesitations in implementing the reforms, particularly the privatization program. Other issues are a source of particular concern for foreign investors—such as the practical impediments that they often face in transferring dividends abroad, in spite of a clear guarantee of transfer in the Algerian legislation; or the negative attitude and restrictions to foreign investment in the service or distribution sector. Constraints and restrictions that do not correspond to best international practices should be urgently addressed (World Bank, 2002d).

95. Improvements to the overall business environment would also strengthen the FDI climate and support the Government's objective of FDI promotion. In addition to improving access to finance and industrial land as discussed separately below, areas were reforms would contribute to strengthening of the overall business environment include: a) reducing administrative barriers to doing business; b) strengthening the legal, judicial, and governance
framework; c) lowering the cost and improving the quality of key infrastructure and business services.

96. The positive change in Government policy toward the private sector has not translated yet into a significant change in the attitude of the public administration and a lowering of administrative barriers to doing business. Entrepreneurs still face unfriendly bureaucratic behavior, red tape, cumbersome and opaque regulations and endless delays to obtain clearances and authorizations. Barriers are pervasive in all areas of business activity. Most frequently mentioned are the procedures to: clearing imported goods through customs, in particular through Algiers' harbor; obtaining a building permit; registering an enterprise; etc (Figures 2.10a and 2.10b). Tax harassment is also frequently mentioned. These difficulties are compounded by difficulties to access information, such as about laws, regulations and procedures, statistics, market information, etc. Although evidence is hard to come by, corruption is also reportedly present, possibly spurred by the administrative barriers and cumbersome procedures that make service delivery by the public sector slow and unreliable (Figures 2.10a and 2.10b). Some reforms are underway and should be scaled-up (for example, in customs and the tax authority), but major efforts of simplification and e-enabling of administrations are needed. Some of these, including faster business creation and improved access to information, should materialize via the ongoing roll-out of ANDI.

97. The Algerian legal framework is progressively being more attuned to the requirement of a market economy. However, it is far from functioning smoothly because of the shortage of qualified commercial judges and of the lack of understanding, by the business community, of methods that proved successful in other market economies (e.g. collateral legislation; bankruptcy; alternative dispute resolution). Also, there is limited trust within the business community in the impartiality of the judicial system. It is still widely seen as slow, inefficient, partial, and best avoided. In the short-term, there is a need to speed-up the implementation of the judicial reform on commercial matters, in particular the setting-up of independent commercial courts. As important is the need to urgently scale-up the ongoing training program of commercial judges to a much larger number of beneficiaries.
Figure 2.10: Administrative barriers to doing business in Algeria remain high

Delivery of business services is slow...

...while cumbersome customs procedures are a key bottleneck

Source. World Bank staff.

98. Pervasive administrative barriers in doing business and weaknesses in the legal and judicial framework perpetuate what is often perceived as unfair competition and make it hard to enforce the legislation on competition. Three types of un-competitive behavior appear to harm sound business development.

- Competition from the informal sector
- Competition from importers that are able to smuggle significant quantities of consumer goods
- The rise of new, private import monopolies that appear to have replaced the old state trade monopolies.

Some of these issues fall into the broader context of governance and transition politics, but there is a need, in the short-term, to: (i) significantly reinforce the competition agency; (ii) review the public procurement policies to create a level-playing field between all enterprises, whether public or private; and (iii) create an enabling environment for informal companies to formalize.

99. Algerian firms often have poor access to services provided by public utilities, and the quality of these services is reportedly low. The services considered to pose the most significant problems are connection to, and maintenance, of fixed-line telecommunications, access to water supply, harbor services and management of industrial parks. Transportation or access to energy are not regarded as a major problem. Overall, a ranking of Algeria’s performance across 42 infrastructure indicators indicates a weak performance (Annex 2.6). Algeria’s average ranking was 2.8 out of 4 for the North African countries, and 5.7 out of 8 for the broader set of comparators.¹⁷
100. Liberalization of trade-related infrastructure services, coupled with pro-competitive regulation, and fostering of private sector participation in infrastructure would help reduce the cost and improve the quality of business-related services in Algeria. Fostering transition in network industries calls for restructuring of public utilities, with the aim of covering costs and improving efficiency and responsiveness to demand. This should be followed by entry liberalization in potentially competitive segments—especially in fixed telephony—commercialization; tariff deregulation; establishment of independent regulatory institutions; and accounting for environmental impacts. It is important to unbundle the regulatory functions of airport and port authorities from the provision of potentially commercial services, to promote private participation in the commercial operations of airports and ports. This would improve efficiency, help modernize infrastructure, and reduce the cost of cargo handling. Promoting private sector participation in infrastructure would call for creating an appropriate regulatory framework and building expertise in the negotiation of BOT and BLT contracts.

101. Liberalization in network industries usually entails tariff rebalancing, in the form of raising tariffs for utility services in the retail segment of the market, and improving payments discipline. However, liberalization eventually leads to lower prices to users thanks to enhanced competition. Utilities that cannot cover their costs—due to pricing problems or inability to collect payments—will not be attractive to investors.

102. Improving the efficiency of infrastructure and trade-related services, streamlining customs procedures, and upgrading product standards to international norms would allow Algeria to reap the benefits from lower trade barriers and the prospect of a free-trade zone for industrial products with the EU. Improved telecommunications infrastructure will also provide crucial support to Algeria's payments system, which currently falls short of the requirements of a modern economy, integrated into global trade.

**Improving private sector's access to finance**

103. Encouragement of private-sector investment in Algeria remains weak, also because of a still difficult access to finance. As documented earlier (Figures 2.6a and 2.6b), despite a recent improvement, while the private sector represents now approximately 50 percent of GDP and 60 percent of bank deposits, bank loans to the private sector still represent only about one-third of total credit allocation to the enterprise sector (including both public and private enterprises).

104. Access to credit is difficult, time consuming, and unreliable. The delay in obtaining the last investment credit was about 5.5 months, for both private and public enterprises of big size (above 100 employees). But for small companies (between 5 and 19 employees, mostly in the private sector), the delay in investment credit increases to almost one year (Figure 2.11a). Although lending conditions to public enterprises appear to have tightened—possibly as a result of the introduction of the "Performance Contracts" with public banks—they are still easier than lending conditions to private enterprises of comparable size (Figure 2.11b). In the case of private companies, the value of guarantees for investment credits exceeds on average by 55 per cent the value of loans, while the average term of loans is lower than for public enterprises, both for investment and for working capital credits.
The difficult access to credit partly reflects the weaknesses of the banking sector, as banks are bureaucratic, not business-friendly, and poorly equipped. There are long-standing lending links between public banks and state-owned enterprises, which have shaped the credit culture towards less risk taking. Credit officers are not trained to serve smaller private sector clients, and they have little incentive to take responsibilities or manage risk—also because of the repeated government buy-backs of non-performing loans of public banks.

But the difficult access to credit also reflects weaknesses on the business side. Economic information is scarce, non-transparent, and unreliable. Only 53 per cent of private companies have audited accounts, credit history databases are inexistent, and many SME managers lack the qualifications to present sound business plans. These deficiencies objectively curtail the number of “bankable” investment projects, thus restricting the private sector’s access to finance, although, as seen earlier, the private sector’s profitability remains healthy and exceeds that of public sector enterprises across all manufacturing industries (see Figure 2.4). An additional obstacle lies with the fact that the judicial system is slow, unreliable, and still dominated by judges lacking knowledge of commercial matters. This makes it difficult for banks to credibly secure collateral. Private and foreign banks and other financial institutions (leasing, venture capital) are still weak and only play a minor role in financing enterprises. Lastly, export financing facilities (export credit, guarantees) are limited and should be strengthened.

Figure 2.11: Bottlenecks in access to credit

Access to credit remains time consuming for both private and state-owned enterprises... but private enterprises face tighter lending conditions

Source: World Bank staff.

Improving access to credit would call for action in a number of parallel directions, which extend beyond financial sector reform. Policy options are further elaborated in the Strategy Note for Private Sector Development and the companion synthesis Policy Note:
• Restructuring of major public banks (as developed in section 2.1), followed by privatization through the participation of strategic investors, in order to expand retail bank services and improve financing of SMEs;
• Encouragement of the expansion of private banks on a sound basis;
• Improving access to reliable market information and credit information systems;
• Creation of a mechanism—in partnership with the private sector—to advise start-ups in the preparation of business plans; facilitate networking with other firms and contacts with financiers; and help SMEs upgrade accounting standards to facilitate assessment of creditworthiness by banks;
• Creation of favorable conditions for the expansion of domestic securities markets—also in connection with the development of domestic public debt markets (see section 3.3);
• Introduction of a support program for export financing for SMEs;
• Reform and development of housing finance;
• Scaling-up the ongoing judicial reform;

Promoting the development of an efficient financial sector

108. Development of domestic private banks will inject more competition into the domestic banking system, force discipline on public banks, and improve access of private businesses to finance. However, experience from developing countries suggests that domestic private banks may fail to deliver superior performance, as they are often plagued with governance failures similar to those of public banks.18 In Algeria, many new private banks have been established but they have weak capital positions. Moreover, in view of the close links of certain private banks with business groups, banking supervision would need to be strengthened.

109. In addition to stepped up prudential supervision, there are important prerequisites for the development of sound private banks in Algeria:
   (a) uniform and credible enforcement of bank regulation for all banks, whether publicly or privately owned;
   (b) the absence of oligopolistic practices by the largest public banks, especially in loan and deposit pricing, and in the conduct of their money and foreign exchange market operations;
   (c) a legal and judicial environment that promotes the enforcement of contracts and bank loan collateral, and the timely recovery of non-performing loans;

110. Foreign bank entry, has also the potential of enhancing the efficiency of the domestic banking system. The main advantages of foreign banks are the transfer of financial technology and the strong capital position of their parent institutions. They also have a positive impact on staff training and on financial innovation.19 Foreign banks have a bigger impact when they acquire, or become strategic investors in, large local banks (private banks or privatized state ones) than when they enter a local market through opening up of branches. In the latter case, they take longer to achieve a large and critical size. Their operations are often inhibited by the lack of a large branch network and the underdevelopment of the local inter-bank market.
111. Several foreign banks have been authorized and started operations in Algeria. But most of these banks are focused on foreign trade financing. And foreign banks represented in 2000 a mere 2 per cent of total bank assets, far below the shares seen elsewhere in MENA, in economies in transition, and in developing countries in Latin America (Figure 2.12a). Results are usually better when foreign banks have diverse origin rather than when they all (or most) come from the same country. Contrary to a number of other countries in MENA, the home country origin of foreign banks in Algeria is highly concentrated (Figure 2.12b). And since participation of banks from high-income countries outside the region is limited, the impact on the efficiency of the domestic banking system may be muted.

112. Development of a local equity market would also help meet the financing needs of private firms. For the equity market to make a contribution to investment finance, core large companies would have to be privatized, accounting standards should be improved, and market regulation and supervision considerably strengthened. Establishing interest rates and a yield curve that reflect market conditions would be a key step toward the development of active domestic capital markets. Even though the development of active equity and corporate bond markets may take time, the markets for money market instruments and for government bonds could and need to be developed to enhance overall efficiency and to facilitate a more effective conduct of monetary policy and a more efficient financing of the government (see section 3.3).

Figure 2.12: Foreign bank presence in Algeria

(a) Despite some progress, foreign bank presence is still very low in Algeria...

(b) ...and participation of foreign banks from non-MENA high-income countries is weak

Note: MENA II: Kuwait, Saudi Arabia, Libya, Bahrain; MENA I: Non-CGC MENA countries
Source: World Bank staff

113. Contractual savings institutions (pension funds and life insurance companies) can play an important part in mobilizing long-term financial resources and investing them in marketable securities, thus supporting the development of domestic capital markets. However, in Algeria the local financial system is not well developed, casting doubt on its ability to support private pension funds and large insurance companies. Reforming the
insurance sector, to foster the development of new segments and the diversification of insurance services (life and illness insurance, pensions), would lay the groundwork for the promotion of contractual savings in a medium-term process of financial market deepening.

114. In the modern financial environment, specialized financial intermediaries, such as factoring, leasing, venture capital, asset management and investment advice companies, play an increasingly important role. All of these companies require small amounts of capital (by comparison to banks and insurance companies) and rely on professional expertise and provision of specialized services for their successful survival. They compete with banks and insurance companies and are able to respond more flexibly and efficiently to new ideas. Their role is more effective when they are owned by independent local or foreign operators since they are then free of the conflicts of interest that afflict large financial conglomerates. Through the use of leasing, factoring and venture capital, specialized NBFIs can play a large part in expanding the range of financial services to SMEs. The Algerian authorities would need to promote their role, at least in some areas (such as for example factoring and leasing), although they need to ensure the probity and financial integrity of their founders.

115. Financial sector reform would also need to address bottlenecks in the provision of owner-occupied housing associated with shortages of real estate credit. Along with broader housing sector reform, this would create an enabling environment for growth in construction, which is critical not only to address acute housing shortages, but also to bolster employment creation and help mobilize savings. The Government’s strategy is to shift from the public provision of subsidized rental housing to the encouragement of privately owned housing, financed through affordable long-term mortgage loans. The World Bank is supporting these efforts through a housing finance project aimed at providing mortgage loan training; assisting banks in developing adequate instruments to promote finance for home purchase purposes; and strengthening the legal and administrative framework of property and mortgage rights. Further initiatives would be required, particularly in three directions:

(i) strengthening the capacity of banks to manage credit and financial risks, by promoting credit risk management tools and services, and developing the long-term segments of the local securities markets;

(ii) fostering the mobilization of productive savings through its linkages with housing;

(iii) drastically improving the provision of serviced urban land with clear legal tenure.

The social housing policy should be focused on situations where housing and finance supply cannot be solely provided by market-based mechanisms, and the goals should be pursued with fiscal instruments that do not distort the financial markets.

116. Finally, putting in place an enabling infrastructure for basic financial services is key for improving the operational efficiency of the banking system; maintaining low intermediation margins; and supporting the development of the local securities markets. This will require modernizing the inter-bank payments system for large-value transactions; developing standards for low-value transactions; building an electronic clearing house. Efforts in these areas will need to go hand-in-hand with improvements in the telecommunications network to facilitate interconnections and processing in the inter-bank payments system. The authorities
have taken steps in this direction, which are supported by the World Bank through a project on financial system infrastructure modernization.

**Industrial land bottlenecks hinder private sector development**

117. The shortage of industrial land in Algeria has become a bottleneck to private sector investment. Industrial land bottlenecks arise because about half of the industrial estate in Algeria lay unused, while at the same time there is a considerable pent-up demand for such real estate. Out of the 600 firms surveyed in 2002, 38 percent have been looking for a plot of land, for a period of time of almost five years on average, to invest and expand. The whole process of acquiring industrial land is thus lengthy, costly and uncertain, hindering the growth of private enterprises.21

118. Most unused land in industrial zones is entitled to former state-owned enterprises—often local SOEs—that ceased to operate, though half of these do not even have a proper land ownership title. This impedes freeing unused industrial land. In addition, public enterprises that have cut back operations and some private investors who purchased their plot of land before 1994, are keeping it unused thus taking advantage of the steeply increasing land prices. While dominated by public land, the land market is actually dual and there is a private market for land. The State-dominated land market exhibits large—though diminishing—price differentials, fostering speculation and non-transparent distribution.

