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Luxembourg: 2004 Article IV Consultation—Staff Report; Staff Supplement; and Public Information Notice on the Executive Board Discussion

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2004 Article IV consultation with Luxembourg, the following documents have been released and are included in this package:

- the staff report for the 2004 Article IV consultation, prepared by a staff team of the IMF, following discussions that ended on **January 26, 2004,** with the officials of Luxembourg on economic developments and policies. **Based on information available at the time of these discussions, the staff report was completed on April 6, 2004.** The views expressed in the staff report are those of the staff team and do not necessarily reflect the views of the Executive Board of the IMF.

- a supplement to the staff report of **April 23, 2004** prepared on the basis of additional information.

- a Public Information Notice (PIN) summarizing the **views of the Executive Board as expressed during its April 28, 2004 discussion** of the staff report that concluded the Article IV consultation.

The document listed below have been or will be separately released.

Selected Issues Paper

The policy of publication of staff reports and other documents allows for the deletion of market-sensitive information.

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LUXEMBOURG

Staff Report for the 2004 Article IV Consultation

Prepared by the Staff Representatives for the 2004 Consultation with Luxembourg

Approved by Alessandro Leipold and Carlos G. Muñiz

April 6, 2004

- Discussions were held in Luxembourg during January 15-26, 2004. The mission met with the Ministers of the Treasury and Budget, of Labor and Employment, and of the Economy; the Central Bank President; the Parliamentary Commission of Finance and the Budget and the Commission of the Economy, Energy, Postal Services, and Transport; officials of the Ministries of Foreign Affairs, Economy, Finance, Labor and Employment, the Social Security Administration, STATEC, and of the supervisory commissions; and representatives of the financial sector, the social partners, and the academic community.

- The team comprised Messrs. Decressin (Head), Annaert, and Nadal De Simone (all EUR). Mr. Prader (Alternate Executive Director) and Messrs. Crelo (Advisor) and Marquez (former Advisor) also participated in the meetings.

- The authorities released the mission's concluding statement and intend to publish this staff report. Luxembourg is on a two-year consultation cycle and the previous Article IV staff report was published as IMF Country Report 02/118, following the IMF Executive Board meeting on June 5, 2002.

- Luxembourg is an Article VIII member (Appendix I) and maintains an exchange system free of restrictions on payments and transfers for current international transactions, except for reasons related to security.

- Luxembourg does not subscribe to the SDDS. Economic statistics have improved over the past two years but further progress is needed (Appendix II).

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Executive Summary

Background and Prospects

After two decades with average real GDP growth of some 5½ percent and budget surpluses, real GDP growth slowed to 1¼ percent during 2001-03 and the general government fiscal balance is estimated to have recorded a deficit in 2003. A recovery is at hand. However, the correction of asset prices since 2000, relatively high wage increases recently, and slowing productivity will likely hold back the growth of employment and incomes to below the pace of 1980-2000. The authorities have begun to adapt fiscal policy to the less buoyant growth outlook. General elections are scheduled for June 2004.

Key Policy Issues

- **Adapting fiscal policy to less rapid growth**. The authorities anticipate that, owing to the exceptional depth and duration of the growth slowdown, deficits will persist through 2006, despite a major expenditure deceleration. Given the high level of public assets, the staff concurred that fiscal adjustment could be stretched over time, while pointing to the advantages of a faster pace of adjustment. At any event, expenditure growth would have to be lower than programmed to achieve the Stability Program objectives. The authorities were confident that their targets could be achieved but did not rule out additional measures if and when necessary.

- **Welfare reform to raise the resilience of the economy to shocks**. To combat rising unemployment, the authorities are improving the targeting of support for the jobless within the existing legal framework; the staff favors a deeper adaptation of the framework to increase work incentives. Reforms of the pay-as-you-go (PAYG) pension system and health care are also needed to avoid potentially large payroll tax hikes in the future. The authorities view the PAYG system as sustainable on long-run historical real GDP growth rates and intend to reassess the system in 2006, in consultation with social partners. They also pointed to ongoing health care reforms.

- **Further strengthening the financial sector**. Banks and insurances have weathered the recent turbulence well and thus the discussions focused on the medium-run prospects and on improvements in supervision. The EU Directive on savings taxation was seen to clear the air of uncertainty and the authorities looked forward to its rapid adoption. They did not expect a large negative impact on the financial sector, although activity was widely seen to slow relative to the boom years of the 1990s, reflecting also rising global competition. There was agreement that Luxembourg would have to sustain strong AML/CFT efforts given the large amount of crossborder business.

I. BACKGROUND

1. **Two decades of impressive performance preceded the current, unusually long slowdown** (Figure 1). Several elements set off a virtuous growth circle, following the 1970s steel crisis: (i) tax and regulatory advantages combined with early financial market liberalization; (ii) a responsible fiscal policy; (iii) depressed economic conditions and higher payroll taxes in surrounding regions that fuelled commuting to Luxembourg; and (iv) pragmatic trade unions that frequently favored employment over rapid wage growth, thereby allowing a generous benefit system to be funded with low contribution rates.

2. **However, some factors that had driven this strong performance are now fading, a risk that had been underscored by Directors in previous consultations** (Box 1). Since 2001, economic growth has fallen to the EU average. The financial sector—which accounts for about one quarter of output—had carried the economy through previous downswings but is now suffering from the bursting of the global equity bubble, compounding weak manufacturing activity during 2001-02.

3. **Various tensions are likely to hold back the emerging, externally-driven economic upswing** (Table 1):

- While equity prices have recovered recently, the financial sector is still adjusting to the earlier stock market correction (Figure 2).[1] Also, output is being affected by the still very sluggish recovery in the euro area.

- Wage settlements did not anticipate the extent of the slowdown, allowing weakening labor demand to interact with generous welfare benefits and raise the unemployment rate to over 4 percent (Figure 3)—the highest in two decades—or about 6 percent including workers on special work and training schemes.

- Falling productivity raised unit labor costs during 2001-03. With low GDP inflation—although CPI inflation is running around the euro-area average (Figure 4)—this surge in costs likely has reduced the share of capital in income by about 10 percent since 2000, a drop that is unlikely to reflect only a switch to more labor-intensive

[1] A Selected Issues paper underscores that asset price cycles are much longer than real GDP cycles, implying that the bursting of the bubble will continue to reverberate for some time.

Box 1. Policy Recommendations and Implementation

During past consultations, Directors commended the authorities for the sound policies which, along with several features specific to the economy, had underpinned an excellent economic performance. However, they also recommended further steps to reduce the economy's vulnerability to exogenous shocks, and, more recently, to return fiscal policy to a more cautious course. In particular:

- Directors recommended a reform of the pay-as-you-go pension system, suggesting that consideration also be given to the gradual introduction of a mandatory, actuarially balanced "second pillar." The authorities have preferred an approach that, while continuing to accumulate assets, is also directed at fostering private retirement savings and raising the effective retirement age. Further decisions about fundamental changes to the entitlement system's sustainability and robustness will likely have to await the review of the system scheduled for 2006.

- Directors argued for more fundamental action to avoid joblessness, notably for scaling back generous benefits. The authorities have reformed disability pensions to boost labor force participation but, given relatively low unemployment thus far, have not reduced the generosity of support for the jobless. However, they are now intensifying efforts to implement strictly the existing eligibility requirements for benefit support.

- More recently, Directors advocated a more cautious fiscal policy because of emerging constraints on growth, although the tax cuts of 2001-02 were supported in light of the authorities' intention to moderate public spending as needed to avoid fiscal deficits. In the event, lower-than-projected growth and a loose expenditure policy led to a deficit in 2003. The authorities are in the process of adapting expenditures to the less buoyant growth outlook, but the new Stability Program foresees a return to balance only after its planning horizon (2006).

production techniques.[2] Together with the recent appreciation of the euro, this has weakened profitability and competitiveness, albeit from high levels.[3]

4. **Income tax cuts and rapidly expanding social security and infrastructure spending have combined with the current slowdown to lead to a sharp deterioration in the public finances**. The general government balance shifted into a deficit estimated at about 1 percent of GDP in 2003,[4] following surpluses averaging 4½ percent of GDP during the boom years of 1998-2000. While entitlement and infrastructure spending expanded rapidly, income tax cuts during 2001-02 accounted for at least 3¼ percentage points of GDP of the change in the deficit ratio.

5. **The budget for 2004 foresees a further rise in the deficit, owing to the lagged effect of the slowdown on corporate tax receipts** (Table 2). Revenue growth would slow sharply, owing to the lagged effect of slumping corporate profits. The authorities target a general government deficit of 1.8 percent of GDP in 2004—with nominal expenditure growth programmed to slow to 4¼ percent, down from about 10 percent in 2001-03. However, staff estimates suggest that, on current policies, the deficit could widen to about 2½ percent of GDP. Nonetheless, gross debt would remain low and net financial assets high (close to 50 percent of GDP).

II. Policy Discussions

6. **The discussions took place at a time of unusually sluggish activity and ahead of general elections scheduled for June 13**. They focused on the outlook for activity and the appropriate fiscal policy; on the needed structural reforms to the pension system and the labor market, following up on issues discussed during previous consultation (Box 1); and on developments in the financial sector, including AML/CFT issues. Pending the elections, policymaking is temporarily on hold but the authorities underscored their support for maintaining sound public finances. Accordingly, it was agreed that the less buoyant medium-run growth outlook called for a reduction in the recently very expansionary public

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[2] The CPI inflation differential relative to the euro area typically moves in tandem with energy prices, as the relevant products have a larger weight in Luxembourg's consumption basket.

[3] Because of the large weight of energy in the CPI and the importance of the financial sector in valued added, the CPI-based real effective exchange rate is not a reliable gauge of competitiveness. Profitability and cost indicators for the financial sector suggest a high degree of competitiveness.

[4] Luxembourg provides national accounts at an annual frequency only and data for 2003 will be available in May 2004.

expenditure growth. However, with public sector assets equivalent to over 50 percent of GDP adjustment could be stretched over time. There was also agreement on the need to control entitlement spending, notably on health care; to strengthen work incentives, particularly for older workers; and to sustain strong AML/CFT efforts given the large amount of crossborder business.

A. Economic Outlook

7. **The authorities and the staff concurred that a recovery of economic activity was in prospect but that the medium-term outlook was less buoyant than during 1980-2000**. The recovery in world demand, a rebounding financial sector, and relatively supportive monetary conditions would spur growth, consistent with forward-looking confidence indicators (Figure 5). However, owing to the recent developments in productivity and profitability, employment and wage growth would be relatively modest through 2006. The staff saw lower labor income growth and, consistent with developments in the euro area, less profit margin growth than the authorities and hence a slower nominal GDP deflator.

Output and Inflation
(Percent change, unless otherwise noted)

	2003	2004	2005	2006
Real GDP, staff	1.2	2.3	3.3	3.5
Real GDP, authorities	1.2	2.0	3.0	3.8
Output gap, staff	...	...	...	...
Output gap, authorities 1/	-1.8	-4.4	-6.1	-6.6
GDP deflator, staff	1.1	1.7	1.7	1.7
GDP deflator, authorities	1.7	2.7	2.8	1.9
Memorandum item:				
Euro area GDP deflator, WEO	2.1	1.7	1.8	1.8

Source: Stability Program update and IMF staff projections.
1/ In percent of GDP.

8. **The authorities saw the near-term risks to the outlook to lie mainly with the recovery of external demand rather than the appreciation of the euro thus far**. They were more concerned about the volatility in exchange markets of the euro-dollar rate rather than the level of the exchange rate at the time of the discussions. They noted that measures of competitiveness had not moved far away from historical averages and underscored that firms exported mainly to euro-area countries, while importing mainly from elsewhere. All agreed that the equity market recovery over the past year had improved financial sector prospects and that the downside risks to the growth forecast—which was low by historical standards—from further volatility were limited.

9. **The authorities were somewhat more optimistic than the staff about the longer-run growth prospects**. They observed that the recent decline in productivity was concentrated in the nontradables sector and might partly be a statistical phenomenon.[5]

[5] An increasing number of temporary work agencies are settling in Luxembourg, because payroll costs are lower than in neighboring countries, but sending workers abroad. The quantitative impact is under investigation.

Potential real GDP growth would be about 4 percent annually, a rate that would almost be reached again by 2006. The staff underscored that potential output growth estimates were subject to large margins of error, considering the recent, unusually long period of sluggish activity as well as various risks that specifically concern the Luxembourg economy—domestic and foreign changes in taxation and regulation, shocks to the demand for financial services, and shifting locational preferences and opportunities of economic agents.[6] Staff agreed that various factors underlying the virtuous growth circle of past decades remained intact but others—notably those related to the financial sector and productivity growth—might be fading (Box 2). Accordingly, policies should not be anchored on highly uncertain estimates of potential output (or of the output gap) but strengthen the resilience of the economy to unforeseen developments.

B. Fiscal Policy Requirements

10. **The authorities underscored that the 2004 budget reflected a major change in expenditure policy**. They emphasized that general government spending growth was to be restrained to only some 4¼ percent, down from double-digit rates in recent years (Table 2, SP targets). This would be achieved by across-the-board expenditure restraint, including on infrastructure and the wage bill.

11. **The staff saw a risk that the general government deficit target for 2004 might be appreciably overshot** (Table 2, Staff projection). The revenue target would be difficult to meet, owing to slow growth in labor incomes. Furthermore, assuming full execution of discretionary spending plans and a social expenditure growth rate that is consistent with the absence of major reforms, the expenditure targets would be missed. The mission agreed on the need to restrain expenditure on various categories, particularly on public investment and subsidies, to which Luxembourg allocates a higher share than other EU countries (Figure 6). Accordingly, to avoid an overshooting of the 2004 deficit target, the public investment program should be reviewed and properly prioritized—with the help of cost-benefit analysis—and other discretionary spending should be kept under a tight hold.[7] The authorities noted that they had considered but discarded additional consolidation measures in the course of the budget debate, owing to the still uncertain economic outlook. Overall, they were more confident that the budget target could be achieved, while not ruling out corrective measures if clearly needed.

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[6] Commuters now account for about one-third of total employment.

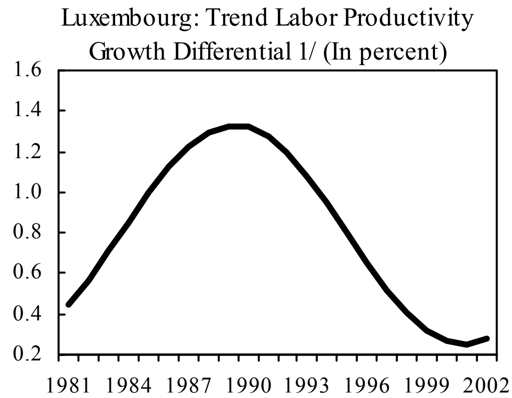
[7] Central Bank estimates suggest that if the funds that manage the public investment projects were to implement only 90 percent of their expenditure program, the fiscal deficit would be lower by about ¾ percent of GDP. Furthermore, according to OECD Economic Surveys: Luxembourg Vol. 2003/15, cost-benefit analysis is almost never undertaken (p. 14).

Box 2. Slowing Labor Productivity

Despite more rapidly rising employment Luxembourg enjoyed much higher labor productivity growth than neighboring Belgium, France, and Germany through the early 1990s. However, a Selected Issues paper finds that the trend labor productivity growth advantage might now have fallen to only about ¼ percentage point.

Falling labor productivity growth may herald lower real GDP trend growth, considering also that immigration and commuting might slow. However, Luxembourg remains an attractive location because of its high productivity level and pay and due to the relatively depressed economic conditions in surrounding regions.

Luxembourg: Trend Labor Productivity Growth Differential 1/ (In percent)



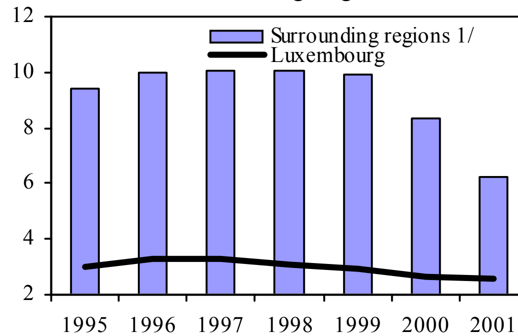
1/ Differentials from output-weighted average productivity level for Germany, France and Belgium.

Nominal Productivity Levels, 2002
(In euros)

Belgium	65,136
France	61,192
Germany	54,659
Luxembourg 1/	78,333

1/ For Luxembourg, productivity based on domestic employment.

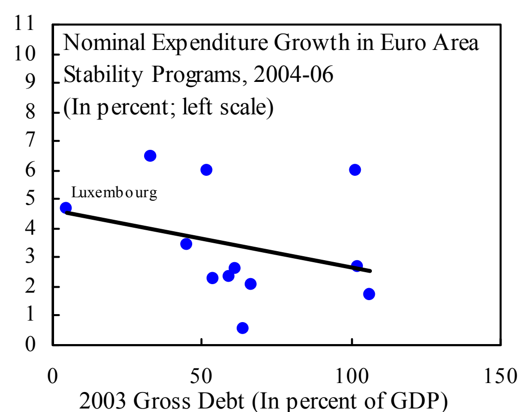
Unemployment in Luxembourg and the Surrounding Regions



1/ Average of unemployment rates in three regions: Trier, Saarland, Lorraine, weighted by number of employees.

12. **The authorities conceded that their objective for the medium run—maintaining a modest general government budget surplus without raising the tax pressure—would be challenging to achieve**. Considering the unexpectedly long period of relatively low growth, the surprising fall of asset prices, the lagged effect of weakening corporate profitability on tax receipts, and the rising impact of past expenditure and tax policy decisions, the latest Stability Program (SP) update could not foresee a return to fiscal balance through 2006 (Table 2, SP targets). However, gross debt would remain very low and net assets high.

13. **The mission agreed that the public sector's favorable net asset position offered room to stretch the adjustment**. The degree of expenditure restraint required to meet the SP targets was not as strong as that proposed by most euro-area partner countries but with net assets around 50 percent of GDP adjustment could be drawn out. Furthermore, net assets would remain high and gross debt low under a variety of scenarios, including with much lower real GDP growth (Appendix III). Nonetheless, the staff probed the scope for greater ambition, arguing that a faster pace of adjustment would safeguard the savings required to meet the rising demands of an aging population. Also, it would not unduly weaken activity given the openness of the economy. At a minimum, all deficits needed to be eliminated soon after 2006 (the end of the SP planning horizon) on current growth projections. In response, the authorities clarified that they did not intend to delay the attainment of a modest budget surplus well beyond 2006, as could have been signaled by the SP update, which had advocated public finances that develop in a balanced manner "over the long run."



Source: 2003 Stability Program updates; and IMF staff calculations.

14. **The staff argued that the proposed expenditure policy would not be tight enough to eliminate the general government deficit soon after 2006** (Table 2, Staff projection). While agreeing on revenue buoyancy, staff calculations suggest that annual nominal expenditure growth would have to be kept almost 2 percentage points below the SP path for 2005-06 (Table 2, Scenario with tighter expenditure), owing to a slower growth rate for labor incomes and thus nominal GDP. Furthermore, to attain the SP expenditure targets in an efficient manner, entitlement reforms were needed, given the dynamics of social spending—which had expanded by over 8 percent annually during the past decade—and its share in total expenditure (Figure 6). The authorities were more optimistic about revenues, considering also that the return from social security assets could be expected to rise following the imminent adoption of a law that broadened the scope for their investment. Also, they felt that the expenditure targets could be attained, although they did not rule out additional restraint, including to avoid a breach of the Maastricht 3 percent ceiling—which staff saw as a risk for 2005. However, they considered an identification of specific measures premature, arguing

that all expenditures would be reviewed if and when necessary. Furthermore, they noted that the public had traditionally supported adjustment when necessary and that spending could be cut sufficiently without raising major sensitivities.

C. Pensions and Health Care Reform

15. **The mission stressed that pensions and health care reforms were necessary to attain the long-run fiscal objective and strengthen the economy's resilience to shocks**. Such shocks could require significant increases in contribution rates that could adversely affect migration, thereby causing a vicious circle of slowing activity and rising contribution rates. Given the authorities' reservations about developing a mandatory fully-funded pension pillar—the staff's preferred approach because of the mobility of the economy's factors of production—the mission recommended that formal links be established between the old-age pensions replacement rate, which is generous by international standards, and the contribution base as well as between the statutory retirement age and life expectancy (Table 3 and Box 3). This would signal a determination to maintain the country's attractiveness for workers and investors, foster a continued expansion of the revenue base, and thereby potentially forestall the need for more drastic measures in the future. Meanwhile, the credibility of the commitment to maintain low tax and contribution rates could be enhanced by continuing the accumulation of public sector assets, which might later serve to sustain a minimum pension. Efforts would also have to be made to raise the low effective retirement age, by eliminating any financial incentives for early retirement.

16. **The authorities were of the view that the pension system was sustainable on historical growth rates but agreed on the need to raise the effective retirement age**. They drew attention to an ILO study of the pension system, which pointed to no major difficulties for as long as real GDP growth averaged about 4 percent per annum, the average rate of the past four decades. Access to disability pensions had already been narrowed and measures had been taken to foster private retirement saving, including through tax incentives. Nonetheless, they thought that the staff's proposals might be useful options to consider during the next tripartite evaluation of the pension system in 2006, considering also the uncertainty surrounding the economy's long-run growth potential.

17. **Regarding health care, the mission argued that additional reforms were required soon, lest ongoing deficits trigger a potentially harmful hike of payroll taxes**. The authorities pointed to various measures that had been adopted already, including a better targeting of sickness pay. The staff saw a need for additional action and advanced various options: raising copayments, which are low relative to neighboring countries; reducing reimbursements on pharmaceuticals, particularly when generic substitutes are available; and narrowing the list of eligible

Health Care Out-of-Pocket Payments, 2000
(In percent of total health care expenditure)

Belgium	15 1/
France	10.4
Germany	10.5
Luxembourg	7.7

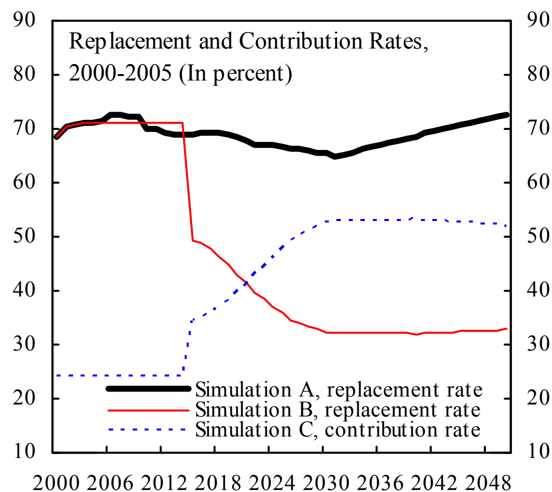
Source: OECD Health Data 2003.
1/ IMF staff estimates.

services. Furthermore, scope for rationalizing hospital services, including through greater crossborder cooperation, could be explored.

Box 3. Strengthening the Pension System

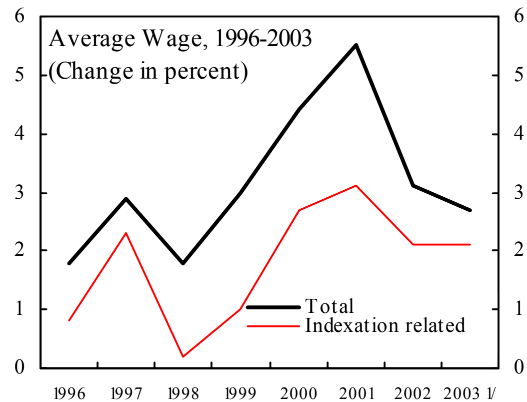
Updated Fund staff projections suggest that the PAYG system remains balanced only if a rising number of commuters and immigrants maintains real GDP growth at least at 5 percent annually. The current contribution rate would then sustain a broadly stable replacement rate without adjustments to the retirement age (Simulation A). However, with growth around 2 percent—consistent with an unchanged workforce—and absent measures pension reserves would be exhausted in 2015 and the replacement rate would have to drop toward 33 percent (Simulation B). Alternatively, the contribution rate would have to double to over 50 percent to maintain the current replacement rate (Simulation C). However, this could lead to a vicious circle, with a falling workforce and economic growth leading to yet further increases in the contribution rate.

The economy and the pension system can be made more resilient through the introduction of a "solidarity factor" —a mechanism that links the replacement rate to the contributions base on the one hand, and the statutory retirement age to life expectancy on the other (see Selected Issues paper). Staff calculations suggest that with annual real GDP growth of 2 percent, an increase in the retirement age in tandem with life expectancy (by about 1¼ years per decade), and a 2½ percentage points increase in the contribution rate in 2015, the replacement rate could be held at 55 percent in 2050. A further 2½ percentage point increase in the contribution rate could boost the replacement rate by an additional 5 percentage points.



D. Factor Markets

18. **Although high job growth testifies to generally employment-friendly wages, most interlocutors did not foresee a significant decline in the unemployment of residents through 2006**. The increase in unemployment even through periods of high growth has raised the specter of higher structural unemployment, driven partly by rising "wait unemployment" for lucrative jobs in the services sector, particularly in government. There was agreement that this called for wage moderation both in the public sector and, to secure jobs, in other sectors. Although unemployment is concentrated among the young and the less skilled, the authorities thought that the legal minimum wage (Figure 7) and wage indexation did not raise major concerns: job creation for less-skilled workers, typically commuters, had not shown particular weakness and indexation was not the main driver of wages. They were, however, working on a law to improve the wage bargaining framework. The aim of the law was to allow employers and trade unions to agree on the broad working conditions for emerging sectors, rather than relying on government-designed legislation for such matters.



Source: BCL Bulletin 2003/3.
1/ Estimate.

19. **The staff advocated a better targeting of support for jobless residents to combat unemployment**. Residents' work incentives could be raised through various measures, including: (i) permanently limiting increases in the minimum income available to those who are able to work to the rate of inflation, rather than to the rate of wage increases; (ii) making unemployment benefits available only to those young jobseekers who meet the more stringent work experience requirements of the regular unemployment benefit scheme—as is already the case in many euro-area countries—while possibly allowing those without any means to apply for minimum income; and (iii) tightening the criteria in unemployment benefit legislation that define an "appropriate" job, rejection of which entails benefit losses. The authorities were sympathetic to these proposals and explained that they were intensifying efforts to implement strictly the existing eligibility requirements for unemployment benefits and the guaranteed minimum income. Beyond that they saw a need to improve education and training.