119. The Government has taken steps to somewhat mitigate the bottlenecks. Measures include a program to rehabilitate 35 industrial zones and 3 “zones d’activites commerciales” (ZACs); a census of unused plots; auctions of scarce land in the ZACs by the Agences Foncières. However, further steps would be needed to create a unified industrial real estate market, where supply and demand will eventually balance (see Private Sector Development Update and Companion Policy Note). Apart from accelerating sale at auction of unused land occupied by state-owned enterprises, incentives could be strengthened, possibly by introducing a penalty fee on unused land. Creating more industrial zones and ZACs to increase the supply of industrial land would be key to eventually mitigate the real estate shortage—as the present stock is likely to be insufficient, even if all plots were to be occupied. Development of new zones should be assigned to private promoters through competitive biding of concession contracts. In the same vein, rehabilitation of existing zones should be stepped up by sub-contracting to private developers, under concession contracts. Private management of industrial zones should also be encouraged, as it could improve the quality of maintenance and business-related infrastructure services.

**Fostering the role of the market in developing Algeria’s hydrocarbon and mining sectors**

120. Algeria’s energy and mining sectors have been run by quasi-monopolistic SOEs that used to play both state and commercial roles. The sector has provided substantial export rents to the government, but has also been used to provide implicit subsidies to domestic energy consumption through pricing systems below international prices—and in some cases even below economic costs (Aissaoui, 2001). Low pricing has been pursued with the aim of encouraging the use of natural gas, and as a result natural gas has emerged as the primary
fuel in meeting primary energy requirements. This has been particularly the case in power generation, where natural gas accounts for 97 per cent of fuel input, but also in the petrochemical and fertilizer industries which use natural gas as the main feedstock. According to estimates, in 1999, the average weighted price of natural gas to user industries was about half the estimated replacement cost (long-run marginal cost of production augmented by a "depletion premium"), and more than four times below the average pipeline gas export price (Aissaoui, 2001). These implicit subsidies have led to wasteful consumption and limited cost efficiency. Moreover, taking as benchmark international export prices, foregone fiscal revenues from implicit subsidies only to domestic consumption of natural gas could be as high as US$ 1.3 billion per year—about 2.3 per cent of GDP (Aissaoui, 2001).

121. Past pricing policies have not significantly distorted incentives to exploration and development in the upstream hydrocarbon sector, because domestic demand was only marginal compared to exports. However, domestic demand is growing fast, and over the next 50 years, an estimated one-third of the proven hydrocarbon reserves may be needed to meet future domestic requirements (Aissaoui, 2001). Substantial capital requirements are thus needed to meet demand, optimize the use of Algerian natural resources, and increase government revenues from hydrocarbon exports. To provide adequate incentives to exploration and development, the Algerian government has taken significant steps toward liberalizing the country’s energy and mining sectors. The government’s new policy intends to improve efficiency, allow market forces to play their roles, increase revenues by developing untapped resources, address environmental concerns, promote efficient use of public resources (Annex 2.7).

122. However, the regulatory approach is still heavily state-driven. Sonatrach has been permitted to retain its monopoly over existing oil and gas pipelines, and the company will also be entitled to play a role in marketing natural gas, even in projects in which it is a minority partner. Under the draft law, Sonatrach would now have the option to take up to a 30 per cent interest in a block where a foreign license holder had discovered oil and keep a minimum percentage share for a certain period of time to avoid speculation. Creating an enabling environment for new investment in the sector would call for leveling the playing field, with Sonatrach treated as just another potential investor in competition with foreign and other domestic firms for contracts. Moreover, securing effective autonomy of the regulatory bodies of the sector would be an important step in this direction.

123. Fuel prices are to be deregulated, but at a slow pace for domestic gas and petroleum product prices. Liberalization of petroleum product prices will be carried out over five years. However, the prospect for introducing competition into the different segments of the natural gas industry—which is key for domestic consumption—remains distant, as the process of phasing out of regulated prices will extend over ten years. However, the government will keep the flexibility to reassess the speed of liberalization each year, following an annual review. The government’s main concern is that rapid liberalization of domestic gas prices would deny the Algerian energy-intensive industries and other hydrocarbon downstream industries a significant competitive advantage. Although there is merit to this concern, keeping domestic energy prices low will not be a viable remedy to the competitiveness of these industries in the absence of productivity improvements. In this regard, the analysis of competitive positions presented below (see section 2.3) attests to the fact that unit labor costs
in Algerian energy-intensive industries remain largely uncompetitive, highlighting the need to strengthen efficiency and productivity if the competitiveness of these industries is to be safeguarded.

**Labor market reforms would help improve the employment content of growth**

124. Improving the employment content of growth in Algeria would call for a comprehensive agenda of labor market reforms, with the aim of promoting employment in the formal sector and easing restrictive regulations that hurt vulnerable worker groups, along the lines proposed in previous assessments of the labor market (Nashashibi et al., 1998). This is because the formal sector generates more productive employment and is key for the production of tradable goods.

125. Well-targeted *active labor market policies* are also an important tool to smooth the adjustment process for laid off workers, improve the employability of the labor force, and step up job creation. Such policies include subsidies for training and re-training of the unemployed, subsidies to employment, and tax credits for job creation. However, active labor market policies cannot work effectively, unless they are supported by policies that improve labor market flexibility (often called “passive” labor market policies). For example, high labor taxes and restrictive employment regulations that lead to a sizeable informal labor market will impede the effectiveness of active labor programs, since workers in the informal economy are unable to participate.

126. Although unemployment is high and persistent in Algeria (about 27 per cent of the labor force), expenditure on active employment programs as a percent share of GDP has declined during the 1990s, from 1.3 percent of GDP in 1993 to about 0.6 percent of GDP from 1995 through 2000. The Algerian government has pursued a wide range of employment programs, which include wage subsidies, labor intensive public works, micro-finance programs, job placement services and vocational training. Partly reflecting the large size of the informal labor market, Algeria’s employment programs do not seem to be effective in reducing unemployment, and have high administrative overhead costs. Moreover, Algeria’s employment programs, only reach a minority of unemployed, about 20 percent (World Bank—Social Expenditure Review).

127. To be effective, labor market reforms would need to go in tandem with initiatives in other areas. One such area is housing market reform, as housing shortages seriously limit labor mobility and contribute to a dysfunctional labor market. Another challenge to be addressed is the high level of non wage costs, which reflects the high rates of social security contributions, currently at about 36 per cent. High non wage costs may limit the potential for job creation in the medium term, but, most importantly, are currently exacerbating the shift of unskilled workers to the informal labor market.

128. Targeting reductions in social security contributions on the low-skilled, low-paid workers would particularly help foster employment, owing to the high own-wage elasticity of the demand for these groups of workers. This would also help shift employment out of the informal sector where a large part of the low-skilled can be found. Moreover, if the real-wage elasticity of the demand for labor declines for workers with higher-level skills, building some
progressivity into social security contributions (hence on the average tax wedge on labor income) would be advisable on economic efficiency grounds. Cutting rates of social security contributions at the low-skill end, where workers face an elastic demand, and offsetting the cuts by increasing the rates at skill/income levels where workers face an inelastic demand, would bring about a decrease in the overall excess burden of labor taxation. Moreover, rebalancing social security taxes in this way would, to some extent, offset the revenue loss from reducing the contributions for the low-paid.

129. However, across-the-board cuts in social security contributions would call for reforms to preserve the financial balances of the pensions system. To be sure, Algeria’s current pension system is not very costly because of the young structure of the population. Projected financial unbalances (see chapter 3) due to the increasing dependency ratio, mainly reflect the high rate of unemployment and the sizeable informal sector that escapes payment of social security contributions. Stepping up job creation and shifting employment out of the informal sector is key to improving the viability of the pensions system. To this end, part of the hydrocarbon fiscal revenues could be used strategically, to temporarily compensate for the loss of revenues, should the rates of social security contributions be reduced.

2.3. Rising to the challenge of competition: Fostering the competitiveness of Algeria’s non-hydrocarbon tradable sector

130. The Association Agreement between the EU and Algeria opens a new era in Algeria’s participation in global trade, but also raises important challenges. Trade liberalisation requires adjustments. Import-competing industries, especially enterprises still in public hands, will be exposed to increased competitive pressures once the Temporary Additional Tariff (DAP) is removed. They will need to undergo considerable restructuring and improve their efficiency in order to withstand competition. But most importantly, new enterprises should be encouraged to take advantage of export opportunities in the emerging Euro-Mediterranean free-trade zone. Improving cost competitiveness is a prerequisite for strengthening Algeria’s limited export capacity in non-hydrocarbon products—in particular in manufactures where global demand is growing fast.

In labor-intensive industries Algeria’s cost competitiveness has improved—

131. Algeria’s competitiveness was severely impaired in the 1980s by a grossly overvalued real exchange rate until the stabilization programs implemented since the late 1980s entailed substantial real exchange rate depreciation (Figure 2.13a). Real exchange rate appreciation surfaced once again in the early 1990s, owing to high inflation. However, the real exchange rate misalignment was corrected by the 1994 stabilization program, and the authorities have followed since then a policy that has stabilized the real effective exchange rate.

132. The successive exchange rate adjustments over the 1990s have realigned Algeria’s unit labor costs in manufacturing to a more competitive level (Figure 2.13b). At the same time, the slack in the labor market has moderated wage growth, further contributing to taming growth in unit labor costs. Thus, by the end of the 1990s unit labor costs in manufacturing in
Algeria were slightly lower than in Southern European countries (Spain, Greece) and in Mauritius, and significantly lower than in Turkey (Figure 2.13b).

**Figure 2.13: Algeria's real exchange rate has been aligned to competitive levels**

Real exchange rate overvaluation in Algeria has been reduced steadily in the 1990s... …leading to more competitive labor costs

(a) 
(b) 

Note: An increase in the REER indicates appreciation; Unit labor costs in Algeria are for 1998-2000—other countries see note to Figure 2.11. 

Source: IMF

133. To be sure, unit labor costs in Algeria are still higher than levels seen elsewhere in MENA (Morocco, Tunisia, Jordan, and Egypt), and they exceed by far levels seen in East Asia (e.g., Indonesia, Malaysia, Philippines)—where substantial REER depreciation has taken place since 1997. Algerian manufacturing unit labor costs are still surpassing unit labor costs in Latin America (Mexico) and in Eastern Europe (Hungary, Poland). Thus, despite progress, relative unit labor costs are not competitive enough yet to help Algeria withstand competition in open markets for non-hydrocarbon products.

134. However, progress is noticeable towards achieving competitive unit labor costs in a number of labor-intensive industries that are important for job creation. Algeria is, for example, relatively well-positioned in textiles, and especially in food processing industries where it is close to the lowest-cost producers (Figure 2.14a and 2.14b). This is particularly important given the country’s potential to further promote growth in agriculture—which, with an average growth rate of 5 per cent a year since 1985, has been one of the most dynamic sectors in the economy besides hydrocarbons.
Figure 2.14: Unit labor costs in Algerian manufacturing industries

Source: World Bank staff, based on data from UNIDO and from Algerian National Accounts, ONS(a) Data for MYS, EGY, MEX, ESP, MUS, GRC, MAR, POL, HUN are from 1997-99. Data for TUR SVN IDN and TUN are from 1996-98. Data from JOR, PHL is from 1995-97. Data from Algeria is from 98-00 (a) Data from IDN is from 95-96-98.
135. By contrast, Algeria’s unit labor costs are largely uncompetitive in capital-intensive and energy-intensive industries, such as iron and steel, fabricated metals, machinery, transport equipment, chemicals, and plastics (Figures 2.14c, 2.14d). And the overall competitiveness of these industries is even more questionable in view of the large implicit subsidies stemming from the gap between domestic and international energy prices. Unit labor costs are high, but not out of line with respect to competitors, in other labor-intensive industries such as footwear and wood products (Figure 2.14e, 2.14f).

—but further improving competitiveness would call for productivity gains—

136. The poor TFP performance documented in Chapter 1—which stands in contrast to trends seen in competitors—is a major impediment to improving the competitiveness of manufacturing in Algeria. Slow productivity growth raises relative unit labor costs and squeezes the profitability of non-hydrocarbon tradable goods. Stepping up productivity growth would greatly help consolidate competitive positions in labor-intensive industries such as textiles and food processing, and would assist other labor-intensive industries that have good competitive prospects to expand.

137. Unit labor costs are, on average, are lower in the private sector (Figure 2.15). For similar wage costs in both sectors, lower unit labor costs reflect a better productivity performance in the private sector. Private unit labor costs are significantly lower in textiles, leather, and footwear, where—as noted before (see Figure 2.5)—the recovery of private sector production was particularly strong. Improved competitiveness, thanks to stepped up restructuring of public enterprises and greater private sector participation, would help these industries create export niches, but also better withstand competition in the process of Algeria’s integration into the Euro-Mediterranean free-trade zone. By contrast, there is little difference in unit labor costs between public and private enterprises in capital and energy-intensive industries, suggesting that Algeria’s competitive position in these sectors may indeed be weak.

Figure 2.15: More competitive unit labor costs in private sector manufacturing

![Figure 2.15: More competitive unit labor costs in private sector manufacturing](image)

Source: World bank staff, based on National Accounts data from ONS
138. But despite the potential competitive advantages in light manufacturing, by general reckoning, Algerian enterprises have today little to offer on the export market apart from a few basic products (Annex 2.8). With few up-to-date machinery and lack of exposure to foreign market requirements, Algerian products are considered sub-standard. The poor investment climate further weakens competitiveness as it limits the attractiveness of Algeria to FDI that could improve the country's participation in production sharing networks, especially in the EU. In Algeria, the high cost of trade-related infrastructure services documented earlier, not only raises the cost of exporting but also reduces the country's attractiveness as a location for outsourcing.

139. Government support in building export capacity has proven a key factor of success in countries that pursued export-oriented growth strategies. But, in Algeria, the existing instruments to support export development are less effective compared to policies implemented elsewhere in the region. The export promotion agency, PROMEX, offers very limited financial support to exporters. PROMEX offers neither training courses nor consulting services to would-be exporters (e.g. export audit; upgrading to international standard; in-the-field assistance; etc), and does not support market research.

140. The 2001 Budget offered some fiscal incentives to exporters, similar to those found in neighboring countries, such as: (i) the exemption from value-added tax of inputs processed into export goods; (ii) a 5-year exemption from the profit tax and the “Versement Forfaitaire” (a payroll tax) of exports of goods and services; (iii) the reimbursement of custom duties paid on inputs processed into export goods; and (iv) a series of measures taken by the customs to facilitate imports and tax-free temporary storage of imports to be processed into export goods. Although these incentives are in the right direction, creating an enabling environment for exports would call for additional measures in several directions.

141. Improving the effectiveness of banking procedures. Current procedures, reflecting especially the slow inter-bank transactions, are an obstacle to export. They severely delay financial flows. Reportedly, an Algerian firm may need up to 6 months of working capital to finance the procurement-processing-export cycle because of delays in establishing letters of credit, getting paid, and finally having bank accounts credited with the proceed of the export sale.

142. Supporting export-oriented enterprises by providing them better access to bank credit through a preshipment export credit guarantee program. Providing insurance protection against the nonperformance of exporters would also help lower the risk to bank credit for funding the purchase of raw materials and other working capital needs of export-oriented SMEs. Support programs for export development by SMEs may also promote the development of export factoring—the sale of foreign receivables by SMEs, which facilitates and reduces the risk of international sales.

143. Streamlining the cumbersome custom procedures. Despite recent progress and a strong modernization drive, it still takes considerably longer in Algeria to clear customs compared
to other developing countries (see Figure 2.10b). It is also important that the duty drawback procedures for the intermediate imports of exporting firms be simplified. Frequent changes in the regulatory framework create difficulties, for lack of proper dissemination of information about changes—including within the custom staff.
144. Oil price shocks in Algeria have generated highly volatile fiscal outcomes and a strongly procyclical fiscal stance. From a comparative perspective with other oil producing countries, volatility is shown to have affected not only oil revenues, as it should be expected, but virtually all revenue and expenditure items, thus making volatility an endemic feature to fiscal policy at large (section 3.1). The main vehicle of procyclicality has been the level of total public expenditure. The analysis of procyclicality of fiscal policy shows how the changes in the fiscal stance have magnified the output cycles in Algeria. Insulating fiscal policy from the volatility of hydrocarbon revenues is important, because international experience suggests that a sound and predictable fiscal policy is key to improving macroeconomic stability, which is a prerequisite for sustained growth (Annex 3.1).

145. After a painstaking fiscal consolidation in the 1990s, the focus of fiscal policy should now shift toward safeguarding the sustainability of fiscal programs and improving the delivery and quality of public services, while maintaining efforts to control imbalances in the deficit that put the achievements of stabilization at risk. As shown in section 3.2., under reasonable assumptions about the macroeconomic performance, primary expenditure is deemed sustainable in the medium term—with a debt-to-GDP ratio maintained at the level achieved in 2001. However, the fiscal risks arising from the government’s contingent and implicit liabilities—such as, the liabilities in the pension system, and the possibility of recurrent bailouts of public banks—are high, and call for stepped up vigilance to secure medium term fiscal sustainability. This section also reviews the role, from a comparative perspective, of the hydrocarbon revenue stabilization fund (“Fonds de Régulation des Recettes”) in the medium term as a factor that may or may not contribute to overall medium-run fiscal sustainability.

146. The sustainability of fiscal policy has implications for the sustainability of the external position. International experience suggests that, often, sizeable fiscal deficits have not been offset by higher private saving and have consequently been reflected in large current account deficits, putting external debt sustainability at risk. The analysis points again to the need for vigilance on the fiscal front, as external debt sustainability turns out to be sensitive to the projected hydrocarbon export revenues.

147. Options to strengthen the fiscal framework are reviewed in section 3.3. To secure fiscal sustainability, the fiscal framework should be re-designed by decoupling public expenditures from short-run movements in oil prices and the resulting volatility in hydrocarbon revenues. The non-hydrocarbon primary fiscal deficit, measured as a ratio to non-hydrocarbon GDP, could be the strongest anchor for fiscal policy. But challenges also exist for maintaining long-run fiscal sustainability, in view of the sizeable non-hydrocarbon primary fiscal deficit and the exhaustible nature of hydrocarbon fiscal revenues in the long run. Securing the long-term sustainability of the non-hydrocarbon...
fiscal deficit requires a suitable savings strategy over time. The appropriateness of simple fiscal rules to tackle the long-run challenge of fiscal sustainability is discussed. In particular, a simple rule associated to an estimation of the permanent hydrocarbon fiscal revenue is proposed, as an anchor for the non-hydrocarbon primary fiscal deficit. The analysis also points to the need for an appropriate strategy for financial asset and liability management, as in the base-case scenario large hydrocarbon revenues are likely to boost budget surpluses and create leeway for improving foreign indebtedness.

148. Securing both, medium- and long-run fiscal sustainability requires that fiscal institutional reforms be envisaged already from an early stage. Reforms should support the establishment of a framework for fiscal discipline and expenditure efficiency, while ensuring a reasonable degree of flexibility in the conduct of fiscal policy in the future. These efforts should be underpinned by improved transparency and accountability of fiscal activities in the context of an integrated, multi-year budget framework. An action plan to strengthen the role of the budget as an instrument for medium-term macroeconomic management is outlined.

3.1. Insulating fiscal policy from the volatility of hydrocarbon revenues

149. Prudent fiscal policies are often exposed to external shocks with long lasting effects, usually involving high adjustment costs. Lack of (or even too slow) adjustment may result in high inflation, an overvalued exchange rate, and a balance of payments crisis. These in turn hamper investment and lead to slow growth. Significant external and domestic imbalances almost invariably call for fiscal consolidation to reduce demand pressures, along with an appropriate exchange rate adjustment, to support the reduction of the balance of payments deficit. Fiscal consolidation in Algeria has played a crucial role in the achievement of macroeconomic stability since the mid-1990s, and in the responses to episodes of renewed macroeconomic uncertainty as a result of the recent oil price shocks (World Bank, 2001b, and Nashashibi et al., 1998).

A bold fiscal adjustment has been achieved——

150. Fiscal adjustment during the 90’s helped Algeria reduce primary deficits and turn them into an average 6 per cent surplus more recently. The overall-average fiscal surplus of 2.3 percent of GDP in 1996-2000, compares to average deficits of 3 to 10 percent of GDP in the past. For the period of 1975-2000 as a whole, Algeria ran a yearly average primary deficit as share of GDP of over 3 per cent, which was at the origin of unsustainable debt dynamics up until the fiscal adjustment carried out in the early 90s. Surpluses have been recorded only in 5 years over 1975-2000 (Figure 3.1). The average surplus in those 5 episodes was 4.3 per cent of GDP, ranging from 1.7 per cent to 10.6 per cent, while the average deficit in the rest of the period was 7.7 per cent of GDP, ranging from 0.5 per cent to 14.5 per cent.
151. External shocks, related to the vagaries of the oil price, have been a key factor of fiscal performance in Algeria, due to the dominant position of oil revenues in total fiscal revenues. On average, oil revenues contribute around two-thirds of total government revenues, up from around one-half during 1975-1995. Dependence on hydrocarbon fiscal revenues will continue and may even be strengthened as production capacity and diversification are enhanced within the hydrocarbon industry. By contrast, non-oil revenue may be negatively affected by lowering of tariffs and slow non-oil economic activity. Non-oil revenues dropped from around 18 per cent of GDP in 1975-90 to 11 per cent in 1991-00, reflecting slow economic growth, institutional weaknesses, an inappropriate tax structure, and a narrow tax base. Recent trends show that Algeria has reinforced indirect tax revenues (particularly customs duties) as its main source of non-hydrocarbon fiscal revenue.

152. Expenditure reduction has been the cornerstone of Algeria’s remarkable fiscal consolidation. On average, between 1975-1980 and 1996-2000, Algeria has steadily reduced total public expenditure by 18 percentage points as a share of GDP. Expenditure reduction affected public investment, including the reduction of Government subsidies to public enterprises, reflecting the State’s progressive disengagement from the economy. The sharp cuts in capital expenditure between the late 1970’s and the late 1990’s were accompanied by a doubling of government’s current expenditure, due to the doubling of the wage bill, increased transfers, and increased interest payments on public debt.

—but, to reduce volatility, the pro-cyclicality of fiscal policy needs to be tackled

153. The most striking feature of fiscal outcomes in Algeria is their volatility (Table 3.1). On average for 1975-2000, Algeria’s overall deficit as a share of GDP has been around twice more volatile than in other oil-producing countries. The primary deficit, which excludes the effects of past deficits, has been 3 times more volatile than in those countries.

154. Itemized volatility indicators show that volatile hydrocarbon revenues remains the dominant source of fiscal volatility in Algeria. During the 1990’s, total fiscal revenue in Algeria was around 50 per cent more volatile than in other oil-producing countries—with 80 per cent more volatility in hydrocarbon revenues, resulting from changes in both
volumes and prices. *Expenditure volatility* has been drastically reduced. Transfers and capital expenditure are presently the main domestic sources of fiscal expenditure volatility in Algeria, compared to other expenditure items (Table 3.1).

155. Empirical estimates suggest that volatility in hydrocarbon revenues has induced pro-cyclical changes in government expenditures in Algeria (World Bank, 2001b, particularly Annex II). Because of the large share of government expenditures financed by hydrocarbon revenues, when these revenues fall, maintaining fiscal balance calls for expenditure compression—even though international capital markets financing can provide temporary relief for revenue shortfalls. Given the limited flexibility of government current expenditure (especially the wage bill, interest payments on debt, and transfers), the brunt of the adjustment in the face of oil revenue shortfalls has been borne by discretionary government spending—especially capital spending. By contrast, increases in hydrocarbon revenues have often boosted government expenditures, especially public investment, even though higher hydrocarbon revenues has proven temporary, thus yielding capital expenditure volatility (Table 3.1).

| Table 3.1: Comparative Volatility of Fiscal Outcomes |
|-----------------|-----|-----|-----|-----|-----|
| VOLATILITY INDICATOR | Region | 75-80 | 81-85 | 86-90 | 91-95 | 96-00 |
| Overall Balance/GDP | Algeria | 3.9 | 7.0 | 7.0 | 4.7 | 6.4 |
| | Oil Countries | 4.0 | 2.8 | 4.0 | 1.4 | 3.7 |
| Primary Deficit/GDP | Algeria | 3.8 | 7.1 | 5.7 | 4.8 | 6.2 |
| | Oil Countries | 0.9 | 2.9 | 2.6 | 1.8 | 3.0 |
| Total Revenue (real) | Algeria | 10.9 | 10.1 | 17.1 | 20.2 | 29.4 |
| | Oil Countries | 18.8 | 17.0 | 21.4 | 12.3 | 25.2 |
| Hydro revenue (real) | Algeria | 22.4 | 16.6 | 60.7 | 30.3 | 49.9 |
| | Oil Countries | 27.4 | 26.8 | 39.7 | 13.8 | 35.5 |
| Total Expenditure (real) | Algeria | 13.2 | 7.7 | 11.8 | 22.3 | 6.0 |
| | Oil Countries | 13.6 | 18.8 | 17.4 | 14.1 | 21.9 |
| Current Expenditure (real) | Algeria | 9.7 | 9.7 | 7.0 | 25.6 | 4.7 |
| | Oil Countries | 11.3 | 17.0 | 12.1 | 7.0 | 23.5 |
| Capital Expenditure (real) | Algeria | 26.5 | 10.5 | 19.3 | 17.1 | 25.0 |
| | Oil Countries | 24.5 | 29.1 | 34.6 | 63.6 | 30.1 |

1/ Selected, including Venezuela, Mexico, Nigeria, Saudi Arabia, and Indonesia

*Source: World Bank estimates.*

156. The pro-cyclical stance of fiscal policy is also suggested by the close association between the non-hydrocarbon primary fiscal deficit and the hydrocarbon fiscal revenue (both measured as ratios to non-hydrocarbon GDP—Figure 3.2). And despite progress in disciplining public expenditure since the adjustment program in 1994, the sharp increase in hydrocarbon revenues since 2000 has been reflected in a widening of the non-hydrocarbon fiscal deficit by about 6 percentage points of non-hydrocarbon GDP. Overall fiscal balances also vary pro-cyclically with economic growth, owing to changes in public expenditures that tend to outstrip the changes in hydrocarbon revenues. Each 1 per cent increase in the growth rate of GDP has been associated with an almost 1 percent decrease
in the fiscal surplus as a percentage of GDP, with the proportionally higher increase of expenditure over revenues exacerbating the impact of the initial disturbances on the economy. Conversely, deteriorating growth performance has been associated with reductions in the overall fiscal deficit, as expenditures have compressed proportionally more than revenues, provoking a further reduction of output and magnifying the effects of the initial negative shock. Thus, by following the cycle of oil, fiscal policy has exacerbated the impact of terms-of-trade shocks, acting as an important conduit in passing on the oil price shocks to the rest of the economy.

Figure 3.2: The non-hydrocarbon primary fiscal deficit has been affected by the cycle of oil

![Graph showing the non-hydrocarbon primary fiscal deficit](image)

Source: World Bank staff

3.2. Safeguarding fiscal sustainability in the medium term: Challenges and risks

157. Looking forward, with the initial task of fiscal and macroeconomic stabilization complete, the focus of fiscal policy has shifted to the challenges of ensuring a sustainable path in the future. A key fiscal issue in coming years is to contain overall government expenditure levels, and to some lesser extent, to address revenue collection problems. The fiscal exposure to oil price variability, the resulting pro-cyclicality of fiscal policy, and the fiscal risks due to the contingent and implicit liabilities of the state, call for further strengthening fiscal management to secure medium- and long-run fiscal sustainability and to reinforce macroeconomic stability.

Fiscal consolidation has broadened the room of maneuver of fiscal policy in Algeria

158. A primary deficit or surplus is deemed sustainable if it does not generate an ever-increasing debt/GDP ratio, under a given set of macroeconomic assumptions and policy targets. To assess sustainability, an integrated budget constraint, including operations by the central government and the balance sheet of the Central Bank, is used here, in an accounting framework model of fiscal sustainability (see Annex 3.2). The assessment of the sustainability of the fiscal program is based on the comparison of the projected primary balance with the “financeable primary balance”, i.e. the primary balance that would be needed to stabilize the ratio of debt to GDP around a predetermined level, generally its
current level. If the difference is positive, it is a measure of the additional “fiscal effort” needed to stabilize the debt. If the difference is negative, it is a measure of the “fiscal latitude”, in excess of what would be needed to stabilize debt.

159. **Underlying assumptions of the projections.** The analysis of fiscal sustainability in Algeria focuses on primary expenditure, as expenditure is under full control by the authorities, while revenues depend overwhelmingly on the exogenous oil price situation. As shown in the results reported in Table 3.2, the stabilization target chosen is the debt-to-GDP ratio in 2001. A relatively optimistic macroeconomic scenario is predicated as the basis for the assessment of fiscal and external sustainability. The projections are based on the macroeconomic consistency framework in the RMSM-X for Algeria. This scenario spans over 2003-2008 and the main underlying assumptions are summarized below (on average for the projection period). The risks associated to this environment are essentially related to the developments in the oil sector and are summarized in Box 2 (see Annexes 3.3 and 3.7 for a more detailed analysis of Algeria’s medium- and long-term outlook in the hydrocarbon sector).

- Real GDP growth rate of 4 percent, initially led by agriculture, thanks to favorable climate conditions in 2003, and by the construction sector, owing to the Economic Recovery Program of public works financed by the State. The hydrocarbon sector is expected to be a driver of real growth throughout the projection period, as the investments over the last 10 years yield increased volumes of production of crude oil and gas. This scenario compares with GDP growth projections of 5.6 percent in 2002-2005 by the authorities.

- Oil price of US$19.7/bbl, which, given expected output, would yield US$16 billion of oil export revenues on average.

- Real primary expenditure as percentage of GDP is assumed to be 29.8 percent on average, while real interest rate on domestic debt is projected at 1.3 percent, and real interest rate on net foreign debt at 1.9 percent. Nominal interest rates on domestic debt underlying these projections reflect the expected interest charges up to 2005 as reported by the authorities, plus a premium, in concordance with the Government policy to absorb liquidity from the system. Interest rates on external debt reflect the expected interest rate payments on external debt by the authorities, up to 2005. To cover the whole projection period, the rates from 2005 are kept unchanged for the remaining of the period.

- “Fiscalité pétrolière” of 73 percent (percentage applied to total oil revenues transferred to treasury), reflecting a stable trend over the past 10 years, while real non-oil revenues are assumed to be 13.3 percent of GDP.

- Domestic inflation is projected at 4.8 percent in the first part of the period, rising to 6 per cent thereafter, owing to the increased expenditures of the Economic Recovery Program and sizeable liquidity in the system, arising from the recapitalization of banks and the absorption by the State of liabilities of public enterprises and agriculture. In the absence of any additional stimulus to domestic demand, inflation is
expected to taper down toward the end of the period. Foreign (US) inflation is expected at 2.4 percent.