20. **All agreed that another important challenge was to raise the very low labor force participation of older workers** (Table 3). The staff proposed a stronger program to foster on-the-job training. In addition, eligibility criteria for sickness pay and access to the employment subsidies for older workers—which were being abused—needed to be tightened; actuarial fairness should be introduced in the pension system to eliminate incentives for early retirement; and an unlimited rollover of temporary work contracts could be allowed for newly-hired, older workers. A further measure would be to unify the duration of

unemployment benefits at 12 months. This would foster a more rapid return of older job seekers—who can receive benefits for up to two years—to the labor market and thereby limit any atrophy of skills. In exchange, the benefit replacement rate for those who have contributed longer could be raised. The authorities explained that they had already restricted access to disability pensions—which account for about one third of all new pensions—to reduce their abuse. However, they concurred that changes would also be needed to programs governing employment subsidies and pay for chronic sickness.

21. **The staff emphasized that product market reforms were necessary to raise economic efficiency and reduce public expenditure**. Despite high growth, state aid stands above the EU average—reaching 1.3 percent of GDP in 2001—with almost 90 percent flowing to agriculture and transport. On agriculture, the authorities argued that support was needed but should be restructured to limit distortions to prices and quantities. Regarding transportation, the main recipients of aid were the state railways and the authorities were keen to accelerate their restructuring, also to pave the way for competition.

E. The Financial Sector

22. **Banks and insurance companies have weathered the recent turbulence well amid falling business volume growth** (Table 4). The financial sector has been detracting from economic growth during 2001-02. Fees and commissions fell in the wake of the equity market collapse, while interest margins were reduced recently by a flattening yield curve. Banks reacted by cutting expenditure and by tightening lending standards and profits remained at healthy levels (Figure 8), with intra-annual indicators suggesting an ongoing recovery.[8] The authorities noted that preliminary data suggested that life-insurance and reinsurance premium growth might again have reached double-digit levels in 2003.

23. **There was agreement that the prospects for the financial sector were less bright than over the 1990s and that this called for additional vigilance**. The mission's interlocutors did not expect a return to the spectacular growth rates of the end of the 1990s, when the equity market boom was propelling fees and commissions. The ongoing wave of consolidation would weigh on employment and the number of banks. They added that recent stress tests—covering credit to various risky sectors and countries as well as large equity market corrections—had confirmed the 2002 FSAP conclusion that the financial sector is robust and efficient. These tests had been complemented with more detailed analyses, most recently of lending to real estate and construction. A limited exposure to these risky sectors combined with strong capitalization and profitability explained the robustness of the financial system.

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[8] Profits in 2002 would have been some 11 percent lower in the absence of exceptional capital gains related to one large transaction.

24. **In this setting, the authorities and market participants saw benefits from a rapid implementation of the EU Directive on savings taxation as it would clear the air of uncertainty**. Luxembourg would maintain bank secrecy and, assuming timely adoption of the Directive, levy a tax on interest earnings of nonresidents at a rate of 15 percent in 2005, 20 percent in 2008, and 35 percent in 2011. Only part of the country's comparative advantage was seen to be at risk. First, it was noted, incentives would remain to hold interest earning assets in Luxembourg, even if efforts are underway in other countries to lessen these through tax amnesties or lower tax rates. Second, the EU Directive does not cover dividend earnings. And third, the country has an "accumulated" know-how advantage. The authorities were determined to maintain this advantage by improving further the efficiency of financial sector regulation and supervision.

25. **Various measures had been taken to improve supervision and efforts were underway to strengthen the legal AML/CFT framework**. The authorities had widened the scope of supervision, hired more staff, conducted more on-site inspections, refined the 2002 FSAP stress tests, and adopted an internal Code of Conduct for bank supervisory staff regarding the trading and holding of securities, a key recommendation of the FSAP. The insurance supervisory authority had also added staff and was in the process of developing new stress tests. A recent AML/CFT ROSC mission concluded (its draft report is being reviewed by the authorities) that a solid legal and implementation structure is in place. However, vulnerabilities arise from the predominance of crossborder business. Accordingly, in implementing effective "know-your-customer" measures, additional attention could usefully supplement the reliance on customer identification carried out by regulated institutions abroad, as accepted under FATF Recommendations. The financial intelligence unit is well regarded but would benefit from additional resources. A key recommendation is to proceed rapidly with the implementation of a new draft AML/CFT law that reflects the highest international standards.

F. Other Issues

26. The authorities voiced their strong support for multilateral trade liberalization and ODA. They hoped that the **Doha trade talks** would gather momentum soon again and, because of the prevalence of small and medium-sized companies in Luxembourg, expected large benefits from progress on trade facilitation. They observed that Luxembourg had benefited greatly from trade liberalization and pointed to the surge of trade with the **EU accession** countries as the latest example—they were optimistic about the economic effects of accession. They strongly supported the EU's **everything but arms** initiative and efforts to obtain **free trade agreements** with countries bordering the Mediterranean as well as with Mercosur, also because such agreements could foster south-south trade. Turning to **ODA**, the mission praised the high level of Luxembourg's support (0.8 percent of GNI).

27. Luxembourg's **statistical database** has improved further since the last Article IV consultation. The authorities reported that preliminary quarterly national income accounts—

the main element that is missing to allow SDDS subscription—would be made available soon.

III. Staff Appraisal

28. **An excellent economic performance over many years and sound policies leave Luxembourg well-placed to address various policy challenges that have been brought to the fore by the recent global slowdown in activity**. The first and most immediate among these is the need to adapt fiscal policy to a less buoyant medium-run growth outlook; the second is to strengthen the economy's resilience to unforeseen developments, through entitlement and factor market reforms. The incoming government following the upcoming general elections should assign a high priority to spelling out a comprehensive strategy to address these challenges. Judicious adjustments to policies and programs might suffice if action is taken soon, but delays would risk requiring more difficult and far-reaching measures.

29. **Following an unusually long period of sluggish activity, a recovery appears in the offing but the medium-run outlook is uncertain**. In 2004, the global recovery in demand and equity markets is likely to offset the effects of the strengthening of the euro on output. Over the medium-run, however, some of the factors underlying Luxembourg's exceptional growth performance—strong productivity growth supported by a dynamic financial sector—appear to be fading. Accordingly, medium-run real GDP growth is likely to settle appreciably below the high rates of the recent past.

30. **The public sector's favorable net asset position offers room to stretch the fiscal adjustment over time but a faster pace than envisaged in the Stability Program would better prepare the country for the impending demographic challenges**. Given the high mobility of factors of production and the demographic pressures that lie ahead, the official fiscal policy objective to run a small general government surplus over the medium run without increasing the revenue burden should be maintained. Attaining this objective will be difficult because of the exceptional depth and duration of the current growth slowdown. However, expenditure policy would have to ensure that the general government deficit at least be eliminated soon after 2006, unless real GDP growth disappoints significantly.

31. **Returning the budget to balance soon after 2006 will require a tighter-than-proposed expenditure policy**. The Stability Program's emphasis on holding back expenditure to safeguard the favorable fiscal position is well placed. Also, the 2004 budget, with its emphasis on slowing discretionary spending, represents a good start. However, the proposed medium-run expenditure slowdown—to an annual average growth rate of about 4½ percent in nominal terms over 2004-06 from double-digit rates in recent years—likely would not suffice to attain the deficit objectives. The adjustment strategy should thus be reinforced, starting with a tight control of discretionary spending in 2004, to avoid an overshoot of the general government deficit target, and continuing in 2005 and beyond to

encompass cutbacks of the relatively high level of subsidies and further reforms to entitlement programs.

32. **Sustaining the planned deceleration in spending and reinforcing the economy's resilience to shocks will require health care and pension reforms**. In the health care system, various measures could be considered to forestall deleterious payroll tax hikes, including raising out-of-pocket payments. For old-age pensions, building-up a mandatory fully-funded pillar would mitigate risks related to the mobile workforce. Alternatively, the replacement rate should be formally linked to the contribution base and the statutory retirement age to life expectancy, thereby locking in Luxembourg's payroll tax advantages over neighboring regions. Meanwhile, a continued build-up of financial assets would support the resilience of the system and might later serve to protect the pensions of poorer retirees.

33. **Another key challenge is to avoid an increase in structural unemployment, while boosting the labor force participation of older workers**. The efforts to improve the targeting of the support for the jobless and curtail the abuse of disability pensions are welcome but more fundamental changes are likely to be necessary. For young workers, the work experience requirement for access to unemployment benefits should be aligned with that for other workers. For older workers, on-the-job training will have to be improved and various incentives to drop out early of the labor force, notably in the pension system, be eliminated. More generally, to improve work incentives for those who are able to work, gradual reductions in the replacement rate of the minimum income should be considered.

34. **Financial sector activity is already recovering and the main demand on supervisors will be to maintain its robustness as global competition intensifies**. Since the 2002 FSAP, important steps have been taken to improve supervision, a development that should continue. A solid legal and implementation structure is in place to combat money laundering and the financing of terrorism. Because of the large volume of crossborder business, the new draft law to strengthen this structure further should meet the highest international standards.

35. Luxembourg's high level of **official development assistance** is commendable. Luxembourg should continue to foster development, including by lending its support within the EU to **reducing agricultural subsidies and import restrictions**.

36. Luxembourg's **economic statistics** are adequate for surveillance and have continued to improve. Nonetheless, further efforts are needed to allow it to subscribe to the Fund's Special Data Dissemination Standard.

37. It is proposed that the next Article IV consultation with Luxembourg be held within 24 months.

Table 1. Luxembourg: Basic Data

Land Area	2,586 square kilometers
Population (2002)	446,200
GDP per capita (2002)	US$47,384

	1999	2000	2001	2002	2003 Est.	2004 Proj.	2005 Proj.
	Volume changes, in percent						
Demand and supply							
Private consumption (real growth rate)	2.6	4.6	4.5	2.3	1.8	2.4	2.5
Public consumption	7.3	4.8	7.0	4.2	3.8	2.1	2.8
Gross fixed investment (real growth rate)	14.6	-3.5	10.1	-1.4	0.7	2.1	5.9
Inventory accumulation 1/	-0.3	2.3	-1.6	-1.9	0.2	0.2	0.2
Total domestic demand	6.4	4.9	4.3	-0.6	2.2	2.5	3.7
Exports of goods and nonfactor services	14.8	16.8	2.6	-0.3	1.7	3.7	3.8
Imports of goods and nonfactor services	14.6	14.8	4.8	-1.6	1.9	4.0	4.1
Foreign balance 1/	2.0	4.7	-2.3	1.6	0.0	0.2	0.2
Gross domestic product	7.8	9.1	1.2	1.3	1.2	2.3	3.3
	In thousands, unless otherwise noted						
Employment and unemployment							
Unemployed	5.4	5.0	4.9	5.8	8.1	10.0	11.3
(As a percent of total labor force)	2.9	2.6	2.6	3.0	4.1	4.9	5.5
Resident employment	178.3	183.2	188.0	191.1	192.9	194.1	195.9
Cross-border workers (net)	70.0	79.0	89.1	94.5	97.9	100.6	103.5
Domestic employment	248.3	262.3	277.1	285.9	290.8	294.8	299.3
(Change in percent)	5.0	5.6	5.6	3.2	1.7	1.4	1.5
	Annual changes, in percent						
Prices and costs							
GDP deflator	2.2	3.9	2.2	0.6	1.1	1.7	1.7
Harmonized consumer price index	1.0	3.2	2.7	2.1	2.6	2.1	1.7
Average nominal wage growth 2/	3.6	4.7	3.7	3.1	3.0	3.1	3.2
Nominal unit labor costs 2/	1.2	1.7	8.5	5.2	3.6	2.2	1.4
	(In percent of GDP)						
Public finances 3/							
General government financial balance 4/	3.5	6.4	6.2	2.4	-1.0	-2.6	-3.1
General government gross debt	5.8	5.5	5.5	5.7	4.9	6.1	5.9
General government net financial assets	49.1	51.2	57.0	57.8	54.6	51.1	47.5

Table 1. Luxembourg: Basic Data (concluded)

	1999	2000	2001	2002	2003 Est.	2004 Proj.	2005 Proj.
	(In billion euro)						
Current account							
Trade balance	-2.4	-2.6	-2.7	-2.1	-2.3	-2.5	-2.7
Nonfactor service balance	5.0	7.3	7.0	7.2	6.9	7.3	7.7
Factor income balance	-0.5	-1.4	-1.8	-2.5	-2.7	-2.5	-2.4
Employees' compensation	-1.9	-2.3	-2.9	-3.2	-3.2	-3.5	-3.8
Net investment income	1.5	0.9	1.0	0.7	0.6	1.0	1.4
Transfer balance	-0.5	-0.5	-0.6	-0.7	-0.6	-0.7	-0.7
Current account balance	1.5	2.7	1.8	1.8	1.4	1.7	2.0
(In percent of GDP)	8.3	12.8	8.4	8.2	5.9	6.9	8.0
Exchange rates (averages)							
U.S. dollar per euro 5/	1.07	0.92	0.90	0.95	1.13	1.22	…
Nominal effective rate (1995=100)	96.5	95.5	95.4	95.6	96.9	…	…
Real effective rate (CPI based; 1995=100)	95.5	95.3	95.5	96.0	97.7	…	…
Interest rates							
Short term 6/ 7/	3.0	4.4	4.3	3.3	2.3	2.1	…
Long-term bond yield 8/	4.8	5.9	5.4	5.3	4.3	…	…

Sources: Data provided by the authorities; IMF, WEO database; and Fund staff calculations.
1/ Contribution to GDP growth.
2/ Overall economy.
3/ The projection for 2004-05 reflects staff's assumptions about budget execution.
4/ In 2001, improved by a one-off transaction that amounted to 2 percent of GDP and that was recorded as negative capital expenditure.
5/ For 2004, data refer to March 25.
6/ For 2004, data refer to February.
7/ Short-term rates are for 3-month euro deposits.
8/ Average of long-term bonds traded on Luxembourg Stock Exchange. Long-term government bond yields are not available (the only 10-year government bond matures in 2007).