- Real exchange rate (DZ-US) depreciation of 1.7 percent, as the nominal exchange rate depreciation is geared toward ensuring stability of the RER, to compensate for higher domestic inflation in the projection period;

Box 3.1: Risks in the medium-term outlook for the hydrocarbon sector

Both pricing and volume will largely depend on OPEC policy, in addition to global oil market fundamentals. OPEC’s ability to sustain high prices is doubtful: prices kept significantly above costs for an extended period would dampen demand, affect OPEC’s market share and ultimately its pricing power. Even if OPEC could choose some path of relatively high prices while allowing moderate increases of demand, maintaining it is uncertain because of possible structural shift in oil demand (e.g., major advance in non-oil transport, or from environmental pressures). Lower prices may result from supply competition within OPEC, giving rise to volatile and unstable prices.

As a member of OPEC, Algeria’s production volumes are at risk, as high prices limit current and future production levels. With the ambitious investment plans currently underway, Algeria will continue to develop surplus productive capacity. The authorities expect production to match most of the planned increase in oil productive capacity, but OPEC’s quota system may thwart these intentions, if Algeria remains a solid member of OPEC, and if OPEC continues to target higher prices. Tensions could develop if foreign companies that have developed new capacity in Algeria cannot recoup their investments—even though terms relating to OPEC quotas are spelled out at the onset. Either investment might have to slow to reduce surplus capacity, or supply competition from within the organization may put considerable strain on the organization’s ability to sustain high prices.

To partially offset the impending surplus capacity, given its large investment plans, the authorities intend to negotiate a higher share of OPEC quotas in the future (its quota share fell from slightly more than 4.0 percent in 1988 to the present 3.2 percent). An increase in Algeria’s quota to 4 percent would add 175 kb/d at today’s level of output (raising Algeria’s production by 25 percent from 693 kb/d to 868 kb/d). This would clearly benefit Algeria, but to raise its production significantly even under a new quota arrangement requires strong growth in global oil demand and OPEC capturing a significant portion of that growth. This could possibly occur, but OPEC’s relatively high price targets may limit the growth in demand for OPEC oil, and result in both lower oil production and revenues than anticipated.

Gas export volumes are not policy-constrained as for oil, and strong growth in European gas demand is expected to result in higher gas exports to Europe. Gas export prices to Europe are tied to oil prices, but this will change as Europe continues to liberalize its gas markets. Increasing competition is likely to result in lower gas prices.

Source: World Bank staff
Table 3.2: Analysis of fiscal sustainability

<table>
<thead>
<tr>
<th>Stabilization Target</th>
<th>DEBT/GDP RATIO in 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average 2002-2008</td>
</tr>
<tr>
<td>Fiscal &quot;latitude (-) or effort (+)&quot;</td>
<td>-7.5</td>
</tr>
<tr>
<td>Critical level Total Hydro Exports (US$ billions)</td>
<td>10.9</td>
</tr>
<tr>
<td>Critical % &quot;Fiscalité Pétrolière&quot;</td>
<td>49.3</td>
</tr>
</tbody>
</table>

Source: World bank staff

160. Assessing the existing fiscal space. Under the environment just outlined, and thanks to the painstaking fiscal adjustment undertaken in the past, Algeria would face a favorable situation of fiscal latitude in the medium term. While maintaining the debt to GDP ratios at the level seen in 2001, Algeria could afford to increase its primary expenditure by an average of 7.5 percentage points of GDP (in real terms)—essentially on the back of a rather favorable oil export revenue situation.

161. This particularly favorable situation, however, needs to be put in a broader context.

- The estimated "fiscal latitude" should not be interpreted as a prescription to increase expenditure, on the assumption that such an increase may not disrupt a fiscally sustainable program. In the current context of the fiscal policy in Algeria, increasing expenditures indeed would be equivalent to once again adopting pro-cyclical fiscal policies, which are known for their negative effects on the rest of the economy. Booming domestic demand, driven by public expenditure, would thus put at risk the good real output performance projected in the medium-term scenario, by increasing inflation and disrupting the external balance, because of the still limited responsiveness of the economy's supply side. The conflict between sizeable fiscal latitude and the need for a countercyclical fiscal policy in Algeria should be resolved in favor of the latter.

- The fiscal latitude in the scenario at hand should rather be seen as the scope for increased government savings, to ensure that resources are available to smooth public consumption if the favorable oil export revenue situation reverses. In other words, the fiscal latitude should be considered as a favorable degree of comfort to sustain countercyclical fiscal policies in the future.

162. Indeed, this comfortable fiscal latitude is sensitive to the projected size of the hydrocarbon export revenues. Under some critical threshold of hydrocarbon export revenues, fiscal policy would become unsustainable, and Algeria would need to implement a fiscal effort, leading to primary expenditure compression. Maintaining the current
parameters of the macroeconomic scenario, this critical threshold is estimated to be around US$10.8 billion on average for the two selected debt/GDP targets. This amounts to about two-thirds of the projected oil export revenues for the medium-term, and to almost the total import bill at any given year. In other words, if total oil export revenues reach any amount below US$10.8, Algeria would not only face an unsustainable fiscal situation, but would also risk facing an unsustainable external position.

163. In the same vein, the analysis explores the critical level of the hydrocarbon fiscal revenues out of the total hydrocarbon export revenue, which would be consistent with medium-term fiscal sustainability. This is based on the projected level of total oil export revenues in the initial scenario. This critical level is estimated to be around 49 percent, on average, considering the two alternative targets of debt to GDP ratios. This compares with an actual 63.3 percent in 2001, and with an average 71 percent in 1995-2000.

164. If the critical thresholds for oil exports and fiscal oil revenue were to occur simultaneously, Algeria would need to cut primary expenditure in real terms by about 5 percentage points of GDP. That would be the fiscal effort, on average, needed to maintain the alternative debt to GDP ratios on target.

165. These are preliminary results, put forward to estimate the room of manoeuvre to maintain fiscal sustainability in the medium run in Algeria, based on a somewhat optimistic scenario. These results are to be compared with the scenarios elaborated by the authorities to assess the possible direction of fiscal policy in the medium run. Initial indications from the authorities' macroeconomic scenarios point to more optimistic assumptions, particularly on the oil sector, than those retained in this analysis. The availability of only partial information on these scenarios makes it impossible to run the sustainability analysis in a comparative manner.

Risks for fiscal sustainability

166. The proximate risks to medium-term fiscal sustainability in Algeria are contingent liabilities of the public sector. They provide a measure of the policy changes that may be required to maintain fiscal sustainability. However, these liabilities are not easily quantifiable because they are contingent on the realization of the "insured occurrence". Their adverse repercussions may not be apparent in the near term, but they may surface later, causing a severe financial crisis that would require much costlier remedies. The bulk of contingent liabilities in Algeria originates in the non-performing loans to public enterprises, accumulated in the portfolios of public banks. Contingent liabilities arise also from the financial situation of the pension system. Other examples are guarantees for credits extended by financial institutions and for deposits in those institutions.

167. As documented in chapter 2, contingent liabilities in the banking system in Algeria have already proven extremely costly and have the potential to jeopardize the sustainability of fiscal programs. The current contractual arrangements with Bank managers do not provide sufficient guaranties that the build-up of bad loans would be curtailed. This would call for a radical operational restructuring of public banks that would sever their links with public enterprises. Replacing bank loans to distressed enterprises with transparent
subsidies in the budget would help reduce the risk of further build up of non-performing loans with public banks, while providing a better assessment of the underlying fiscal trends.

168. Also, unfunded pension liabilities of the pension system ("Caisse Nationale des Retraites"—CNR) will be an issue for public finances over the medium term. Pressures will arise not because of unfavorable demographic fundamentals, but reflecting the large scale of the informal economy, the slow rate of growth, and the system’s generosity—especially the pensions with no age limit and the “retraite proportionnelle” introduced in 1997, as part of the government’s policy to promote employment through early retirement. Moreover, contributors working in the private sector diminished drastically, along with the recession affecting industry, while the workers in the growing informal economy do not contribute to the system. Preliminary results suggest that the current conditions for accessing the pension schemes offered by the pension system in Algeria bring the old-age dependency ratio close to the OECD levels, at around 20 percent.

169. If the current trend in dependency ratios continues over the medium run, the progressive deterioration in the financial position of the pension system would call for reform to reduce the generosity of the system. Under the current parameters of the system, preliminary simulations suggest the appearance of a cumulative deficit of about 4.5 percent of GDP over 2003-08, and an additional 12 percent deficit over 2009-15—also taking into account the decrease in the number of public sector contributors to the CNR as a result of privatization.

170. These preliminary estimates of contingent liabilities call for vigilance in the strategies to ensure long-term fiscal viability. Management of the risks associated with the contingent liabilities would be greatly facilitated by a transparent and integrated budget framework, along with an adequate strategy to manage assets and liabilities by the State.

Managing hydrocarbon revenue windfalls to reduce the pro-cyclicality of fiscal policy—the role of the Stabilization Fund (“Fonds de Régulation des Recettes”)

171. In response to the effects of windfall oil revenues, price volatility, and potential resource depletion, a number of revenue stabilization and savings funds have been created in oil producing countries, e.g., in established producing areas such as Alaska, Alberta, Kuwait, Norway, Oman and Venezuela; in transition countries such as Azerbaijan and Kazakhstan, and in countries about to commence production such as Chad. New funds have been created elsewhere (Algeria and Iran) and are being contemplated in other countries (Russia).

172. The experiences of funds to date have been mixed, and in general, funds have been more successful in countries with strong fiscal discipline and macroeconomic management (see Annex 3.3). In short, funds are no substitute for sound fiscal management. Funds do not constrain fiscal expenditures and do not reduce price volatility and uncertainty (the latter may be directly addressed with risk management tools).
173. The Algerian authorities have established a Revenue Stabilization Fund, the "Fonds de Régulation des Recettes" (FRR) through a Complementary Budget Law, approved by Parliament on 27 June 2001. The law establishes that all actual hydrocarbon revenues received by the government, in excess of budgeted revenues, are to be deposited into the FRR. On 6 February 2002, an executive decree established a few basic rules. All revenues going into the fund will continue to be actual revenues in excess of budget projections. The budget revenues are based on a reference oil price for Saharan Blend in the budget law, and expected export volumes. All revenues generated from the fund's operation will also remain in the fund. The decree issued two expenditure rules: (i) help balance the annual budget; and (ii) reduce the public debt. The Minister of Finance will be in charge of administering the revenues and expenditures according to terms of the decree.

174. The reference oil price contained in the budget for 2000 and 2001, was $19/bbl and $22/bbl, respectively. This allowed a significant amount of revenues be transferred to the fund, especially in 2000 when oil prices were more than $28/bbl compared with a reference price of $19. According to the Ministry of Finance (Operations du Trésor et Fonds de Régulation des Recettes) the FRR received DA 453.0 billion ($6.0 billion) in 2000, and DA 115.8 billion ($1.5 billion) in 2001. According to the Ministry of Finance and the Central Bank, at the end of 2001 the FRR totaled DA 554 billion ($7.1 billion). However, the government does not publish detailed figures of the FRR, and the Central Bank would not provide inflows and outflows for the FRR, only the balance.

175. However, conflicts appeared between the aimed "principle of precaution" and revenue and expenditure stabilization in the FRR. When the fund was established, the reference price in the budget for 2000 and 2001 was to be set at $19/bbl. It then appeared that the government would try to maintain a level of expenditures that, at a $19 oil price, would not call for deficit financing. Therefore, if prices were to exceed $19, revenues would be saved, to meet financing needs when prices fall below that level. However, this has not occurred. The reference price was revised up to $22/bbl for 2001, when oil prices rose higher than expected.

176. In addition, given the projected budget balance, at the oil price projections for the near future, no oil revenues would flow into the fund. For 2002, the authorities project a reference price of $22/bbl, and for 2003 and beyond of $19/bbl. This is not unreasonable given historic prices and today's oil market environment. As a result, the fund's reserves would decline by 2004 to finance the budget deficit. This means that the government is effectively budgeting $22/bbl for the 2001-04 period, with the use of brief windfall revenues in 2000-01. There would be only limited savings to cushion expenditures if prices were to fall below $19/bbl beyond 2004.

177. To cushion unexpected financing needs in case the oil price drops by $3 below the reference price of $19/bbl for 2003-04, according to highly preliminary and non-official estimates, the government plans to maintain a minimum balance in the FRR of about DZ 120 billion (about 2.5 per cent of GDP). While the reference price of $19/bbl for 2003-04 may look reasonable, if not conservative given today's prices, there are clearly downside risks to the oil prices in the coming years—possibly before 2004 (see Box 2). The minimum reserve may thus not be enough to cushion protracted declines in the price of oil.
Evidence suggests indeed that more caution would be called for to offset downside risks, as the variability of changes in the budget balance (standard deviation of changes in the deficit in per cent of GDP) has by far exceeded the relative size of the minimum reserve (see Table 3.1).

178. Had the government maintained expenditures at a more prudent level, consistent with a price of oil at $19/bbl, which seemed to be the intent when the fund was created, it would have built significant savings to sustain expenditures at the $19 level for a much longer period. This would also have laid the groundwork for more stable and prudent management of public expenditures over time. Downside risks in the price of oil could thus cause government expenditures to return to a more volatile cycle.

179. As suggested by international experience reported above, it must be recognized that the FRR cannot be a substitute for sound fiscal policy, and it is here where priorities must lie. The FRR can only contribute to the process if the government entrenches a prudent countercyclical fiscal policy particularly focused on expenditure, attached to a determinate policy to increase public savings. Without discipline on expenditures—and, hence, significant restraint on the reference price of oil—expenditures will simply revert to the volatile and costly pattern of tracking movements in oil prices. Fixing an appropriate reference price is difficult in and of itself, because of the unpredictability of oil prices, and uncertainty of whether a price shock is permanent or temporary. However, the government should not exacerbate the problem by setting references prices incautiously high, and allowing expenditure to lax unduly, even if assets accumulated in the fund are large.

180. If the fund is to be maintained along with prudent expenditures policies, then the objectives, rules and operations of the FRR should be made more transparent, with strict mechanisms to ensure accountability and prevent discretionary use of the fund. The fund should be integrated into the budget process so as to give the government complete control over fiscal policy and strengthen a transparent fiscal framework. All expenditures should compete within the budget process, subject to parliamentary approval, and all transfers in and out of the fund should be done through the budget. Earmarking of the fund’s resources, i.e., for financing the budget deficit and reducing public debt, can be of benefit if it helps restrict government use of windfall revenues. However, earmarking outside the normal budget could lead to inefficient expenditures, and possible misuse of resources. The government should resist setting up a separate system of expenditures outside the budget process, which could lead to problems of fiscal management, lack of transparency, and abuse.

181. As is further elaborated below (section 3.3), the scope of the Fund could be expanded to implement a long-term savings strategy, with the aim of securing long-term fiscal sustainability. The accumulated reserves in the Fund should be invested abroad, or appropriately sterilized, to prevent an increase in domestic liquidity that would eventually lead to inflation. Expanding the scope and size of the Fund would call for an appropriate asset management strategy—in the context of a broader strategy for the management of the government’s assets and liabilities (see also below). The rules should be transparent, in accordance with prudent investment guidelines, with strict mechanisms to ensure accountability. Frequent disclosure, auditing and reporting are necessary to garner public
support for the objectives and operations of the fund. Fulfilling the stabilization function of the fund would call for investing in liquid assets, in order to draw down quickly if required.