Table 2. Luxembourg: Medium-Term Projections of General Government Finances, 2002-2006
(In percent of GDP, unless otherwise noted)

	2002	2003 Est.	2004 Proj.	2005 Proj.	2006 Proj.
SP targets 1/					
Revenue	46.7	47.1	45.7	44.9	44.9
Expenditure	44.2	47.7	47.5	47.2	46.4
Balance	2.4	-0.6	-1.8	-2.3	-1.5
Central government	-0.2	-2.5	-3.2	-3.6	-3.1
Local governments	0.2	0.1	-0.2	-0.2	-0.1
Social security	2.4	1.8	1.6	1.5	1.7
Staff projection 2/					
Revenue	46.7	46.4	45.2	45.0	45.0
Expenditure	44.2	47.4	47.8	48.1	47.9
Balance	2.4	-1.0	-2.6	-3.1	-2.8
Scenario with tighter expenditure					
Revenue	46.7	46.4	45.2	45.0	45.0
Expenditure	44.2	47.4	47.3	46.7	46.1
Balance	2.4	-1.0	-2.1	-1.7	-1.1
Memorandum items:					
Nominal GDP growth (in percent)	1.9	2.3	4.1	5.1	5.2
Nominal GDP growth (SP, in percent) 1/	1.9	2.7	4.8	6.2	5.5
General government expenditure growth					
SP 1/	15.2	9.6	4.3	5.6	3.7
Of which: Social expenditure	10.5	9.3	5.3	6.2	3.6
Staff projection 2/	15.2	9.6	5.0	5.8	4.6
Of which: Social expenditure	10.6	9.3	6.4	6.5	4.0
Scenario with tighter expenditure (in percent)	15.2	9.6	3.8	3.8	3.8

Sources: STATEC; Ministry of Finance; and IMF staff estimates and projections.

1/ SP refers to the authorities' Stability and Growth Program update of November 2003.

2/ For taxes on corporations, takes the authorities' estimates underlying the November 2003 update of the Stability Program; for all other revenue, growth is projected in line with the staff's macroeconomic projections for nominal GDP and the wage bill. For discretionary expenditure, takes the authorities' targets underlying the November 2003 update of the Stability Program; for entitlement spending, staff estimates suggest a higher growth rate, consistent with the absence of major measures.

Table 3. Selected Countries: Indicators of Retirement Income

	Low income rate of elderly	Relative disposable income of the elderly	Labor force participation rate of 55-64 year old	
	Percent of the elderly with income less than 50 percent of median disposable income	In percent of the disposable income of all individuals	Male	Female
Austria	14.9	86.6	42.1	17.5
Belgium	13.8	77.9	36.6	15.7
Denmark	9.2	73	65.5	51.8
Finland	7.5	79	51.2	49.5
France	10.7	98.7	43.8	34.1
Germany	10.4	85.6	50.6	32.4
Greece	29.2	76.8	57	23.6
Iceland	...	...	92.8	81.7
Ireland	16.7	74.6	66.1	29.5
Italy	15.3	84.1	57.8	26.6
Luxembourg	**6.7**	**98**	**38.1**	**14.3**
Netherlands	1.9	86.3	52	26.9
Portugal	...	...	63.7	41.9
Spain	11.3	...	62.4	23.6
Sweden	3.0	89.2	73.5	67.4
United Kingdom	11.6	77.8	64.4	44.6

Source: OECD Economic Surveys: Luxembourg, 2003.

Table 4. Luxembourg: Selected Financial Soundness Indicators, 1999-2003
(In percent)

	1999	2000	2001	2002	2003 1/
Capital adequacy					
Total regulatory capital ratio	12.9	13.1	13.7	15.0	16.1
Tier 1 regulatory capital ratio	10.4	11.0	11.4	13.1	13.9
Asset quality					
Value adjustments on credit to total gross credit	0.7	0.5	0.4	0.4	0.4
Non-performing large exposures to total large exposures 2/	1.5	0.8	0.6	0.4	0.5
Credit growth					
Real credit growth towards the non-financial corporate sector 3/	18.7	6.6	9.8	-7.9	-13.6
Real credit growth towards Luxembourg households 3/	5.5	18.5	6.5	9.1	23.8
Asset composition					
Overall exposure to Luxembourg households in total exposures	1.2	1.3	1.3	1.3	1.4
Overall exposure to financial corporations in total exposures	67.6	68.4	69.5	70.0	70.9
Overall exposure to non-financial corporations in total exposures	13.0	13.8	14.0	13.3	12.8
Large exposures to total exposures 2/	94.0	94.6	94.6	94.1	93.5
Share of mortgage lending in total lending to private customers	10.7	13.3	14.2	17.8	21.7
Equities portfolio to own funds	25.1	21.1	17.6	15.5	13.8
Profitability					
Return on assets (Net after-tax income to total assets) 4/	0.4	0.5	0.5	0.4	...
Return on equity (Net after-tax income to paid-in capital)	34.0	36.7	40.7	36.4	...
Liquidity					
Liquidity ratio	62.0	61.0	63.0	63.0	63.0

Sources: Banque Centrale du Luxembourg. See **www.bcl.lu** for further information and financial sector soundness indicators.

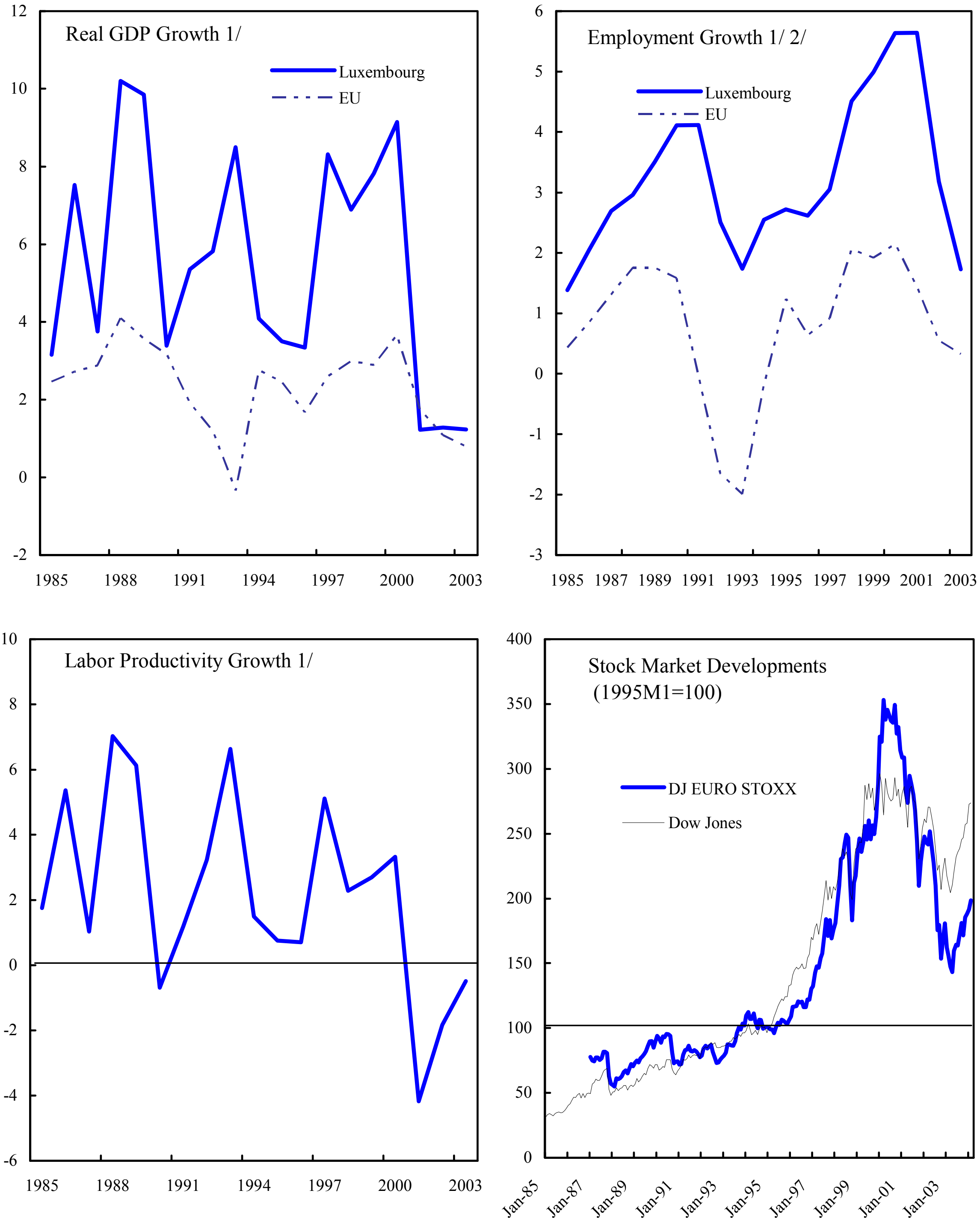
1/ Data for 2003 refer to an average ratio from June 2002 to June 2003.

2/ According to Luxembourg banking regulations, large exposures are defined as exposures above 6.25 million euros or its equivalent amount or 10 percent of the bank's own funds.

3/ Are considered Luxembourg banks including foreign branches; branches of Luxembourg banks abroad are excluded.

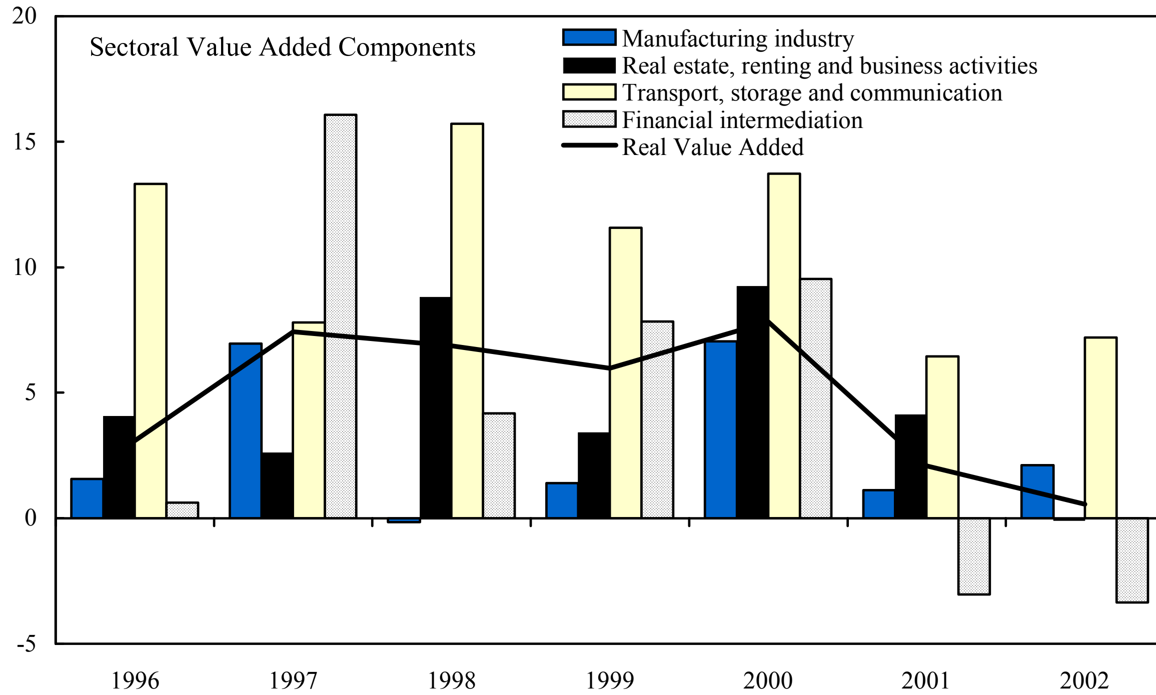
4/ Assets = total balance sheet - prepayments and accrued income.