Assessing the sustainability of foreign debt

182. After peaking in 1996, Algeria's external debt has now declined to its lowest level in over 10 years. A strong current account performance over 2000-01 has contributed to the improvement in the country's debt situation. Consequently, all key debt burden indicators have recently trended down, but remain moderate (Annex 3.5). For example, the size of external debt relative to GDP has fallen from a high of 78 percent in 1995 to 47 percent in 2000 and declined further to about 40 percent in 2001. Compared to other lower middle-income countries and to oil exporting countries, Algeria's debt burden is fairly moderate; but is less favorable than that of Colombia, Iran and Venezuela. The size of debt relative to exports has declined as well, nearly halving over 1999-2000. However, this ratio is still above the level observed in some oil exporting countries. The size of debt service relative to exports has likewise shrunk, and was around 20 percent in 2001. The improvement in debt burden is all the more remarkable, given the country's payment difficulties in the early and mid-1990s.

183. But there is still significant external vulnerability. About half of the country's long-term debt is on variable rates. Thus international interest rate movements are a potential source of risk to the country's external debt burden. Also, with dollar-denominated energy prices and 97 percent of export earnings, export earnings may not provide an adequate natural hedge against currency movements. The currency composition of external debt is estimated at around 50 percent US dollars, about 30 percent euro and 12 percent yen. To the extent the dollar tends to weaken when oil prices weaken, a counter-cyclical hedge exists for the dollar-denominated part of the debt. However, currency movements may somewhat add to the country's external vulnerability.

184. On the strength of large external balances, foreign exchange reserves climbed to $18.3 billion at end-2001 (and about $23 billion by the end of 2002). Reserves are over six times larger than the amount of debt maturing within a year — i.e., short-term debt and long-term debt that is coming due this year. With such large reserves, liquidity or rollover risk in the near to medium term is not expected to be a source of vulnerability.33

185. The evaluation of external debt sustainability is based on the projections of a few key ratios such as external debt and the present value of debt to GDP and to exports, and debt service to GDP and to exports. The debt is sustainable if these indicators exhibit an improving trend over time. Naturally, rising exports and economic growth hold the key to sustainability. But, this also means, on the downside, that poor export and growth performance would affect economic prospects and could lead to worsening ratios. Consequently, projections showing the behavior of these ratios under different scenarios are reported here, based on a macroeconomic model that ensures consistency between the trends of the different variables.
Two scenarios are examined, a base case and a low case. The scenarios are differentiated by the behavior of the key variables of aggregate exports and growth. With Algeria’s external position heavily dependent upon developments in the hydrocarbon sector, volatility in hydrocarbon prices will translate into volatility in the external balance. For example, a one-dollar increase in the price of hydrocarbons boosts export earnings by an estimated $700 million. Investments in the hydrocarbon sector can also raise export earnings through higher production, but prices movements are expected to dominate export earnings in the near and medium term.

The base case is quite optimistic and assumes an average GDP growth rate of 4 percent in the medium term. This rate is higher than the average for recent years, and assumes a strong stance on structural reforms and efforts to encourage investment. In the base case, lower hydrocarbon prices relative to 2001 (at US$ 19/bbl) hurt export earnings and exports don’t recover to their 2000 level until 2009. Consequently, the share of exports in GDP trends down from 37 to 33 percent over 2001-06. At the same time, the share of imports in GDP increases quite rapidly, from 22 percent to 29 percent. Nevertheless, the current account continues to record a surplus, albeit shrinking, over the medium term, and net external borrowing is negative.

In this scenario the standard indebtedness indicators perform favorably, and the debt burden is sustainable. For example, the size of debt relative to exports (excluding workers’ remittances) is more than halved between 2001-07: falling from 112 percent to an estimated 58 percent (Table 3.3). An equally large improvement is observed in the debt to GDP indicator, which drops from 41 percent in 2001 to 19 percent in 2007. The improvement in the debt service to exports indicator is less dramatic, however. Thus debt service to exports is expected to remain moderate in size in this scenario. In the base case, foreign exchange reserves rise rapidly in 2002 and then grow at a much slower pace. The rising trend in foreign reserves combined with a declining external debt portfolio, translates into a net asset position for the country beginning in 2002.
189. The low case, based on some simplifications, aims to assess the vulnerability of the country's external balances and its debt burden to adverse movements in hydrocarbon prices. Thus, weaker hydrocarbon prices directly impact export earnings, but imports and GDP growth are assumed to be unaltered compared to the base case (an oversimplification). At about $15/bbl, energy prices are assumed to be practically half the level in 2000 and well below the average for 1991-99. The relatively depressed level of energy prices results in export earnings remaining below their 2001 levels, to a projected 27 percent over 2001-07. As in the base case, the share of imports in GDP is assumed to increase quite rapidly, from 22 percent to 29 percent. In contrast to the base case, the current account surplus now turns into a deficit beginning in 2003 and net external borrowing becomes positive in the medium term. Consequently, debt levels start rising in 2004. Although foreign exchange reserves are projected on an upward trend in the low case, rising debt levels mean that net assets are negative (or net debt is positive). To be sure, these effects could be somewhat muted by slower growth of imports, to the extent that the lower hydrocarbon revenues depress GDP and household income growth.

Table 3.4: Debt dynamics under the low-case scenario:

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<tr>
<td><strong>Debt dynamics under the Low Case 2002 to 2007</strong></td>
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<td><strong>Indebtedness indicators</strong></td>
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<td></td>
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<tr>
<td>Debt / XGS (%)</td>
<td>112</td>
<td>124</td>
<td>150</td>
<td>156</td>
<td>157</td>
<td>160</td>
<td>166</td>
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<tr>
<td>Debt / GDP (%)</td>
<td>41</td>
<td>42</td>
<td>42</td>
<td>43</td>
<td>43</td>
<td>44</td>
<td>45</td>
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<tr>
<td>Debt / Govt. Revenues (%)</td>
<td>117</td>
<td>125</td>
<td>140</td>
<td>139</td>
<td>139</td>
<td>142</td>
<td>153</td>
</tr>
<tr>
<td>Debt Service / XGS (%)</td>
<td>22</td>
<td>23</td>
<td>27</td>
<td>26</td>
<td>28</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td>Debt Service / Govt. Revenues (%)</td>
<td>23</td>
<td>23</td>
<td>25</td>
<td>24</td>
<td>25</td>
<td>27</td>
<td>32</td>
</tr>
<tr>
<td>PV of Debt /3-year average of XGS (%)</td>
<td>119</td>
<td>104</td>
<td>120</td>
<td>143</td>
<td>159</td>
<td>164</td>
<td>170</td>
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<tr>
<td>PV of Debt / GDP (%)</td>
<td>109</td>
<td>121</td>
<td>146</td>
<td>152</td>
<td>153</td>
<td>157</td>
<td>163</td>
</tr>
<tr>
<td>PV of Debt / Govt. Revenues (%)</td>
<td>114</td>
<td>121</td>
<td>136</td>
<td>136</td>
<td>136</td>
<td>140</td>
<td>151</td>
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<td><strong>Memorandum items</strong></td>
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<tr>
<td>Exports / GDP (%)</td>
<td>37</td>
<td>34</td>
<td>28</td>
<td>27</td>
<td>27</td>
<td>28</td>
<td>27</td>
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<tr>
<td>Govt. Revenues / GDP (%)</td>
<td>35</td>
<td>34</td>
<td>30</td>
<td>31</td>
<td>31</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>Exports of Goods &amp; NFS</td>
<td>20,000</td>
<td>19,665</td>
<td>13,963</td>
<td>14,041</td>
<td>14,753</td>
<td>15,454</td>
<td>16,056</td>
</tr>
<tr>
<td>GDP (in current US$)</td>
<td>54,080</td>
<td>50,332</td>
<td>49,447</td>
<td>51,285</td>
<td>53,781</td>
<td>56,124</td>
<td>58,709</td>
</tr>
</tbody>
</table>

**Source:** World bank staff

190. Under the low case scenario, the standard indebtedness indicators are projected to deteriorate and the debt burden moves along an unsustainable path. For example, the size of debt relative to exports (excluding workers’ remittances) jumps to an estimated 166 percent by 2007. The deterioration in the debt service to exports indicator is equally dramatic (Table 3.4). As expected, the deterioration in the debt to GDP indicator is less severe because of the assumption that GDP is largely unaffected by oil price movements. Modifications to this assumption may be expected to alter magnitudes, but not trends. The debt dynamics shows Algeria’s vulnerability to adverse movements in hydrocarbon prices.
191. The debt dynamics developed under the base case and the low case yield divergent trends in key indebtedness indicators (Figure 3.3). The main factor explaining the two different outcomes is the impact of hydrocarbon prices on export earnings and the current account balance. While the results do represent an oversimplification, they highlight the risks surrounding the external balances in the near and medium term. Although the debt dynamics shows external sustainability, the outcome is vulnerable to unfavorable developments in export and output growth arising from either adverse movements in hydrocarbon prices or slippages in economic management.

**Figure 3.3: Foreign debt dynamics are sensitive to hydrocarbon revenues projections**

![Nominal Debt to XGS (%)](image-a)

![Nominal Debt to GDP Ratio (%)](image-b)

*Source: World Bank staff*

### 3.3. Strengthening medium-term fiscal policy management: An integrative framework

192. Boom-and-bust episodes in commodity exporting countries highlight the need to pursue prudent policies that keep macroeconomic imbalances to a minimum, and respond cautiously to shifts in the terms of trade. International experience suggests that reductions in fiscal deficits do not always guarantee an enduring strengthening of public finances, as fiscal consolidations have often been successful over a relatively short period and have been reversed over time. This highlights the importance of sound fiscal frameworks to help reinforce political commitment to fiscal restraint. Designing contingency mechanisms and institutional structures to promote Governments’ expenditure smoothing by saving in good times and dissaving in bad times remains a key policy issue in many oil-producing countries. Prudence calls for treating all favorable shocks as temporary, even if it is difficult to determine a priori whether the shock will be permanent or temporary. Unfortunately, governments generally behave as if positive shocks are permanent, and negative shocks are temporary.  

193. Algeria faces the challenge of strengthening its fiscal framework, to support the fiscal consolidation achieved so far, strengthen macroeconomic stability, and secure fiscal sustainability in the medium and long term. The challenge is multifaceted as it involves:
- Preserving the financial system and monetary policy from the volatility of hydrocarbon revenues, to improve fiscal and monetary policy coordination and strengthen macroeconomic stability;
- Shielding public expenditures from the volatility of hydrocarbon fiscal revenues, to reduce the pro-cyclicality of fiscal policy that exacerbates Algeria's exposure to the cycle of oil;
- Securing the sustainability of the non-hydrocarbon deficit, in view of the large size of that deficit, the long-run depletion of hydrocarbon revenues, and the underlying fiscal risks.

194. Meeting these challenges calls for a fresh approach in the overall design of medium-term fiscal policy, along with institutional reforms aimed at strengthening the transparency of fiscal accounts and establishing an integrated, multi-year budget framework to support the budgetary process. The government has taken an important step in this direction, with the establishment of the "Fonds de Régulation des Recettes" as a tool to better manage the volatility of hydrocarbon revenues, and has also taken initiatives to strengthen the budget process. In the government's view, these recent steps have addressed the need of better managing volatility in the short and the medium term, while it is recognized that further reforms could be considered in the future to deal with long-term fiscal sustainability and issues of inter-generation equity associated with the depletion of hydrocarbon revenues in the long run.

195. The fiscal framework recommended in this section integrates the goal of securing medium-term fiscal sustainability with these broader long-term policy goals, in the sense that it anchors in a flexible manner medium-term fiscal sustainability in long-term projections for hydrocarbon revenues. The section, first, lays out the operational principles of this integrative framework, to further improve the design of medium-term fiscal policy—including principles for financial asset and liability management. Next, the section outlines an action plan to strengthen the role of the budget in medium-term macroeconomic management.

Improving medium-term fiscal policy design: Toward a rules-based fiscal policy, underpinned by a sound and integrated fiscal framework

196. To strengthen macroeconomic stability, the fiscal framework should aim at decoupling public expenditures from short-run movements in oil prices and the resulting volatility in hydrocarbon revenues. This will be achieved by setting cautious reference prices for oil in the budget and by maintaining expenditure discipline while improving expenditure efficiency—aided by the reforms in institutions and the budget process outlined in the action plan below. The fiscal framework should be anchored on an indicator that is unaffected by the short-run changes in hydrocarbon revenues. Such an indicator should provide a good measure of the fiscal stance and the underlying pressures on medium-term fiscal accounts.

197. The non-hydrocarbon primary fiscal deficit, measured as a ratio to non-hydrocarbon GDP, could be the strongest anchor for fiscal policy. Setting appropriate targets for the level of the primary non-hydrocarbon deficit in the short term and the medium term should provide the basis for expenditure to be de-linked from the volatile hydrocarbon revenues,
thus, reinforcing macroeconomic stability. Changes in the non-hydrocarbon primary balance should be used as a basis for measuring progress in fiscal consolidation (see also Barnett and Ossowski, 2002).

198. The targets on the non-hydrocarbon primary deficit could be adjusted in a relatively flexible manner, so as to correct the deficit for changes in fiscal revenues or expenditures stemming from changes in economic activity in the non-hydrocarbon sector (impact of automatic stabilizers). For example, increases in social expenditures (such as unemployment benefits), coupled with declines in tax revenues, in periods of economic downturn, would tend to broaden the primary non-hydrocarbon fiscal deficit. Such cyclical components of the deficit could be subtracted from the actual deficit, so as to focus the fiscal target on a measure of the structural non-hydrocarbon primary fiscal deficit.

199. Implementing a multiyear expenditure planning, based on a **rolling medium-term expenditure framework** (MTEF), would greatly help strengthen the fiscal framework. A MTEF would help recognize the implications of current budgetary decisions for government finances in the future (including the recurrent costs of capital spending), and, at the same time, help prioritize projects that should be carried out immediately and program those that might be spread over several years. Implementing a MTEF might thus help limit the short-run expenditure responses to sharp hydrocarbon revenue swings. The MTEF should be appropriately defined to include realistic medium-term targets for the non-hydrocarbon primary fiscal deficit (or a structural measure of it), which should be reviewed in the context of the annual budgets.

200. It is important that fiscal policy secures the **sustainability** of the non-hydrocarbon fiscal deficit in the long term, by deciding about “the right size” of the non-hydrocarbon primary deficit that takes into account the financing constraints over time. Moreover, fiscal risks stemming from the contingent and implicit liabilities of the government should be properly valued and taken into account when deciding about a prudent permissible level of the non-hydrocarbon primary deficit.

201. Algeria, as other oil-producing countries, can afford “the luxury” of a sizeable non-hydrocarbon primary fiscal deficit, to the extent the fiscal proceeds from hydrocarbon resources can secure a sufficient and stable financing over time. However, the non-hydrocarbon primary deficit in Algeria is large, and has increased to above 25 per cent of non-hydrocarbon GDP since 2001, as public expenditures have been boosted by the Economic Recovery Program. Moreover, Algeria’s share of (non-interest) public expenditures in GDP is rather on the high-end range, compared to other developing oil-producing countries, MENA countries, and economies in transition (Figure 3.4).
202. Thus, maximizing the impact of hydrocarbon revenues on growth may not necessarily call for increasing public expenditures, but for better targeting and improved cost-effectiveness of public expenditures. Improving the efficiency of public expenditures generally calls for arrangements that facilitate expenditure reallocation towards the most valuable uses, by ensuring that there is no under-provision of key public services, or over-provision, in the form of programs that are unnecessary or fail to adapt to changing circumstances. This is facilitated by performance-based budgeting, which requires linking reallocation with information concerning the effectiveness of expenditures, based on multi-year impacts and program outcomes.

203. Moreover, the decisions concerning public investment in (social and economic) infrastructure should not be directly related to the presence of hydrocarbon windfalls. Sound public finance management would call for borrowing to finance investment projects that would pay for themselves via higher future tax revenues. Thus, the productivity and cost of public capital should be driving public investment, regardless of the presence of hydrocarbon wealth. Although the presence of hydrocarbon windfalls could temporarily lower the cost of financing of public investment, eventually the decisions whether the return to investments is worth the expense is independent of hydrocarbon wealth and should be better taken in the context of medium-term expenditure planning.

204. Maintaining long-term sustainability of the non-hydrocarbon fiscal deficit requires a savings strategy over time, because hydrocarbon fiscal revenues are exhaustible. Although in practice reserves may extend over a long period of time, technology could lead to resource "obsolescence". Even in a stage of unrelenting depletion, costs would rise and a good part of the resource would be left in the ground. At a minimum, slow depletion of the resource will eventually set in, and the country should prepare for an economy without oil.

205. The savings strategy should aim at accumulating substantial assets, so that the return on those assets finances the non-hydrocarbon deficit once hydrocarbon resources have been depleted. The savings strategy should be accompanied by an active assets management strategy to ensure the highest returns with low risk. The alternative of financing the non-hydrocarbon deficit by drawing down accumulated assets once
hydrocarbon resources are exhausted would not be sustainable in the long term. Such a strategy would eventually deplete all accumulated assets, thus leading to increasing government borrowing and unsustainable debt dynamics. In a sense, the strategy should aim at transforming an exhaustible stream of hydrocarbon revenue into a perpetual stream of financial revenue through appropriate savings over time.

206. An option for securing long-term fiscal sustainability would be to implement a fiscal rule with the aim of keeping the non-hydrocarbon primary deficit below a certain target while saving hydrocarbon windfalls for the future. A rules-based fiscal policy in Algeria could be anchored on the concept of the "permanent hydrocarbon income stream". Roughly stated, the rule could target a non-hydrocarbon primary fiscal deficit that does not exceed the "permanent hydrocarbon income stream" over an appropriately defined medium-term time horizon. Surplus hydrocarbon revenues (i.e., revenues in excess of the "permanent hydrocarbon income stream") should be saved. They could be used to finance temporary fiscal deficits due to cyclical circumstances; to pay down debt (as is currently done by the "Fonds de Régulation des Recettes"), or be directly saved for future expenditures, to offset the depletion of hydrocarbon revenues in the long term or help face future calls on the budget.

207. Linking primary government expenditures to the "permanent hydrocarbon income stream" would set an upper limit to the non-hydrocarbon primary fiscal deficit over time, in a way that would be consistent with long-term fiscal sustainability. As indicated in the intertemporal solvency framework in Annex 3.6, the rule would ensure that existing debt is matched by future primary surpluses, whose present value exceeds the value of the debt. At the same time, such a rule could provide a useful anchor for stabilization purposes. This would help smooth out public expenditures over time and prevent unwanted expenditure cuts in case of sharp oil price reversals, thus reducing the pro-cyclicality of the budget.

208. The "Fonds de Régulation des Recettes" (or any type of broader "Heritage Fund" that could be set up for saving purposes) should be integrated into the budget process so as to give the government complete control over fiscal policy. Rules for the management of the fund’s assets should be transparent, in accordance with prudent investment guidelines, with mechanisms to ensure accountability—such as frequent disclosure, auditing, and reporting.

209. However, though safeguards in the form of fiscal policy rules may be appropriate to ensure a sound fiscal policy stance in the long term, the high exposure to volatility, due to the heavy dependence on hydrocarbon fiscal revenues, would call for flexibility in the application of fiscal rules. Flexibility could be obtained by defining the rules over a medium-term horizon, and by targeting the "structural" non-hydrocarbon primary deficit, thus allowing short-term cyclical deviations as a result of the operation of fiscal stabilizers. The authorities should lay the groundwork for a rules-based fiscal policy by implementing an integrated fiscal framework that improves the transparency of public expenditure financing. Failing to put in place such a framework could jeopardize a move towards fiscal policy rules.
210. Operationalizing that fiscal rule requires estimating Algeria's "permanent income" from hydrocarbon production, based on an estimation of the net present value (NPV) of government's hydrocarbon revenue over a long period. These calculations invariably rely on estimates of remaining recoverable reserves, and a production profile of the depleting resource over a long period. The present value of the government's "permanent" revenue stream can be calculated based on assumptions of government take, resource price, costs, and the discount rate. Needless to say, any estimate is subject to considerable uncertainty, reflecting the uncertainty of the quantity of reserves, and the sensitivity of the results to assumptions about prices, discount rates, and other factors (such as costs and taxes). The technical elements of the calculations in the case of Algeria and the risk factors are outlined in Annex 3.6. These calculations incorporate the Government's medium-term plans of expanding production capacity, which are part of a broader strategy of prudent hydrocarbon resource management and preservation.

211. "Upside uncertainty" pervades "permanent hydrocarbon income" calculations as reserve estimates at any single point in time reflect what is then known, and do not depict ultimate recovery, which is unknowable. Estimations are also subject to "downside uncertainty" of long-term declining prices in the global hydrocarbon market. This is because price distorting interventions in the market (e.g. OPEC production restraint), unleash powerful economic forces that, in the long run, render such interventions unsustainable (Annex 3.7). Moreover, possible implementation of schemes to limit global greenhouse gas emissions in the future (through carbon taxation, or quantitative restrictions such as those envisaged in the Kyoto-protocol), would raise the price of hydrocarbons to users, thus limiting consumption and cutting back revenues to producers.

212. Missing some upside potential for government spending, due to underestimation of "permanent hydrocarbon fiscal revenues", would not put long-term fiscal sustainability at risk. By contrast, overspending, based on unrealistic projections of hydrocarbon revenues, would pose fiscal risks—as corroborated by the experience of oil producers. The overall uncertainty surrounding the estimates once again highlights the importance of a flexible application of fiscal rules with respect to:

- The estimation of hydrocarbon reserves, allowing for the possibility of "high-case" reserve scenarios;
- The application of rules over an extended horizon, to allow for changes in the environment beyond the control of the government;
- The need to allow for periodic updates of the underpinnings of the "permanent hydrocarbon income" calculations.

Assessing the feasibility of permanent-income rules, the potential for savings, and risks for long-term fiscal sustainability

213. The net present value (NPV) of government hydrocarbon revenues over a fifty-year horizon is calculated based on three scenarios about reserves and three different assumptions about oil and gas prices (details in Annex 3.7). Total revenues across cases range from $141 billion to $359 billion—i.e., from 2.5 to 6.3 times the level of 2001 GDP
A permanent income of $9.7 billion and $11.8 billion is estimated in the mid- and high-case reserve scenarios, at a mid-case price forecast, in constant 2001 dollars (16.9 and 20.6 per cent of 2001 GDP respectively), based on a 4 per cent discount factor.

Table 3.5: NPV of Government Hydrocarbon Income to 2050

<table>
<thead>
<tr>
<th>Reserves / Prices</th>
<th>(1) Low ($15)</th>
<th>(2) Mid ($20)</th>
<th>(3) High ($25)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Low</td>
<td>141.4</td>
<td>180.2</td>
<td>219.6</td>
</tr>
<tr>
<td>(B) Mid</td>
<td>190.1</td>
<td>242.8</td>
<td>296.2</td>
</tr>
<tr>
<td>(C) High</td>
<td>231.4</td>
<td>295.1</td>
<td>359.3</td>
</tr>
</tbody>
</table>

Oil prices in constant 2001 $ per barrel. Corresponding gas prices (in constant 2001 $ per thousand cubic meters): $62; $77; $92
Discount rate 4 percent

Source: World Bank staff (see Annex 3.7)

214. In view of these estimates, how close is the structure of government expenditures and fiscal revenues in Algeria to meeting the fiscal rule outlined above? In principle, this assessment should be forward-looking, based on a medium- to long-term projection of the non-hydrocarbon primary balance. However, the past trends of government expenditures and fiscal revenues also convey a sense of the potential for meeting the fiscal rule. Table 3.6 presents these trends over two rolling five-year periods—which could also be seen as a medium-term horizon for the application of the rule. Securing intertemporal solvency also calls for adjusting the rule to account for interest payments on gross external and domestic public debt in real terms, and for GDP growth (Annex 3.6). The adjustment here is based on a 2 per cent difference between the real interest rate and the GDP growth rate, and the 60 per cent debt-to-output ratio in 2001 (of which 40 percentage points amount to external debt).

215. In the high-case scenario the rule would be easily met, as permanent hydrocarbon income, estimated at 20.6 per cent of GDP, is still about 3 percentage points of GDP higher than the moving-average of the adjusted non-hydrocarbon primary deficit—despite the upward trend of the latter. However, in the mid-case scenario, with permanent hydrocarbon income estimated at about 17 per cent of GDP, meeting the fiscal rule would be a close call. And the mid-case scenario relies on a relatively optimistic estimate of recoverable hydrocarbon reserves, of about 50 per cent above current estimates.
Table 3.6: Fiscal balance and permanent hydrocarbon income estimates in Algeria

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>a1. Hydrocarbon revenues</strong></td>
<td>22.1</td>
<td>22.7</td>
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<tr>
<td><strong>a2. Non-hydrocarbon fiscal revenues</strong></td>
<td>11.4</td>
<td>11.1</td>
</tr>
<tr>
<td><strong>a3. Total revenues</strong></td>
<td>33.5</td>
<td>33.8</td>
</tr>
<tr>
<td><strong>b1. Total Primary Current expenditures</strong></td>
<td>19.1</td>
<td>19.5</td>
</tr>
<tr>
<td><strong>b2. Total Interest</strong></td>
<td>3.9</td>
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</tr>
<tr>
<td><strong>b3. Total Capital expenditures</strong></td>
<td>7.7</td>
<td>8.1</td>
</tr>
<tr>
<td><strong>b4. Total expenditures</strong></td>
<td>30.6</td>
<td>31.1</td>
</tr>
<tr>
<td><strong>Fiscal balance (a3-b4)</strong></td>
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<td>2.7</td>
</tr>
<tr>
<td><strong>Non-hydrocarbon fiscal balance (a2-b4)</strong></td>
<td>-19.2</td>
<td>-20.0</td>
</tr>
<tr>
<td><strong>Non-hydrocarbon primary balance (a2-b1-b3)</strong></td>
<td>-15.4</td>
<td>-16.5</td>
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<td><strong>c1. Adjustment for growth and debt service</strong></td>
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<tr>
<td><strong>Adjusted non-hydrocarbon primary balance (a2-b1-b3-c1)</strong></td>
<td>-16.6</td>
<td>-17.7</td>
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<td><strong>“Permanent Hydrocarbon Income” scenario B2</strong></td>
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</tr>
<tr>
<td><strong>“Permanent Hydrocarbon Income” scenario C2</strong></td>
<td>20.6</td>
<td></td>
</tr>
</tbody>
</table>

1 Equal to the product of the actual (external and domestic) debt-to-GDP ratio (60 per cent) and the assumed difference between the real interest and the GDP growth rate (2 per cent).

Source: World Bank staff; based on Government financial statistics from IMF.

216. Benchmarking the fiscal rule on past trends, also helps assess the savings of hydrocarbon revenues that would be forthcoming—to reduce the debt burden or to accumulate reserves to finance future expenditures. Since 1997 the global oil market has seen a full cycle, with a near price collapse in 1998, a steep increase in 1999-2000, and a stabilization thereafter. Evaluated at 2001 prices, hydrocarbon revenues in excess of the “permanent hydrocarbon income” over 1997-2001 would range, on average, from 1.5 to 5 per cent of GDP per year, in the high-case and the mid-case scenarios respectively.

217. Summing up, based on the recent trends of government expenditures and non-hydrocarbon revenues, increased vigilance would be needed in the future to ensure that long-term fiscal sustainability would not be at risk. This is because the non-hydrocarbon primary deficit has been recently on a rising trend, contrary to the overall stability of the average fiscal balance over time (Table 3.6). From 12.8 per cent of GDP in 1997, the non-hydrocarbon primary deficit jumped to 16.7 per cent in 2001, and has further increased to 18.4 per cent of GDP in 2002.

218. If the rising trend of the non-hydrocarbon primary deficit were to continue unchecked, a fiscal rule such as the one outlined here would be hard to meet over time, under reasonable permanent hydrocarbon income assumptions. First, owing to growth, the permanent hydrocarbon revenue as a ratio to GDP would decline, requiring an increase in non-hydrocarbon fiscal revenues if expenditure were to remain constant as a share of GDP. Moreover, pressures on the non-hydrocarbon deficit may build up in the future, because
contingent liabilities of the public sector may surface again, especially in public banks. This would put long-term fiscal sustainability at risk.

**Toward a strategy of active debt and financial asset management**

219. An appropriate strategy for financial asset and debt management would help strengthen the medium term fiscal strategy. *Hedging against exposure to permanent shocks* is a primary objective of a country’s asset-liability management policy. *Minimization of costs associated with debt financing* is a complementary objective particularly related to debt management, taking into account the risks associated with debt liabilities. In principle, hedging policies should be formulated in the context of the comprehensive balance sheet of the government, including both the real and financial assets and liabilities of the government. However, often there is not sufficient information on the type of risks in the real side of the balance sheet. Thus in practice, it is more common that asset management policy focus on specific financial portfolios rather than the entire balance sheet. Good international practices in sovereign debt and asset management suggest options for the future, though an in depth analysis would be needed to develop an active asset and liability financial management program for Algeria.

220. A main issue that such a financial management program for Algeria would need to address is the appropriate pace for accumulating financial assets. If a savings strategy were to be implemented, based on the fiscal rule outlined above, how much of the “excess” (or transitory) hydrocarbon revenue should be accumulated by increasing the government’s financial assets and how much should be used to reduce debt? To be sure, prepayment of the most expensive part of the existing debt is an attractive option, because it creates more leeway in the budget, while reducing the tax burden on future generations that would be required to service debt. Moreover, prepaying foreign debt allows to easily sterilize the hydrocarbon windfalls. By improving the characteristics of the indebtedness indicators, prepayment of the most expensive or risky debt can help improve a country’s sovereign ratings, thus strengthening its attractiveness to foreign investors.

221. The experience of other countries with surpluses suggests that, while prepaying expensive debt, there are several good reasons to also accumulate assets, with the aim of hedging the government’s financial position to permanent shocks, rather than focusing exclusively on debt prepayment. Typically, this is because of the importance of maintaining deep and broad debt markets or maintaining long-term investment vehicles for institutional investors (Australia, New Zealand, Norway, and UK). Another reason is that governments may need to return to debt markets in the future, and so there is an interest in maintaining markets in government debt or a presence in global markets. Moreover, countries exposed to high volatility may be better off if they are in a position to face financing gaps by running down accumulated assets, rather than by taking on fresh debt, when the cost of access to capital markets is highly uncertain. Thus, the focus may need to be placed on reducing net debt rather than merely retiring gross debt.
222. In the current context, however, despite the high hydrocarbon revenue volatility, the refinancing risk for Algerian debt is low, due to the high level of foreign exchange reserves ($23 billion). Prepaying foreign debt, with the aim of improving the overall “yield” on the total portfolio of government assets and liabilities, appears thus, in the short term, to be an attractive option, compared with the accumulation of assets to hedge the refinancing risks. Over the medium term, a more fully fledged asset and liability management strategy would be appropriate, taking into account the following considerations:

- Assess the possibility to prepay different classes of debt. Check the importance of penalties on pre-paying the Paris Club debt;
- Prepay shorter floating-rate debt in Euro and Yen, and most expensive US$ debt. Bring the debt-service ratio to well below 15 per cent of exports and keep it below this level over the medium term;
- Once the debt-service ratio is stabilized at below 15 per cent, stop prepaying debt and begin accumulating assets (Heritage fund). The financial portfolio to hedge risks in Algeria’s net financial position should be constructed by examining empirically which securities best hedge against protracted declines in the price of oil. The portfolio should be invested in foreign assets so as to sterilize its impact on the domestic financial system;
- Once the most expensive/risky debt is retired, conduct a vigorous investor relations policy. Study the market to get shadow sovereign rating, but avoid to tap the market if the estimated cost of new debt placement is significantly higher that the average cost of old debt.