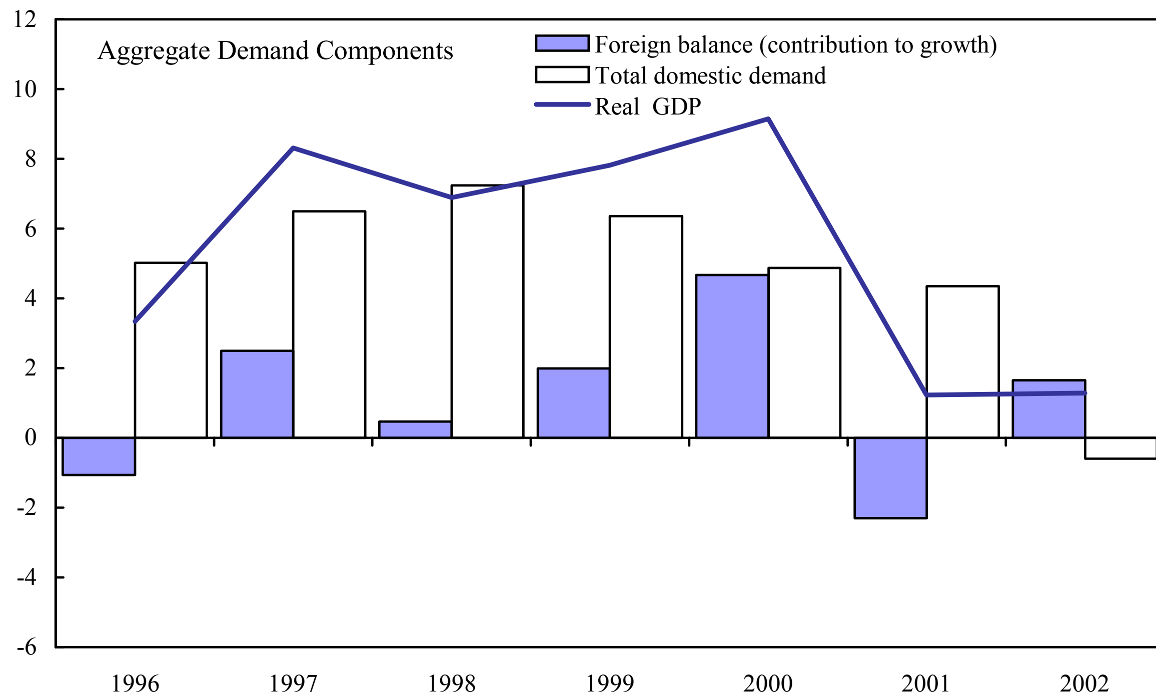
Figure 1. Luxembourg: Macroeconomic Performance Indicators, 1985-2003
(In percent)



Sources: STATEC; IMF, World Economic Outlook; and Bloomberg.
1/ Data for 2003 are IMF staff estimates.
2/ Domestic employment, including cross-border workers from abroad.

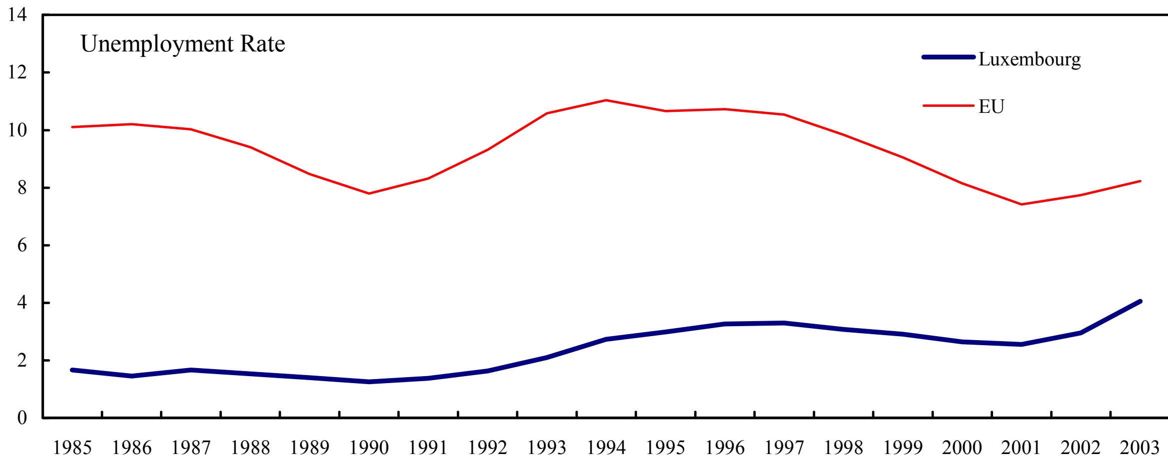
Figure 2. Luxembourg: Real Output Developments, 1996-2002
(Percentage change)

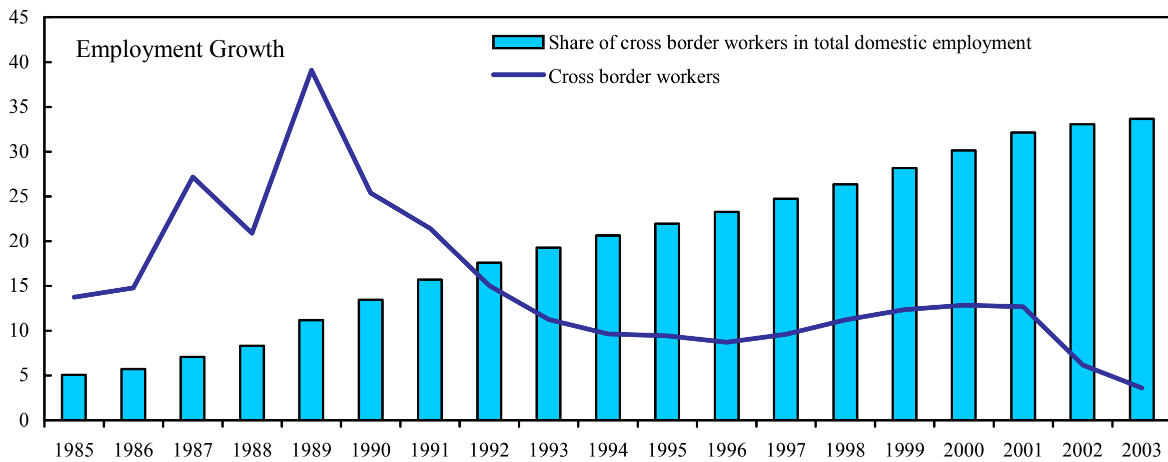


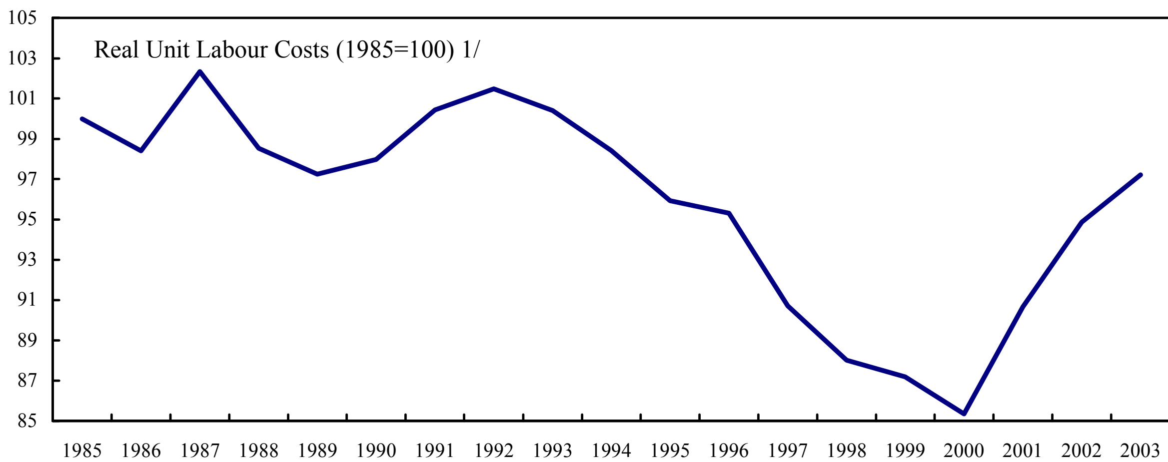


Sources: Eurostat; and IMF, World Economic Outlook.

Figure 3. Luxembourg: Labor Market Developments, 1985-2003
(In percent)

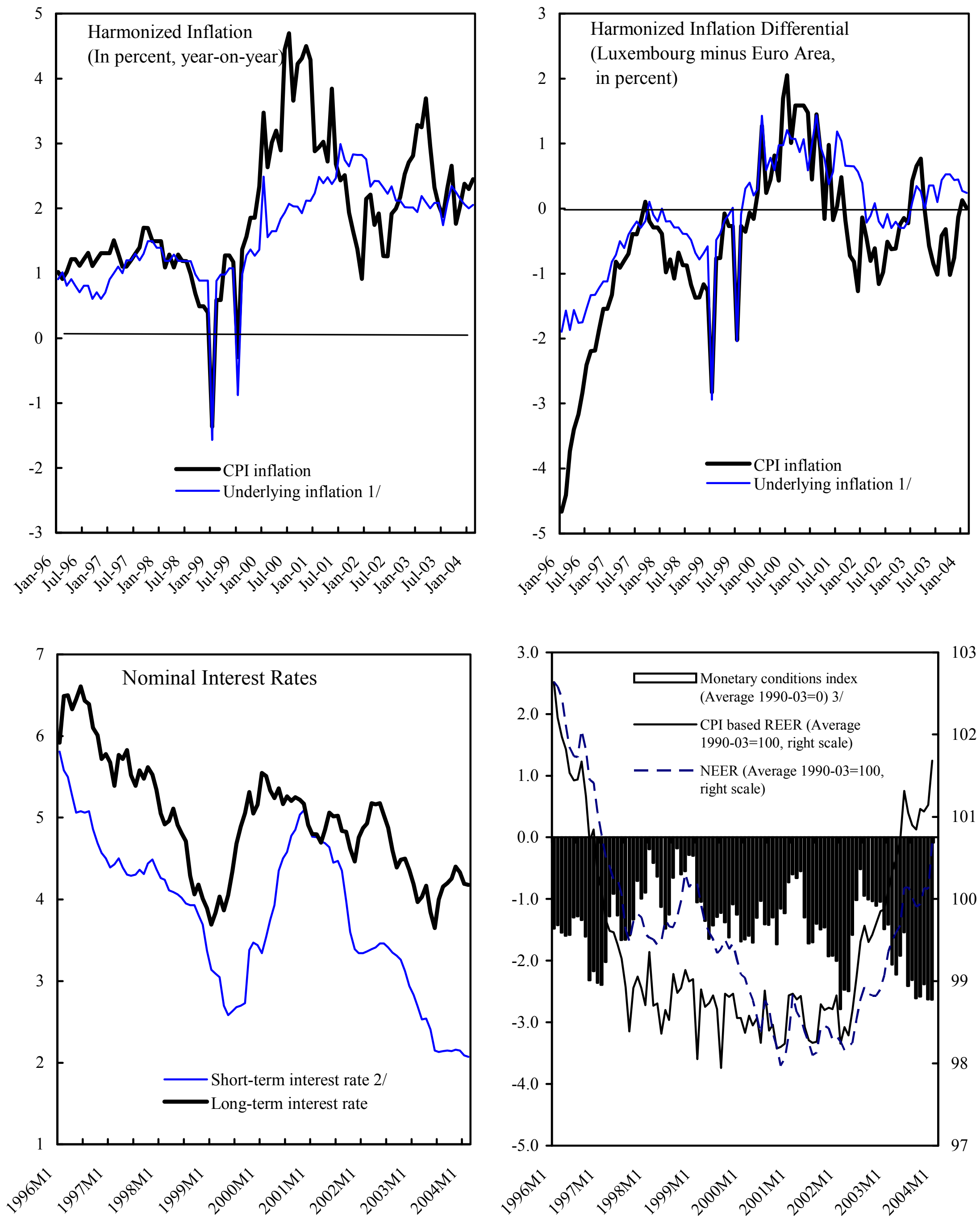






Sources: STATEC; Eurostat; and IMF, World Economic Outlook.
1/ Data for 2003 are IMF staff estimates.

Figure 4. Luxembourg: Prices, and Monetary Conditions, 1996-2004



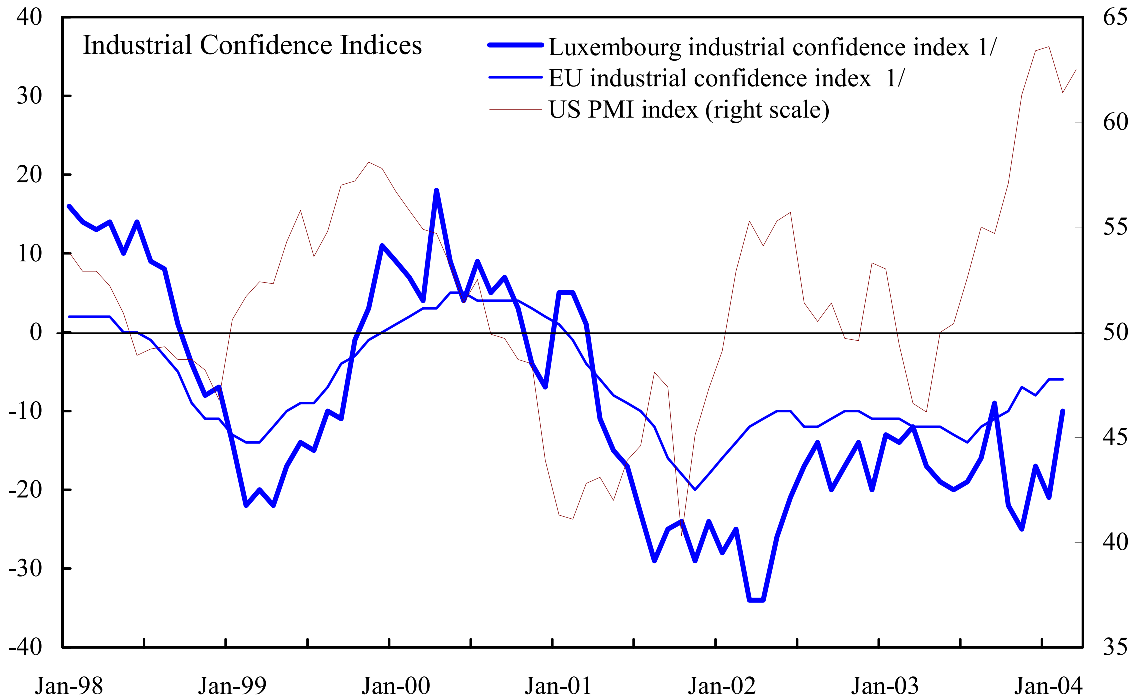
Sources: STATEC; IMF, International Financial Statistics; and IMF staff calculations.

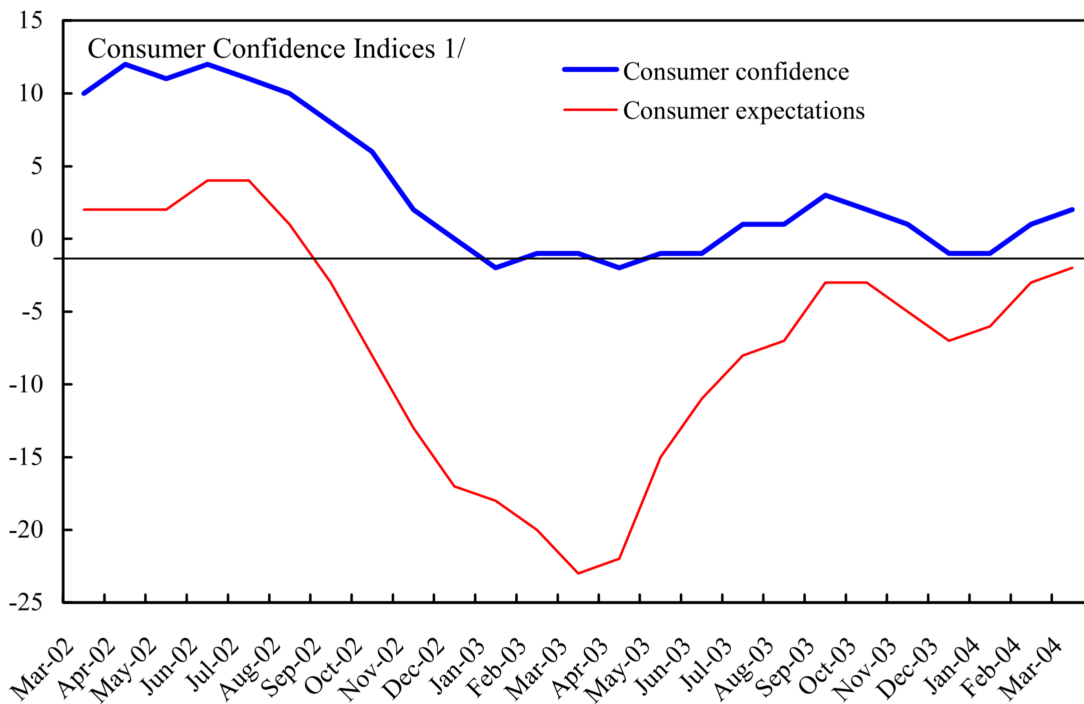
1/ CPI inflation, excluding energy and selected food items.

2/ Short-term rates are for 3-month euro deposits. Long-term government bond rates are for Germany, as daily data are not available for Luxembourg. Germany has the same sovereign risk rating as Luxembourg.

3/ Average 1990-03=0. Calculated using as weights 2.5 for the short-term real interest rate and 1 for the real effective exchange rate.

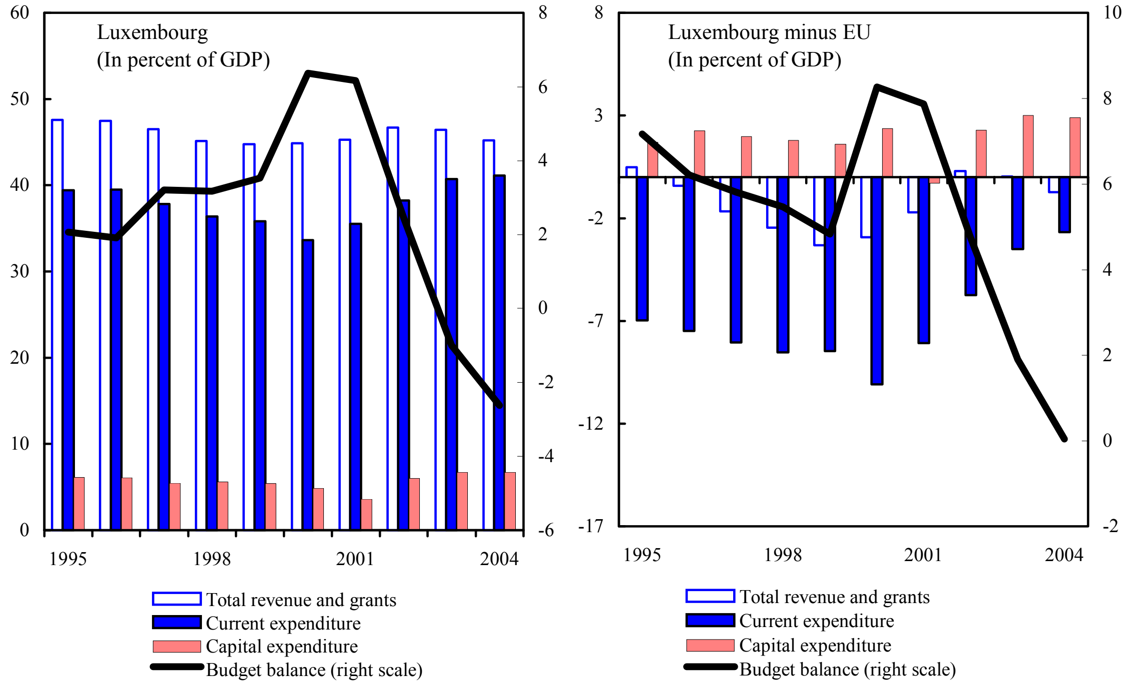
Figure 5. Luxembourg, United States, and the EU:
Industrial and Consumer Sentiment Indicators, 1998-2004



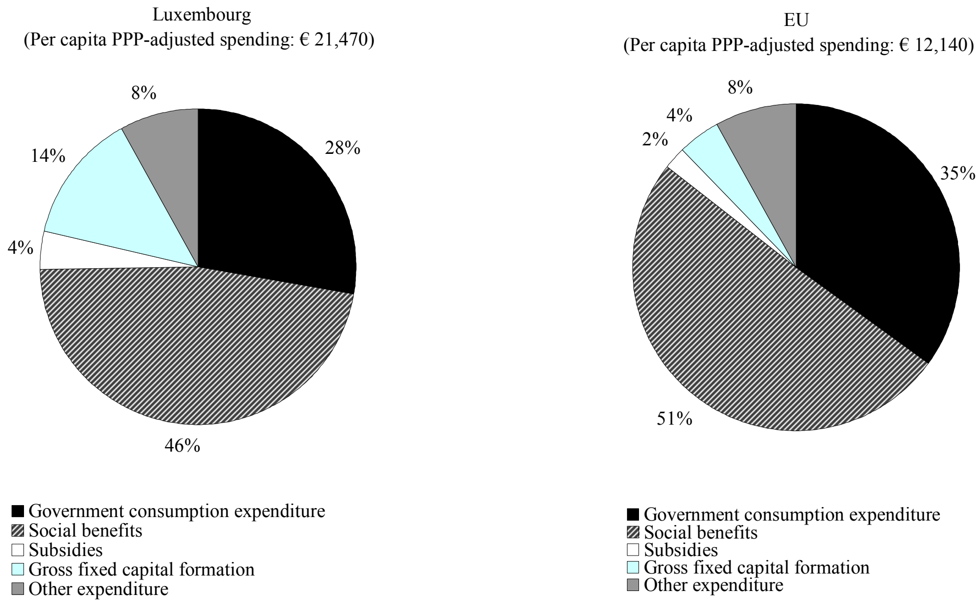


Sources: Banque Centrale du Luxembourg; and Eurostat.
1/ Balance of opinions; three-month moving average.

Figure 6. Luxembourg and the EU: Fiscal Developments, 1995-2004

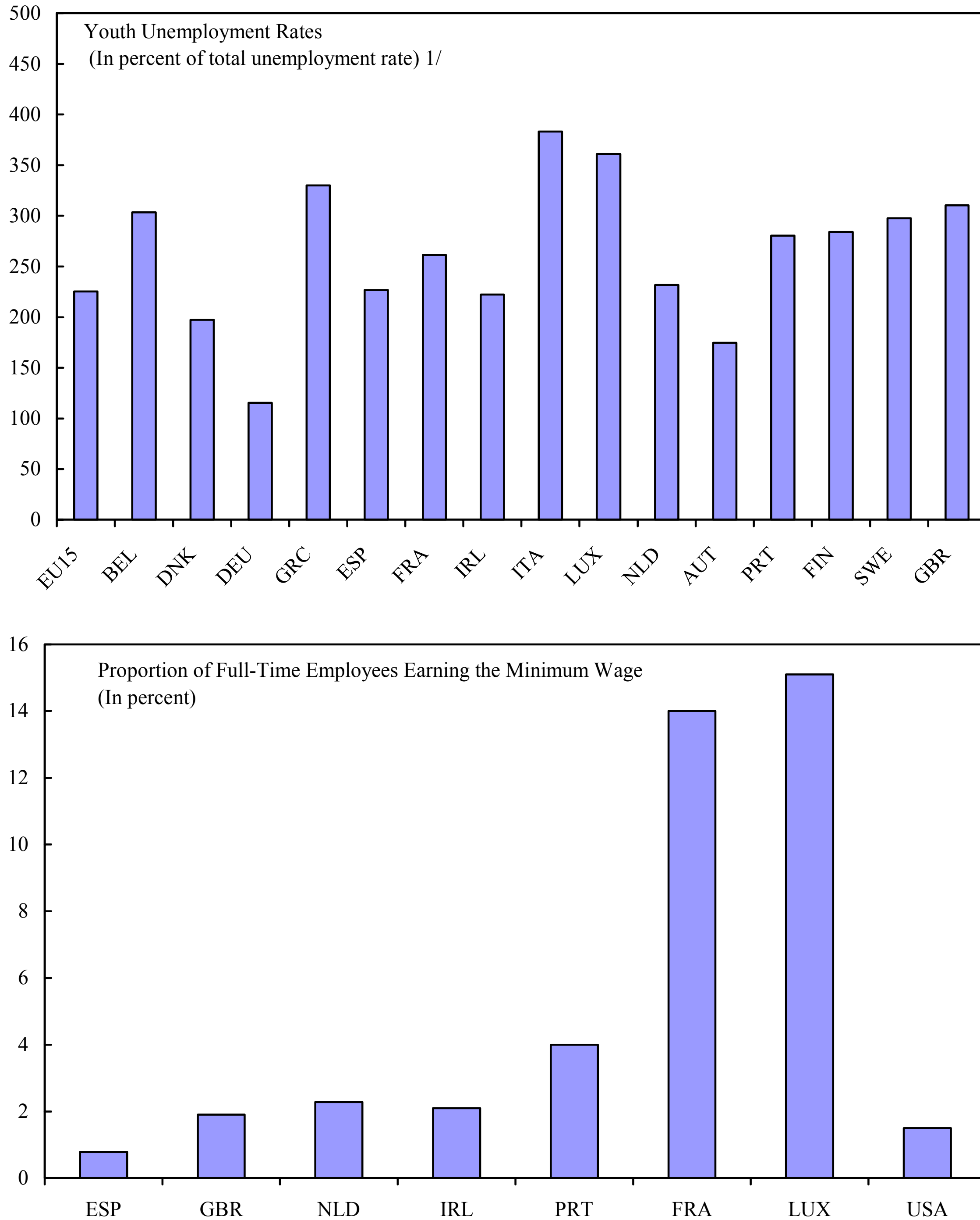


Distribution of General Government Spending, 2002



Sources: IMF, World Economic Outlook; and the European Commission.