223. With appropriate policy initiatives in external debt management and marketing, by pre-paying the significant part of debt that is restructured, illiquid, and expensive, Algeria may be able to obtain relatively attractive spreads on benchmark issues in the international capital market. Establishing, over the medium term, a regular and trusted presence in the international capital market would help develop an off-shore yield curve on longer maturities of public debt denominated in foreign currency. This may help complement the short-end yield curve in local currency, which would emerge with the development of the domestic capital market (as the domestic markets are initially unlikely to develop beyond short term maturities of, say, up to two years). The off-shore yield curve may form the benchmark for pricing longer term loans in local currency—using, for example, currency swaps, though the capital account implications of these transactions would need to be further investigated. The cost of such an issuance program will primarily depend on the instruments’ rating and liquidity.

224. Promoting efficient, broad and deep capital markets by appropriate and regular government debt issuance should not be overshadowed by the presence of budget surpluses, due to temporarily high hydrocarbon revenues. Debt financing for public investment expenditure could be increasingly used as means to develop government debt markets. This would require provision of adequate information to market participants on the timing of auctions; scheduled amounts of security issues; coupons offered; prices; and bids and offers accepted. Issuance should be centered on a limited number of maturities, to ensure the liquidity of the secondary market. Creating an appropriate regulatory framework (especially with the introduction of repurchase agreements) would be a prerequisite for the
development of deep secondary debt markets, while the conduct of monetary policy on the basis of open market instruments would greatly support the development of an active interbank market, creating more scope for transactions on government securities.

225. Creating efficient government debt markets would enable the proper pricing of risk, through the establishment of reference interest rates and yield curves, thus helping overcome a major weakness in the existing financial system. This would also help meet government financing needs, while minimizing the cost of borrowing by facilitating active debt management. However, the key objectives of debt management may not always be compatible. For example, countries that are in the early stages of developing domestic debt markets will find trade-offs between supporting these markets and minimizing financing costs. A country with budget surpluses and declining debt will find it difficult to maintain liquid, benchmark government issues across the yield curve, all the while trying to reduce borrowing costs. This will be even more challenging if a country is attempting to develop domestic capital markets while running budget surpluses.

**Improving fiscal transparency and moving towards an integrated fiscal framework**

226. Further strengthening the fiscal framework to secure fiscal sustainability in the medium and long term requires institutional reforms aimed at improving transparency of fiscal accounts and establishing an integrated budget framework to support the budgetary process. Institutional reforms must cover the financial operations of government at all levels to ensure the rule of law applies to every official financial transaction. As such, it goes beyond establishing the appropriate institutional arrangements for debt management, tax administration, and expenditure management. Steps in the implementation of a proposed action plan to strengthen budgetary management, along the lines discussed below, are outlined in Table 3.7.

227. Transparency is necessary for sound economic policy and government finances, good governance and fostering the confidence of the population, and overall fiscal integrity. It is a foundation for a stable and predictable government financial situation, as it helps economic agents to accurately assess the government’s present and future financial position and plan economic strategies accordingly (Annex 3.8 and IMF, 1998). International evidence suggests that transparency and rules on the deficit, debt, or expenditure—as the one proposed above—can complement each other to make up a sound fiscal framework. Enhanced fiscal transparency strengthens the credibility of fiscal rules and objectives in three ways: a) by removing any tendency to be nontransparent to meet rules; b) by facilitating judgments of actual fiscal performance against rules; and c) by allowing justifiable flexibility in the application of rules. Thus, fiscal transparency laws help relax the trade-off between the need for discipline and flexibility in fiscal policy. A commitment to transparency would support government credibility in the event it needs to temporarily deviate from its fiscal rules or targets.

228. To enhance transparency, the expenditure side of the budget preparation process should cover all government expenditures, ensure consistency of budgeted expenditures with realistic macroeconomic and revenue forecasts, and prioritize spending. Expenditure
allocation is often based largely on renewal of appropriations from previous budgets, rather than on explicit prioritization, leading sometimes to disorderly expenditure compression during budget execution. On the revenue side, transparency in tax treatment should entail a well-defined, clearly disseminated, statutory basis for taxation, as well as clear and simple administration. This is an area where considerable progress has been achieved, and yet further efforts will be needed to streamline the tax system, improve tax compliance, and eventually generate higher non-hydrocarbon fiscal revenues.

229. Despite the strengthening of the role of the legislature in the budget preparation process, because budgets have become subject to approval by parliament, budget adoption procedures need further strengthening. Steps that could improve interaction between parliament and government during budget adoption include enhancing the analytical expertise of parliament. But sound expenditure management does not end with budget preparation. The budget must also be implemented according to schedule, following the approved appropriations, with transparent and efficient adjustments to new developments throughout the year. Moreover, after budget execution, an external audit or evaluation stage is advisable.

230. Information in the relations between the government and the state-owned enterprises should be well documented in publicly available reports. Equally, information on the cost of quasi-fiscal activities conducted by public financial institutions – particularly through preferential credits, and guarantees - should be provided preferably in annual documents accompanying the budget. Information should also be available on the fiscal costs of restructuring state-owned financial institutions and non-financial enterprises. In addition, it is necessary to compile and disclose information on commitments and contingent liabilities, in particular those related to State-owned commercial banks and enterprises, and to the pension system.

231. The essential instrument to integrate all government transactions and manage public finances (budget universality principle) is a multi-year integrated budget framework (budget unicity principle), defined as the legal global budget framework for the formulation and execution of Government policies in a long-run perspective. This framework reflects a rolling forecast of revenues and expenditure with a forward-looking horizon that is updated periodically. This budgetary instrument is subject to an annual review by Parliament, who authorizes budgetary allocation for the first (or current) year of the horizon, while proposed allocations for the future signal the possible evolution of the allocations associated to concrete expenditure items. In 2001, the Algerian authorities have indeed initiated efforts to modernize budget procedures, with support from the World Bank, in order to implement such a framework.

232. The principles of universality and unicity of the budget, foundations of fiscal transparency and discipline, are weak in Algeria. The budget presentation contains deficiencies that do not facilitate a global view on the Government's financial situation and its management. There is widespread scattering of current and capital budget allocations not reflected in the budget. Spending scattering dilutes public policies and provides incentives to the different services to perpetuate multiple activities for which the services accumulate resources. This situation blurs public finances; reflects a lack of program
prioritization by the authorities; leads to progressive efficiency losses, and weakens transparency and accountability.

233. Resource dispersion is compounded by a multiplicity of financial management instruments for public expenditure. There are over 300 active special accounts in Algeria that intermediate expenditure financing, most of which are not integrated in the budget. Furthermore, the budget presented does not cover all government expenditure items, which has a negative effect on the financial management of the public administration. Often, non-budgeted sizeable Treasury operations finance non-budgeted expenditure programs. The lack of transparency in these areas is, in turn, compounded by the expectation that as long as there will be oil resources in the country, investment projects and programs financing will be assured, thereby determining that the administrations operate under a virtual soft-budget constraint. Delays in the production of information on public expenditure and the absence of performance-based mechanisms to check accountability worsen transparency.

234. Yet, there are strong foundations in Algeria for a progressive establishment of a multi-year integrated budget framework. In particular, current practice in the government’s budgetary services can already allow for the implementation of an integrated framework based on a rolling budget covering the medium-term (around 3 years). In fact, the background material usually prepared to elaborate the budget laws could deal comprehensibly with all the public finances priority problems in terms of, both, revenues and expenditures, and optional sectoral policies and programs.

235. An initial multi-year integrated budget framework could be produced on the basis of these materials, which then would allow the authorities to conduct an evaluation of the coherence between government strategies/policies and economic and financial perspectives. This initial framework would provide to broad budgetary objectives for the next budget year, the programming period to be covered by the framework, preferably at least for the three next years, and the overall sectoral allocations compatible with policy and strategic choices, and within the envelope of available resources. The progressive introduction of performance-based budgeting in Algeria could further support an integrated budget framework by facilitating the resolution of potential conflicts in intra- and inter-sectoral priorities in the face of financing constraints.

236. This new integrated budget framework would require a new budget information system and public accounting. These would help improve expenditure control and efficiency in the classification of budget allocations to strengthen equity and efficacy of public expenditure. It would therefore be essential that the authorities tackle the overwhelming problem affecting budgetary and accounting systems: the absence of integration between planning, public policies, and the national budget. An integrated data base system is needed to manage all accounting and budgetary operations, as well as to facilitate management of treasury and control activities. The authorities are currently developing an accounting plan for the State that will allow them to operate in computer based integrated budget system that will contribute to increasing efficiency in budget processes.
Table 3.7: Strengthening the role of the budget as an instrument for improved medium-term macroeconomic management—action plan

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<th>Short term to medium term objectives II:</th>
<th>Description</th>
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<td>Short term policy</td>
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<tr>
<td>Step 1: Accelerate improving the preparation and formulation of the Budget</td>
<td>Continue the necessary efforts to strengthen the information base and the information function of the Budget, building on the on-going Modernization of Budget Procedures project. The actions recommended are:</td>
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1. Enhance coordination among data and information collecting institutions, and increase interaction with DGEP and the Budget Directorate, both dealing with economic and financial projections underlying the budget.
   - Fully centralize economic and financial information relevant to the budget within an institution to be designated by the authorities.
   - Undertake thorough and periodic collection of that economic and financial information, and formalize the cycle to do so.
   - Strengthen economic analysis within the appropriate directorates (DGEP, Budget, and Treasury), building on the activities already included in the Budget Procedures Modernization project. This strengthening should include devices related to economic monitoring, forecasting, and analysis of policy impacts.
   - Engage international expertise if necessary to conduct the information and analytical strengthening.

2. Increase the efficiency of the “arbitrages” in the allocation of budgetary resources.
   - Establish a Budgetary Nomenclature including functional and economic classification of accounts, in conformity with international standards.
   - Use this new Budgetary Nomenclature as the basis to centralize the data and information relevant to the budget, including the “apurement” of the accounts at the most refined level (i.e., municipal level).
   - Establish an efficient procedure to transmit the information in the shortest delays to the Central Budget office, including the necessary financial and technical resources for this to happen.

3. Strengthen the capacity by Government agencies to formulate better projects and programs for public investment.
   - Institute a project and program formulation system according to internationally available instruments for programming (such as the Logical Framework), including concrete performance indicators.
   - Implement a permanent training program about analytical project/program formulation techniques throughout the administration, including municipal governments.
   - Enhance the interaction among State agencies in the formulation of sector programs, and in the choice of budgetary priorities.

4. Establish a fully integrated Budget framework, including a unified, pluriannual, and rolling Budget for 3-year periods; and inclusive of all budgetary accounts. Following the full integration of current and capital expenditure into the Budget that is currently being undertaken:
   - Institutionalize investment programs as opposed to investment projects as the main framework for public investment planning.
   - Establish investment programming mechanisms starting at the most basic level of the administration, and ensure that the
<table>
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<th>Short term to medium term objective II:</th>
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| Short term policy                     | Programming is rolling over at least three years to effectively execute the budget.  
Strengthen decentralization of investment programming.  
Establish a budgetary mechanism to ensure financing needs covering the whole period of investment programming, including increased control on availability of resources (credits) and execution of the programs. |

5. Ensure thorough coverage ("exhaustivité") of all fiscal and expenditure accounts within the Budget.  
- Centralize the information from all public accounts’ managers and sources of Budget transactions, while ensuring quality control.  
- Include all autonomous accounts into the Budget and clean up all public accounts ("assainissement").  
- Streamline management of all State’s financial accounts, by grouping them according to themes (i.e., security, defense, education, social assistance, etc) and type of managers (i.e., treasury and all State structures that manage expenditure).  
- Concentrate management of a maximum of public accounts included in the Budget into the Treasury. For the accounts that will exceptionally be kept autonomous, ensure full oversight by the Treasury.  
- Extend the necessary powers to the Ministry of Finance to hold and exert all control on these accounts, including the right and authority to open these accounts and regulate their management.  
- Reorganize the Treasury’s management services of all public accounts by means of: (a) making the Public Accountant from the Treasury the manager of the accounts, with the clear function to follow the rules established for the funds, ensuring the securitization of the use of public resources; (b) submitting these management services to internal control by the Financial Inspector ("Inspecteur des finances"), in the same way as all official agencies. |

6. Consolidate the accounting for contingent liabilities and monitor developments of its sources.  
- Dress a detailed inventory of the sources of contingent liabilities and design a monitoring device for these sources to yield periodic reports on the situation.  
- Submit the accounts related to contingent liabilities to the control by the Minister of Finance and the Financial Inspection, while ensuring that the Minister does not intervene in the management of the funds.  
- Establish joint-responsibility of the Director of the Treasury and the Governor of the Central Bank to monitor the sources of contingent liabilities, and to produce bi-annual monitoring reports (twice-a-year).  
- Make the Monitors directly accountable to the Council of Ministers.  
- Institutionalize that the bi-annual contingent liabilities monitoring reports be an Annex to the Budget Laws, in the same way as the “Loi des Règlementations”. |

7. Improve the transparency of the Budget document in order to strengthen its informative function to all economic agents for their decision making process.  
- Apply continuously the budgetary principles of universality, unicity, accessibility, and readability to the Budget document.  
Engage into public information activities to improve the population’s understanding of Government policies.
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<th>Short term policy</th>
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<tr>
<td><strong>Step 2: Strengthen ex-post Audit/Control of Budgetary Expenditure</strong></td>
<td>Strengthen the ex-post verification that the initially established objectives in the Budget Law have indeed been reached. By strengthening the ex-post control: (i) achieve a balance in the overall control of expenditures, as the ex-ante control will be reinforced through the previous themes; and (ii) ensure that accountability is rooted thorough the whole administration, to promote increased fiscal responsibility, transparency, and broad dissemination of the state of public accounts.</td>
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<td><strong>1. Reinforce internal controls.</strong></td>
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<td>• Strengthen the General Financial and State Inspection (“Inspections Générales des Finances et de l’État”), including all internal inspections, by means of streamlining its organization, based on periodic work plans and improved inspection skills.</td>
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<td>• Improve performance by the inspections by establishing indicators to measure the quality of the inspection reports. Engage external evaluations of the reports on the big inspections.</td>
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<tr>
<td><strong>2. With respect to the Administrative Control (Executive), implement a reform of the Financial Control of the internal inspection in general</strong></td>
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<td>• Carry out an audit of the Inspection, of the legislation guiding its functioning, its structure and organization, and the human resources.</td>
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<td>• Establish the norms for control ensuing the audit in the previous recommendation.</td>
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<tr>
<td>• Implement the reform recommendations from the audit.</td>
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<tr>
<td><strong>3. With respect to the Judiciary Control (Court of Accounts, or “Cour des Comptes”), enforce the application of the Court of Accounts’ Organic Law to ensure the execution of its functions, establish its autonomy, and modernize its role in conformity with international standards as established by INTOSAI.</strong></td>
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<tr>
<td>• Strengthen the Court’s control of efficacy and efficiency of public expenditure by means of enforcing Court’s ruling (“jugement”) on all accounts of Public Accountants, and validating the “Loi des Règlements” to be presented at Parliament.</td>
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<td>• Upgrade, through a training program, the skills of all “Magistrats de la Cour des Comptes”, and implement a permanent training program for the Judges.</td>
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<td>• Increase the number of verification assistants at the Court, by reassigning accountants and financial controllers from the Executive.</td>
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<tr>
<td><strong>4. With respect to the Legislative Control by Parliament, strengthen the analytical capabilitites and development of policy options of the Finance Commission of the Chambers.</strong></td>
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<tr>
<td>• Provide the Finance Commissions with a clear, readable, and accessible drafts of the General Financial Accounts (“bilan public”), the “Loi des Règlements”, and the Budget Law draft.</td>
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<tr>
<td>• Establish a permanent training program for members of the Finance Commission at Parliament, including budget preparation and contents, execution, ex-post control, and impact analysis.</td>
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<td>Short term policy</td>
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<tr>
<td><strong>Step 3: Establish an independent system for impact evaluation of public policies</strong></td>
<td>Establish an independent verification system for the final impact analysis of public policies. Ensure the system provides concrete recommendations for continuity of programs in the next Budgetary exercises so as to reach the expected impacts of policies on the population.</td>
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- Establish the Impact Evaluation of Public Policies functions and designate an independent entity to ensure the realization of those functions.
- The entity should prepare the impact evaluation of public policies adopted in the Budget Law of two-years prior to the current exercise, and include the evaluation as an Annex to the "Loi des Règlements", to be jointly presented at Parliament.
- Design concrete impact indicators to guide the impact evaluation, including impact indicators at the lowest level of the administration.
- Ensure that the new Budget Laws include the concrete impact indicators expected with the implementation of the budget, and an estimated length of period when the impacts are expected to materialize.
- Engage external audits for a sample of the Impact Evaluation exercises carried out, and accompany the results with the Annex prepared above.
References


World Bank, 2001b, Algeria : Mini-CEM.