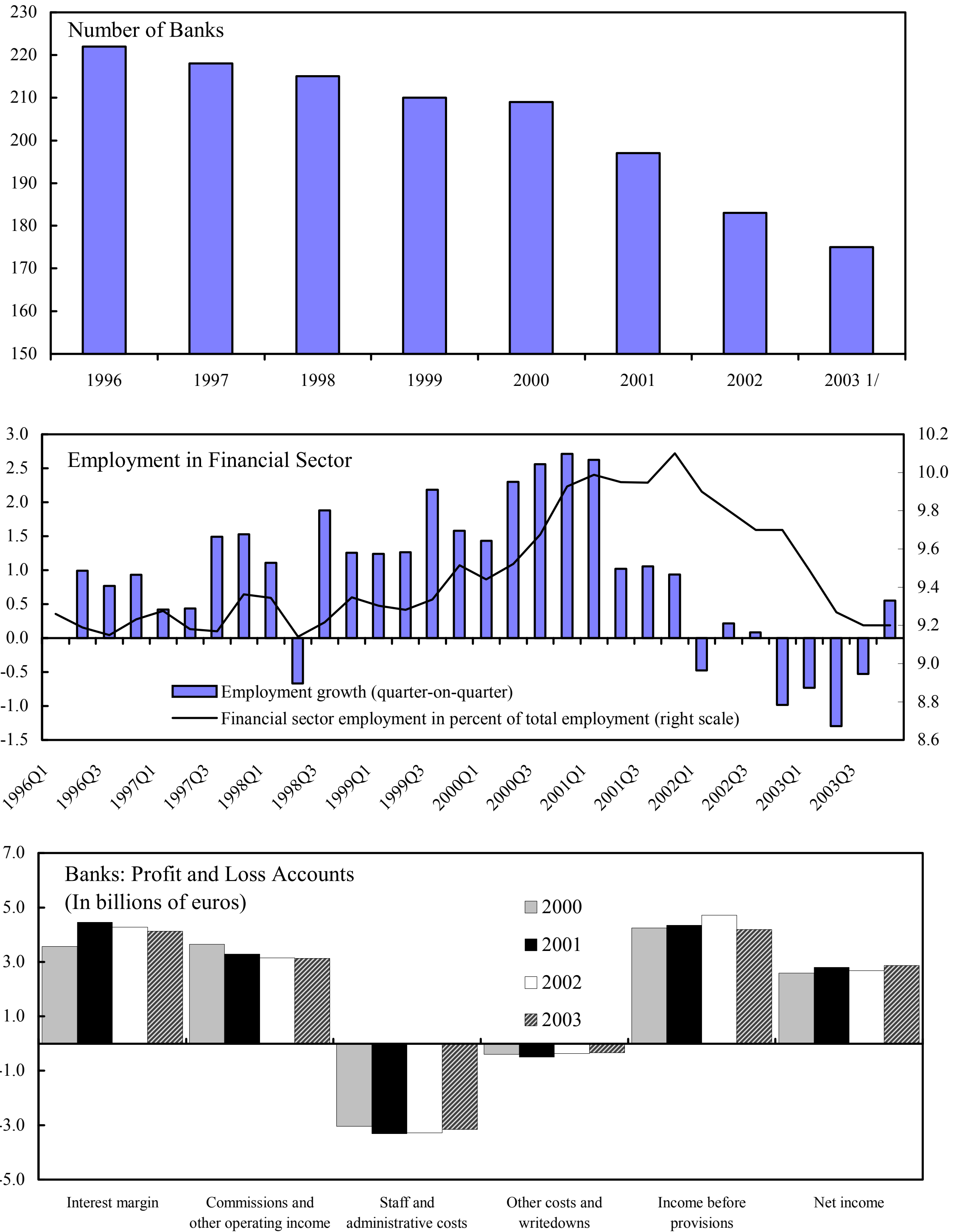
Figure 7. Luxembourg: Youth Unemployment and Minimum Wage Employees, 2002



Sources: Eurostat; and IMF staff calculations.

1/ Unemployment rate of residents who are less than 25 years old in percent of the unemployment rate of residents who are at least 25 years old.

Figure 8. Luxembourg: Financial Sector Developments, 1996-2003



Sources: STATEC; Banque Centrale du Luxembourg; and IMF staff calculations.
1/ Data for the third quarter of 2003.

Luxembourg: Fund Relations

(As of February 29, 2004)

I. Membership Status: Joined December 27, 1945; Article VIII.

II. General Resources Account:	**SDR Million**	**% Quota**
Quota	279.10	100.00
Fund holdings of currency	168.07	60.22
Reserve position in Fund	111.05	39.79

III. SDR Department:	**SDR Million**	**% Allocation**
Net cumulative allocation	16.95	100.00
Holdings	8.69	51.23

IV. Outstanding Purchases and Loans: None

V. Financial Arrangements: None

VI. Projected Obligations to Fund: None

VII. Exchange Rate Arrangement:

On January 1, 1999, Luxembourg entered Stage 3 of the European Economic and Monetary Union (EMU) at a rate of 40.3399 Luxembourg franc per euro.

VIII. Exchange Restrictions:

Luxembourg is an Article VIII member and maintains an exchange system free of restrictions on payments and transfers for current international transactions, except for reasons related to security. In accordance with UN Security Council resolutions and EU regulations, the authorities put into effect a series of measures freezing the accounts of and banning payments in favor of the Taliban, listed terrorists, persons and organizations related to terrorism. Furthermore, pursuant to such resolutions and regulations restrictions are imposed on payments and transfers to the UNITA movement in Angola, Iraq, certain individuals in Myanmar as well as Serbia and Montenegro, and Zimbabwe
A full listing of these restrictions can be found on the website of the central bank in a regularly updated annex to *Circulaire BCL 2002/172*.

IX. Article IV Consultations:

The last Article IV consultation was concluded at EBM/02/56 (6/5/02).

Luxembourg: Statistical Issues

In recent years. Luxembourg's macroeconomic statistics have improved substantially as to coverage and timeliness, which reflects the authorities' undertakings in the context of EU/EMU membership, Luxembourg's monetary union with Belgium until end-1998, and a significant increase in budgetary resources. However, the sectoral shift away from manufacturing to services has raised difficult methodological issues.[9] Most statistics are now available electronically at no cost. Since the last Article IV consultation, the following improvements have been made:

- The ESA95 national accounts data were extended back to 1985, from 1995.
- Central government accounts were compiled on an ESA95 basis.
- In 2002, the Central Bank of Luxembourg began compiling and disseminating quarterly balance of payments statements including current and financial accounts, compiled in the framework of the *Balance of Payments Manual, Fifth Edition (BPM5)*.

However, the following data problems continue to impede analysis:

- National accounts data based on ESA95 are not available at a quarterly frequency. Also, a full set of accounts is not available for some of the institutional sectors of the economy (households, and financial and nonfinancial corporations).
- General government accounts are not available at a quarterly frequency, as in almost all other euro-area countries.

The authorities intend to subscribe to the Fund's Special Data Dissemination Standard (SDDS), and efforts to provide the requisite metadata are under way. The main obstacles to subscription include the SDDS requirements to provide sub-annual national accounts and central government data. The publication of quarterly national accounts, however, will begin soon, following clarification of some methodological issues. Preliminary data were already discussed in a seminar hosted by STATEC.

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[9] The difficulties in measuring Luxembourg's GDP are vividly brought out by Als, 1988, "The Nightmare of Economic Accounts in a Small Country with a Large International Banking Sector," *The Review of Income and Wealth*, pp. 101–10.

Luxembourg: Core Statistical Indicators
As of March 2004

	Exchange Rates	Int'l Reserves	Central Bank Balance Sheet	Interest Rates	Consumer Price Index	Exports/ Imports	Current Account Balance	Overall Government Balance	GDP/GNP	External Debt/Debt Service
Date of Latest Observation	Mar 3	Jan 31	Jan 31	Mar 3	Jan 04	Nov 03	03Q3	2002	2003	2002
Date Received	Mar 3	Feb 14	Feb 14	Mar 3	Feb 04	Feb 29	Jan 04	May 03	Mar 04	May 03
Frequency of Data	Daily	Monthly	Weekly	Daily	Monthly	Monthly	Quarterly	Annual	Annual	Annual
Frequency of Reporting	Daily	Monthly	Weekly	Daily	Monthly	Monthly	Quarterly	Annual	Annual	Irregular
Source of Update	Reuters	Central Bank	Central Bank	Reuters	Statec	Statec	Statec	Ministry of Finance/ Statec	Statec	Statec
Mode of Reporting	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic	Electronic
Confidentiality	Published	Published	Published	Published	Published	Published	Published	Published	Published	Published
Frequency of Publication	Daily	Monthly	Weekly	Daily	Monthly	Monthly	Quarterly	Annual	Annual	Irregular

Luxembourg: Debt Sustainability Analysis

Luxembourg's public sector debt is very low, amounting to about 5 percent of GDP in 2003. The public sector holds financial assets equivalent to about 60 percent of GDP in 2003, held largely by the social security system. Debt sustainability is thus not an issue over the medium run. A standard analysis reveals that this conclusion would also hold upon excluding financial assets (see table). However, the public sector's net financial assets are projected to decline through 2008, reflecting general government budget deficits. Over the longer run, age-related expenditures are projected to rise considerably (see also the Selected Issues paper and IMF Country Report No. 02/118, Box 1). Because of the mobility of capital and commuters, Luxembourg cannot afford to raise the revenue burden considerably or to accumulate a significant amount of net financial liabilities to meet age-related expenditures. It would thus be prudent to return the central government budget to balance over the medium run, consistent with a modest general government budget surplus. Furthermore, the pension system would have to be reformed (see Box 3 in the main text), to avert the risk of a vicious circle of rising contribution rates and falling migration and activity.

Table. Luxembourg: Public Sector Debt Sustainability Framework, 1998-2008
(In percent of GDP, unless otherwise indicated)

	Actual												Projections						
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002			2003	2004	2005	2006	2007	2008	
													I. Baseline Projections						Debt-stabilizing primary balance 10/
1 **Public sector debt 1/**	7.2	6.5	6.6	7.2	6.8	6.2	5.8	5.5	5.5	5.7			**4.9**	**6.1**	**5.9**	**5.8**	**3.8**	**3.2**	**-0.1**
o/w foreign-currency denominated	...	...	...	...	...	...	...	...	...	...			0.2	0.0	0.0	0.0	0.0	0.0	
2 Change in public sector debt	1.6	-0.7	0.1	0.5	-0.4	-0.5	-0.4	-0.4	0.0	0.2			-0.8	1.1	-0.2	-0.1	-2.0	-0.6	
3 Identified debt-creating flows (4+7+12)	-2.0	-3.5	-2.6	-2.2	-3.9	-3.8	-4.1	-7.0	-6.3	-2.6			0.8	2.4	2.8	2.6	1.5	0.8	
4 Primary deficit	-2.0	-3.2	-2.4	-2.3	-3.6	-3.5	-3.8	-6.6	-6.4	-2.7			0.8	2.4	2.8	2.6	1.6	0.9	
5 Revenue and grants	50.0	49.2	47.6	47.5	46.5	45.1	44.8	44.9	45.3	46.7			46.4	45.2	45.0	45.0	45.0	45.0	
6 Primary (noninterest) expenditure	48.0	45.9	45.2	45.2	43.0	41.6	40.9	38.2	38.9	44.0			47.2	47.6	47.9	47.6	46.6	45.9	
7 Automatic debt dynamics 2/	0.0	-0.2	-0.2	0.0	-0.3	-0.2	-0.3	-0.4	0.1	0.1			0.1	0.1	0.0	0.0	-0.1	-0.1	
8 Contribution from interest rate/growth differential 3/	-0.1	-0.2	-0.1	0.0	-0.4	-0.2	-0.3	-0.4	0.1	0.2			0.1	0.1	0.0	0.0	-0.1	-0.1	
9 Of which contribution from real interest rate	0.36	0.0	0.1	0.2	0.2	0.2	0.2	0.0	0.2	0.2			0.2	0.2	0.2	0.2	0.1	0.1	
10 Of which contribution from real GDP growth	-0.45	-0.3	-0.2	-0.2	-0.5	-0.4	-0.4	-0.5	-0.1	-0.1			-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	
11 Contribution from exchange rate depreciation 4/	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	
12 Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	
16 Residual, including asset changes (2-3)	3.6	2.7	2.7	2.8	3.5	3.2	3.7	6.7	6.4	2.7			-1.6	-1.3	-3.0	-2.6	-3.5	-1.4	
Public sector debt-to-revenue ratio 1/	14.5	13.2	13.9	15.1	14.5	13.8	13.0	12.2	12.1	12.2			10.6	13.4	13.0	12.9	8.4	7.1	
Key Macroeconomic and Fiscal Assumptions											10-Year Historical Average	10-Year Standard Deviation							Projected Average
Real GDP growth (in percent)	8.5	4.1	3.5	3.3	8.3	6.9	7.8	9.1	1.2	1.3	5.4	3.1	1.2	2.3	3.3	3.5	3.9	4.0	3.0
Average nominal interest rate on public debt (in percent) 6/	6.7	5.7	5.9	5.6	5.3	5.9	5.4	5.1	5.1	4.7	5.5	0.5	4.0	5.7	4.5	4.6	3.1	4.0	4.3
Average real interest rate (nominal rate minus change in GDP deflator, in percent)	6.9	0.9	1.5	3.6	2.6	3.2	3.2	1.2	3.0	4.1	3.0	1.7	2.9	4.0	2.8	3.0	1.3	2.2	2.7
Nominal appreciation (increase in US dollar value of local currency, in percent)	-9.6	1.4	10.1	-3.0	-10.6	-1.2	-4.9	-13.5	-2.9	5.2	-2.9	7.3	19.9	6.3	0.0	0.0	0.0	0.0	4.4
Inflation rate (GDP deflator, in percent)	-0.2	4.9	4.3	2.0	2.7	2.7	2.2	3.9	2.2	0.6	2.5	1.6	1.1	1.7	1.7	1.7	1.7	1.8	1.6
Growth of real primary spending (deflated by GDP deflator, in percent)	10.1	-0.3	1.8	3.4	3.0	3.5	6.1	1.9	2.9	14.7	4.7	4.5	8.6	3.1	4.0	2.9	1.8	2.3	3.8
Primary deficit	-2.0	-3.2	-2.4	-2.3	-3.6	-3.5	-3.8	-6.6	-6.4	-2.7	-3.7	1.6	0.8	2.4	2.8	2.6	1.6	0.9	1.8
A. Alternative Scenarios													II. Stress Tests for Public Debt Ratio						Debt-stabilizing primary balance 10/
A1. Key variables are at their historical averages in 2004-08 7/													**4.9**	**-0.1**	**-6.6**	**-12.6**	**-19.2**	**-23.6**	**0.5**
A2. Primary balance under no policy change in 2004-08													**4.9**	**6.1**	**5.9**	**5.8**	**3.8**	**3.2**	**-0.1**
A3. Country-specific shock in 2004, with reduction in GDP growth (relative to baseline) of one standard deviation 8/													**4.9**	**6.3**	**6.1**	**6.0**	**3.9**	**3.3**	**-0.1**
B. Bound Tests																			
B1. Real interest rate is at historical average plus two standard deviations in 2004 and 2005													**4.9**	**6.2**	**6.2**	**6.2**	**4.1**	**3.5**	**-0.1**
B2. Real GDP growth is at historical average minus two standard deviations in 2004 and 2005													**4.9**	**7.6**	**10.9**	**14.1**	**15.0**	**17.4**	**-0.3**
B3. Primary balance is at historical average minus two standard deviations in 2004 and 2005													**4.9**	**3.3**	**-0.1**	**-0.1**	**-2.0**	**-2.5**	**0.0**
B4. Combination of 2-4 using one standard deviation shocks													**4.9**	**1.7**	**-3.3**	**-3.3**	**-5.2**	**-5.6**	**0.1**
B5. One time 30 percent real depreciation in 2004 9/													**4.9**	**6.2**	**6.0**	**5.9**	**3.9**	**3.3**	**-0.1**
B6. 10 percent of GDP increase in other debt-creating flows in 2004													**4.9**	**16.1**	**15.8**	**15.7**	**13.4**	**12.7**	**-0.2**
Memorandum item:																			
Public sector financial assets	**...**	**...**	51.3	55.5	52.8	53.2	54.9	56.6	62.5	63.5			59.5	57.2	53.4	49.9	47.6	46.0	

1/ Indicate coverage of public sector, e.g., general government or nonfinancial public sector. Also whether net or gross debt is used.
2/ Derived as [(r - ┼⇔g┼- g + ┼⇔ r┼]/(1+g+┼+g┼)) times previous period debt ratio, with r = interest rate; ┼ = growth rate of GDP deflator; g = real GDP growth rate; ┼ = share of foreign-currency denominated debt; and ┼= nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).
3/ The real interest rate contribution is derived from the denominator in footnote 2/ as r - π (1+g) and the real growth contribution as -g.
4/ The exchange rate contribution is derived from the numerator in footnote 2/ as ┼×(1+r).
5/ Defined as public sector deficit, plus amortization of medium and long-term public sector debt, plus short-term debt at end of previous period.
6/ Derived as nominal interest expenditure divided by previous period debt stock.
7/ The key variables include real GDP growth; real interest rate; and primary balance in percent of GDP.
8/ The implied change in other key variables under this scenario is discussed in the text.
9/ Real depreciation is defined as nominal depreciation (measured by percentage fall in dollar value of local currency) minus domestic inflation (based on GDP deflator).
10/ Assumes that key variables (real GDP growth, real interest rate, and primary balance) remain at the level in percent of GDP/growth rate of the last projection year.

INTERNATIONAL MONETARY FUND

LUXEMBOURG

Staff Report for the 2004 Article IV Consultation

Supplementary Information

Prepared by the European and Policy Development and Review Departments

Approved by Alessandro Leipold and Carlos G. Muñiz

April 23, 2004

1. This supplement reports on data on the fiscal outcome for 2003 that has become available since the issuance of the staff report. Other economic indicators continued to evolve broadly in line with staff projections. The new information does not change the thrust of the staff appraisal.

Fiscal developments and outlook

2. According to data submitted by the authorities to Eurostat, the general government deficit was contained to 0.1 percent of GDP in 2003, about 0.8 percentage point of GDP lower than the staff's projection and 0.5 percentage point below the earlier official estimate (Table). However, as elaborated below, much of the overperformance is likely to be temporary and the authorities are maintaining the 2004-06 Stability Program (SP) targets. The modest revenue overperformance in relation to the staff's projections (but not to the SP) —stemming from higher VAT and excise tax receipts—does not materially alter the staff's revenue projections for 2004-06. Expenditure, however, was appreciably lower as major investment projects were delayed, contrary to the authorities' and the staff's assumptions. At this stage, there are no plans to cancel these projects. Considering further that social spending grew faster than the staff's projection in 2003, the staff continues to believe that the SP medium-term targets remain at risk (including, possibly, a temporary breach of the Maastricht 3 percent ceiling in 2005), unless the plans for discretionary spending are scaled down or entitlement programs reformed.

Table. Luxembourg: General Government Finances, 2003-03
(In percent of GDP, unless otherwise indicated)

	2002			2003		
	SP 1/	Staff Est. 2/	Update 3/	SP 1/	Staff Est. 2/	Update 3/
Revenue	46.7	46.7	47.0	47.1	46.4	46.6
Expenditure	44.2	44.2	44.3	47.7	47.4	46.8
Balance	2.4	2.4	2.7	-0.6	-1.0	-0.1
Memorandum items:						
Social expenditure growth (in percent)	10.6	10.6	10.4	9.3	9.3	9.8
Gross debt	5.7	5.7	5.7	4.9	4.9	4.9

Sources: Eurostat; and IMF staff estimates and projections.
1/ SP refers to the authorities' Stability and Growth Program update of November 2003.
2/ See Staff Report, Table 2.
3/ Notification to Eurostat by STATEC.

3. The draft law that broadens the scope for the investment of social security assets (see Staff Report, §14) has recently been passed.

Other issues

4. In accordance with IMF Executive Board Decision 144-(52/51) dated August 14, 1952, the authorities formally notified the Fund on April 15, 2004, of a number of measures taken for the preservation of national and international security, in conformity with various EU Council regulations that give rise to exchange restrictions subject to Fund jurisdiction. In addition to the measures listed in the Staff Report (Appendix I), restrictions relating to Somalia (per EU Council Regulation No. 147/2003), the Democratic Republic of Congo (per EU Council Regulation No. 1727/2003), and the assets of some residents of Kuwait and Iraq are in place; however, restrictions relating to Angola, mentioned in the Staff Report, are no longer in place.

INTERNATIONAL MONETARY FUND

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EXTERNAL
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Public Information Notice (PIN) No.04/49
FOR IMMEDIATE RELEASE
May 4, 2004

International Monetary Fund
700 19th Street, NW
Washington, D. C. 20431 USA

IMF Concludes 2004 Article IV Consultation with Luxembourg

On April 28, 2004, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation with Luxembourg.[1]

Background

Following a prolonged slowdown in economic activity, an externally-driven upswing appears in the offing, although various obstacles are likely to hinder a return to the impressive 5.5 percent average real GDP growth rate of 1980-2000. The financial sector is still adjusting to the bursting of the global equity bubble. Also, relatively generous wage settlements and falling productivity caused a significant increase in unit labor costs that reduced corporate profitability and competitiveness, which has also been weakened by the appreciation of the euro. Sluggish activity interacted with generous welfare benefits to raise unemployment, while labor force participation remains relatively low, particularly of older residents.

The authorities are adjusting policies to the growth slowdown, although major new initiatives are on hold in the run-up to the June 2004 general election. Tax cuts, high expenditure, and weak activity are estimated to have caused a general government deficit in 2003, the first in two

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board. At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities.

decades. To forestall a large deterioration, expenditure growth is programmed to slow to about 4.3 percent in 2004, down from near double-digit growth rates in previous years. Some reforms and adjustments to entitlement programs are supporting this deceleration. Nonetheless, absent further measures the general government deficit is projected to rise through 2005, as corporate tax receipts react with a lag to the economic slowdown. Gross debt remains low and net assets high.

Executive Board Assessment

Directors welcomed indications that real GDP growth is rebounding, following an unusually long period of sluggish activity. However, they stressed that medium-run growth prospects are now less buoyant in comparison to the exceptional growth performance of the past decade, as productivity growth and the expansion of the financial sector have slowed. Two key challenges in the period ahead will be, first, to adapt fiscal policy to the slower growth environment through a marked deceleration of expenditure increases, and second, to enhance the economy’s resilience to unforeseen developments through entitlement and labor market reforms. Directors urged the government to design and implement soon after the general elections a comprehensive strategy to address these challenges, with a view to preserving the economy’s attractiveness for business in Luxembourg.

Considering the high mobility of factors of production and the demographic pressures that lie ahead, Directors supported the official fiscal policy objective to run a small general government surplus over the medium run without increasing the tax burden. However, attaining this objective will be difficult because of the depth and duration of the current growth slowdown, and will require that expenditures are lower than planned in the Stability Program update. A number of Directors also pointed to the importance of observing the 3 percent of GDP deficit ceiling. While Directors agreed that fiscal adjustment could be stretched over time because of the public sector’s favorable net asset position, they encouraged the authorities to eliminate the general government deficit soon after 2006, unless real GDP growth disappoints significantly; several Directors, however, highlighted the benefits of more rapid adjustment.

Directors stressed that expenditure restraint would be key to improving the public finances. Tight control of discretionary spending will be needed in 2004, to avoid overshooting the general government deficit target. Directors called for a more comprehensive adjustment strategy to sustain the deceleration in spending over the medium run, centered on cutbacks in subsidies, a better targeting of jobless support, and health care and pension reforms.

Regarding expenditure on entitlements, Directors underscored the benefits of addressing aging-related pressures proactively and early, to limit the risks for potentially deleterious payroll tax hikes later on. In the health care system, various measures could be considered, including raising the proportion of medical expenses paid out-of-pocket. For old-age pensions, most Directors encouraged the authorities to consider building up a mandatory fully-funded pillar, in particular in order to mitigate risks related to the high degree of mobility of the workforce. Alternatively, the rate of replacement of pre-retirement income under the pension scheme could be formally linked to the pension contribution base, and the statutory retirement age could be

linked to life expectancy. Some Directors recommended reviewing the pension system before 2006, and reviewing it thereafter more often than every 7 years.

Directors observed that employment growth has remained robust, supported by a strong inflow of commuters to jobs in Luxembourg. At the same time, unemployment among residents has increased steadily, and the rate of participation of older workers in the labor force is low, owing to a generous social welfare policy. Directors supported the authorities' efforts to improve the targeting of the support for the jobless and curtail the abuse of disability pensions. However, more fundamental reforms should be considered. In particular, for young workers, the shortened work experience requirement for access to unemployment benefits could be aligned with that for other workers. For older workers, on-the-job training could be improved and various incentives to drop out of the labor force early, notably in the pension system, eliminated. More generally, gradual reductions in the replacement rate of minimum income should be considered to strengthen the incentive to work for those who are fully able to.

Directors observed that recent developments had confirmed that Luxembourg's financial sector is robust, efficient, and well supervised, as assessed in the 2002 FSAP. Directors welcomed recent steps to improve financial sector supervision, which will help to maintain the sector's robustness as global competition intensifies and taxation is harmonized. They noted that the large volume of cross border financial business makes combating money laundering and the financing of terrorism (AML/CFT) an important task and challenge for the authorities. Accordingly, they endorsed the efforts to strengthen further the AML/CFT legal and implementation structure, and commended the authorities' commitment to ensure that the new AML/CFT draft law meets the highest international standards.

Directors praised Luxembourg's high level of official development assistance, and encouraged the authorities to support further multilateral reductions of agricultural subsidies and import restrictions.

Directors observed that Luxembourg's economic statistics are adequate for surveillance and have continued to improve. They encouraged further efforts to allow Luxembourg to subscribe to the Fund's Special Data Dissemination Standard.

Public Information Notices (PINs) are issued, (i) at the request of a member country, following the conclusion of the Article IV consultation for countries seeking to make known the views of the IMF to the public. This action is intended to strengthen IMF surveillance over the economic policies of member countries by increasing the transparency of the IMF's assessment of these policies; and (ii) following policy discussions in the Executive Board at the decision of the Board.

Luxembourg: Selected Economic Indicators

	2000	2001	2002	2003 1/	2004 2/
Real economy					
Real GDP (change in percent)	9.1	1.2	1.3	1.2	2.3
Domestic demand (change in percent)	4.9	4.3	-0.6	2.2	2.5
CPI (in percent, year average)	3.2	2.7	2.1	2.6	2.1
Unemployment rate (in percent)	2.6	2.6	3.0	4.1	4.9
Gross national saving (in percent of GDP)	32.9	32.2	26.2	25.9	25.6
Gross fixed investment (in percent of GDP)	20.9	22.9	22.5	22.5	22.4
Public finances (percent of GDP)					
General government balance	6.4	6.2	2.4	-1.0	-2.6
General government gross debt	5.5	5.5	5.7	4.9	6.1
Interest rates (in percent)					
Short term rate 3/ 4/	4.4	4.3	3.3	2.3	2.1
Long-term bond yield 5/	5.9	5.4	5.3	4.3	...
Balance of payments (in percent of GDP)					
Trade balance	-12.4	-12.2	-9.6	-10.2	-10.5
Current account	12.8	8.4	8.2	5.9	6.9
Exchange rates					
Euro per US dollar 6/	1.08	1.12	1.06	0.88	0.82
Nominal effective rate (1995=100)	95.50	95.40	95.63	96.89	...
Real effective rate (CPI based; 1995=100)					

Sources: Data provided by the authorities; and IMF staff calculations.

1/ Data for 2003 are estimates as of April 6, 2004.

2/ Projections.

3/ For 2004, data refer to February.

4/ Short-term rates are for 3-month euro deposits.

5/ Average of long-term bonds traded on Luxembourg Stock Exchange. Long-term government bond yields are not available (the only 10-year government bond matures in 2007).

6/ For 2004, data refer to March 25.