Endnotes

1 Despite Algeria's weak growth, the country's relative standing in the global economy has been stable. Out of the 118 countries for which comparable data are available, Algeria's rank in terms of per-capita GDP in 1970, 1980, and 2000 stood at about 60. This suggests Algeria shared important characteristics in terms of growth performance with the global economy, on average, during this period. This also provides a justification for the approach pursued in the chapter, of assessing Algeria's growth potential based on cross-country empirical evidence.

2 Annex 1.2 presents estimates of the contribution of capital, human capital, and total factor productivity to growth of total and non-hydrocarbon GDP. These estimates are based on an accounting framework which distinguishes between the contributions of physical and human capital.

3 The results are robust to changes in assumptions about share of capital. For example, if we assume that the share of capital in Algeria is in fact 0.6, to account for the relatively large hydro-carbon sector, results don't change much. The main differences are: the contribution of capital increases while the contribution of human capital reduces in growth (by assumption); and the period 1975-78 shows a negative TFP growth rate, as opposed to positive growth derived under the previous assumption on capital share.

4 The TFP rates in Fig 5 correspond to the TFP2 measure in Annex 1.3 (including human capital accumulation).

5 Volatility in key macroeconomic variables such as the terms of trade, inflation and real exchange rate, heightens uncertainty, lowering the risk-adjusted returns on investment, leading to lower private investment as a result. Greater uncertainty also exacerbates the adverse selection problem, leading to lower investment (as financial institutions ration credit) and lower investment efficiency as the quality of borrowers drops due to increased cost of capital. Ramey and Ramey (1995) find that the negative relationship between growth volatility and average growth remains robust even after including other standard growth regressor such as capital accumulation and population growth rate.

6 According to Mankiw, Romer and Weil (1992), these factors typically explain a large part of cross-country differences in growth performance.

7 i.e., given the slope coefficient of 0.05 for volatility, if TOT volatility, which measured 24 for Algeria, had equaled the sample average of 12, per-capita growth would have been higher by 0.7 percentage points. Similarly, for other variables.

8 The data for the real overvaluation measure are from the Global Development Network Growth Database (prepared by Easterly and Sewadeh), available on the Bank's Growth Research homepage. The overvaluation measure uses the technique described in Dollar (1992). To get the overvaluation measure, Dollar uses the international comparison of prices prepared by Summer and Heston (1985) and corrects those by countries' relative endowments (proxied by GDP and population density). The actual price level divided by the predicted price level then gives the overvaluation index. Dollar argues that this is a good proxy to measure the extent to which the real exchange rate is distorted away from a hypothetical free-trade level.

9 This is a recognized shortcoming of the standard Barro-type growth regressions (such as the one reported in BOX 1), which work well in terms of explaining average growth performance over extended periods of time, but fail to explain an important feature of growth dynamics observed during the past few decades: growth collapses in a number of parts of the world, including Algeria, in the 1980s and 1990s. For example, according to Easterly (1999), while the median per-capita growth in developing countries was 2.5 percent during 1960-79, it was only 0.0 percent during 1980-98.

10 Where $V1 = \text{Stdev(annual TOT growth over 1980-2000)}*\text{(trade to GDP ratio (averaged over the period 1981-1985))}$, and $V2$ is the $\text{VOLAT(TOT4)}$ indicator described in Annex 1.3 and measures the level of uncertainty arising out of TOT fluctuations.

11 The change in per-worker GDP growth is lower than the corresponding change in per-capita GDP growth. This is largely because of increasing labor force participation rate among men and women, especially women, which leads to a higher workforce growth rate than the population growth rate. The model predicts the correct sign of the change in growth for almost 80 percent of countries under the various estimations.

12 $V3 = \frac{\text{VAR(V2*(50-ICRG))*(5-POL))}}{\text{STDEV(V2*(50-ICRG))*(5-POL))}}$; where ICRG is the increase in average ICRG ratings for political institutions during the 1990s over 1980s, and POL is the measure for Political Stability and Violence from Kaufmann et al (2002). We standardize this synthetic indicator by dividing the actual values by their standard deviation so that the interpretation of the coefficient becomes easier. An
increase of 1 standard deviation of this indicator lowers growth by 0.6 percent. The value of this indicator for Algeria was more than 3 standard deviation higher than the mean for the sample. This synthetic indicator also makes the oil-country dummy insignificant, indicating that their growth crash is well explained by this indicator.

An additional synthetic measure, V4, captures the interaction between volatility and the relative size of government expenditures. This too affects growth negatively, suggesting that adjustment of expenditure in the face of shocks is slower when the government absorbs a large part of resources (see Annex 1.5).

From the end of 1992 to the present, cleaning up the public banks’ loan portfolios has been achieved through a massive government repurchase of bad loans to state enterprises. The amount of the loan buy-back initiated in late 1992 totaled DZ 275 billion, which was then followed by another repurchase of DZ 167 billion, mainly for loans to the agricultural and food processing sector; a buy-back of DZ 92 billion associated with loans to the public housing sector; and a moratorium on farmers’ debts in the amount of DZ 25 billion.

Administered prices were introduced in 1996 and extended in 1997, 1998, and again in early-2001 to eventually cover just over 9 percent of the tariff lines out to eight digits and were applied to 786 different products (mainly agricultural and agri-food stuffs and consumption goods).

Algeria applied for GATT contracting party status in its own right in 1987, however, negotiations never commenced. After GATT was converted to the WTO in 1995, Algeria activated negotiations by circulating information on its trade regime to WTO members in 1996, supplemented in January 1998. Algeria’s Working Party met in April 1998 to conduct an initial review of the trade regime. Efforts lapsed until recently, in February 2002, when Algeria opened another round of trade negotiations with the WTO.

Comparators include, Morocco, Tunisia, and Egypt in North Africa, plus four other higher-income Mediterranean countries: Greece, Portugal, Spain, Turkey.

Domestic private banks in developing countries usually fit into two groups. At one end are (a limited number of) banks that have strong capital, low levels of non-performing loans and adequate levels of provisions. These may belong to financial groups with interests in other segments of the financial system (insurance, investment banking, asset management, leasing and factoring) but with limited direct involvement in industry and commerce. At the other extreme are private banks that belong to highly diversified family groups with large interests in industrial and commercial activities. These banks tend to be weakly capitalized and to have inadequate provisions. They also usually do not observe the prudential limits on risk exposures.

The impact of foreign banks in reaching SMEs and low-income groups is less clear. In most cases, the experience is too recent to provide strong evidence of success or failure in improving access to financial services by such groups. But faced with strong competition from foreign banks in large corporate banking, domestic banks (state or private) are compelled to expand their services to smaller firms and to the household sector.

Delays in basic bank transactions are still very high in Algeria: Cashing a check within the same bank takes, on average, 2 weeks, while it can take up to 4.9 weeks between different banks and different towns. Opening a letter of credit takes on average 2 weeks.

Cheap public land is made available into industrial zones and “Zones d’Activite” (ZACs), suitable for both industrial and commercial activities, but is desperately scarce. Privately-owned land is expensive—up to five times the price of publicly owned land—and equally scarce.

Low-skilled labor tends to be a good substitute for other production inputs, such as capital and energy. The high elasticity of substitution of low-skilled labor with these other production factors is reflected in a high own-wage elasticity. Available evidence from OECD countries is extensively discussed in OECD (1995).

This follows as an application of the “Ramsey rule” for optimal taxation. Taxes with minimum excess burden are those levied on goods and services that are inelastic supply, demand, or both—as in those cases market responses to tax distortions are subdued. Taxation of such goods and services should be preferred compared to goods and services whose taxation carries a high excess burden.

For example, research has suggested that persistent current account deficits in excess of 5 percent of GDP signal unsustainable macroeconomic imbalances, particularly if the deficits result from a consumption boom rather than investment and are combined with low national saving rates (IMF, 1998).

When oil-exporting countries, for instance, face revenue boosting favorable shocks, they pursue unsustainable policies, financing them with the windfall gains or external borrowing. As they engage in procyclical spending, often involving investment programs with little or no return, when the commodity prices decline, these countries are left with large and unsustainable fiscal deficits and Dutch disease phenomena (Collier and Gunning, 1999).
The volatility measure for deficits as per cent of GDP is the standard deviation of their first differences. The volatility measure for each revenue and expenditure item, in real terms, is the standard deviation of its growth rate. The analysis follows the methodology from Gavin and Perotti (1997). For more details, see World Bank (2001b).

The analysis of procyclicality is based on Bayoumi and Eichengreen (1995); Gavin and Perotti (1997); Gavin et al. (1996); Talvi and Vegh (2000); and Lane (1999). For more details, see World Bank (2001b).

The procyclicality result for Algeria contrasts with fiscal policy countercyclicality in OECD countries (coefficient: 0.37) and is more intense than that of Latin American countries (coefficient: 0.04). See Gavin and Perotti (1997).

Furthermore, for reasons explained below, primary expenditure, as compared to primary deficit, provides a better anchor for the viability of a modern fiscal framework.

The results obtained are contingent on the structure of the model. The analytical structure used here typically assumes that changes in the primary expenditure or primary surplus will have no effect on either GDP growth, interest rates, inflation, exchange rate depreciation, and so forth. To solve this, one would ideally need a full-blown model that endogenously determines GDP growth rates, real interest rates, and real exchange rate changes. Further, the approach here assumes well functioning domestic capital markets and full and smooth access to international capital markets so that liabilities can continue to grow at the GDP growth rate. This leaves rather vague the role of expectations by economic agents about what would actually be a sustainable fiscal policy.

The main purpose of the FRR was to establish a "principle of precaution" in the management of public finances, through stabilizing government revenue and expenditure in the medium-term. It was intended to avoid overspending and/or increased public debt, associated with oil price fluctuations. There were few formal rules adopted at the time of the fund's inception, leaving its operations to the discretion of the fund's authorities. Expenditure guidelines indicated that the fund was meant to finance "inflexible expenditure" linked to the domestic and foreign debt service, "normal functions of the State", and growth-promoting investments (World Bank, 2001b).

According to a "Tableau de Synthèse", also from the Central Bank, the balance of the FRR at 31 December 2001 fell to DA 414.1 billion, from DA 578.4 billion at 30 September 2001. However, the end-2001 figure is about 25 percent below that provided elsewhere by the Central Bank and Ministry of Finance. This discrepancy needs to be reconciled.

Recent episodes of financial crisis have shown that large repayment obligations in the short term, especially relative to available foreign currency reserves, make a country vulnerable to reversals of capital flows and to rollover or liquidity risk.

In Algeria, windfall revenues in good oil price times could strengthen the scope and speed of adjustment by directly supporting the cost of completing the transition to a market economy and improving competitiveness. They could ensure funding for public investment towards infrastructure goods and services to support increase of productivity of the private sector; support lowering the tax burden to improve incentives and reduce the size of the informal economy; and secure funding for social safety nets to mitigate the social cost of achieving the transition to a market economy.

The rule would be subject to an adjustment in order to take into account real interest payments on public debt and GDP growth. See the assumptions made below and the discussion in Annex 3.6.

For example, in the US, which has been heavily explored and developed, estimated reserves in 1950 were 25 billion barrels; but over the 1950-1994 period the industry extracted over five times that amount and it still had nearly 24 billion barrels on the shelf. Exploitation of new reserves from new or existing pools has thus postponed and mitigated the decline in production, which has begun since the early 1970s (see Annex 3.6). Streifel (1995).

Oil reserves in the low case are set at the current estimate of 11 Bbbl. Two higher scenarios of 16 Bbbl and 20 Bbbl were chosen, based on reasonable expansion of recoverable reserves. For gas, the low case was set at 4000 bcm, some 27 percent above the Ministry's current estimate of recoverable reserves and more in line with other current estimates. Mid-case reserves are 6000 bcm, and high-case reserves are 9000 bcm. Real oil prices per barrel are set at $15, $20, and $25. Gas prices are increasingly de-linked from oil and reflect more competitive markets in all three scenarios. The discount factor is 4 percent.

For example, on the liability side it would include the market value of sovereign debt, the present value of contingent obligations, and the present value of expenditure obligations. On the asset side, it would contain foreign exchange reserves, securities and other financial assets, present value of income flows, investment in...
SOE, and government buildings. The government's debt and financial asset portfolios would then be designed to provide a hedge against permanent shocks to the balance sheet. Thus, the nature of permanent shocks to the balance sheet would determine the composition of these portfolios. See OECD, 1999, *How Should Governments Invest Financial Assets and Manage Debt?*

39 While there is general convergence in debt management practice in OECD countries, this is not the case for financial asset investment policy. In some cases, assets were accumulated to hedge against risks associated with debt liabilities. In one case, the objective was to establish a fund to meet the government's public employee pension obligations. Because of different objectives and sizes of actual and future projections of surpluses, the type of financial asset investments made by these countries were also different. Some countries placed their surpluses in short-term, liquid accounts in the banking system, including the central bank (Australia and UK). Yet others, bought back some of their foreign currency denominated debt and purchased foreign currency assets (New Zealand and Sweden). Elsewhere, Norway invested its cash surpluses in longer-term financial instruments with higher risk return characteristics (The Norwegian Petroleum Fund is about 60 percent invested in debt securities and about 40 percent in equities).

40 However, surplus countries did use tools like debt buybacks and bond exchanges to change the characteristics of sovereign liabilities, in terms of improving debt maturities and promoting liquidity of certain issues.

41 These issues will be further examined by the forthcoming study on Algeria in the context of the Financial Sector Assessment Program conducted jointly by the IMF and the World Bank.

42 Fiscal transparency can be defined as openness toward the public at large about government structure and functions, fiscal policy intentions, public sector accounts, and projections.