Cyprus: Selected Issues and Statistical Appendix

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CYPRUS

Selected Issues and Statistical Appendix

Prepared by Leif Eskesen, Gian Maria Milesi-Ferretti and Athanasios Vamvakidis
(all EUI)

Approved by the European I Department

January 17, 2003

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I. THE INTERNATIONAL INVESTMENT POSITION: AN INTERNATIONAL PERSPECTIVE[1]

1.   **This Chapter provides a brief assessment of Cyprus's external position and its composition in an international perspective**, drawing from work on the structure of countries' international portfolios and their determinants (Lane and Milesi-Ferretti, 2001; 2002; 2003). It discusses estimates of Cyprus's external position based on partial International Investment Position data as well as on cumulative flows, and compares its level and composition with advanced OECD economies and with other accession countries. The Chapter finds that Cyprus is a net debtor, but that a precise assessment of its overall external position is hindered by the lack of data on nondebt stocks, particularly foreign direct investment. International experience suggests that direct investment and portfolio equity flows to and from Cyprus have been relatively low, and may well increase in the future, with the completion of capital account liberalization and further integration with the European Union.

A. Cyprus's External Account Dynamics

2.   **During the past 25 years, Cyprus has run persistent current account deficits.** These were high during the period 1976–85, averaging close to 10 percent of GDP, on account of the reconstruction effort after the war and partition. During the same period, annual GDP growth averaged close to 10 percent. Since 1986, the average current account deficit declined to 3.5 percent of GDP, and average growth to 5 percent. As a result of these persistent external imbalances, Cyprus is a net debtor.

3.   **The dynamics of the net foreign asset position are linked to the current account balance by the relation:**

$$B_t - B_{t-1} = CA_t + KA_t + KG_t \qquad (1)$$

where B is the stock of net foreign assets, CA is the current account balance, KA is the capital account balance (measuring net capital account transfers, such as debt forgiveness) and KG are net capital gains on external assets and liabilities, arising from factors such as valuation changes and exchange rate fluctuations. All variables are expressed in U.S. dollars. Taking ratios to GDP, equation (1) can be approximated as follows:

$$b_t - b_{t-1} \cong ca_t + ka_t + kg_t - (g_t - d_t)b_{t-1} \qquad (2)$$

where lower-case letters indicate ratios to GDP, g is the nominal GDP growth rate expressed in domestic currency, and d the rate of nominal depreciation vis-à-vis the U.S. dollar.

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[1] Prepared by Gian Maria Milesi-Ferretti.

4.   **Estimating the net external position of a country starting from balance of payments flow data is an exercise fraught with uncertainties** (see Lane and Milesi-Ferretti, 2001, for a discussion). In the case of Cyprus, these difficulties are compounded by changes in the methodology used to estimate current account balances (from Manual 4 to Manual 5), which affect the data from 1995 onwards, as well as changes in the residency definition for data on direct investment flows (which counts offshore companies with a physical presence in Cyprus as resident from 1997 onwards) which affect the estimates of the stock of direct investment.

5.   **With these caveats in mind, this Chapter presents two rough current-account-based proxy for Cyprus's net external position as a ratio of GDP for the period 1980–2002**, which are plotted in Figure 1. This first cumulative current account measure, CUMCA, is constructed using estimates by Sinn (1990) for the net external position at the end of 1975 (which shows a small creditor position), and using equation (2) to update its value from that year onwards, ignoring capital gains and losses.[2] The second measure, CUMCA+Sinn, uses Sinn's net external position estimates for the period 1980–87, and equation (2) for subsequent data updates. The Sinn estimates are based on data on foreign exchange reserves, banks' net foreign assets, as well as estimates of government debt liabilities and nonfinancial private sector assets and liabilities.[3] As can be seen from Figure 1, both ratios shows a steady deterioration during the period 1996–2001. Because of the depreciation of the euro (and hence the Cyprus pound) against the dollar during this period, the last term of equation (2) has been close to zero, and therefore current account deficits averaging 4 percent of GDP a year have raised net external liabilities by approximately the same amount.

6.   **Equation (2) also determines the current account balance that, other things being equal, stabilizes the net external position.** Assuming a real growth rate of 4 percent, inflation of 2 percent, a stable nominal exchange rate vis-à-vis the U.S. dollar, and a net external position of 50 percent of GDP, the level of the current account deficit that stabilizes the ratio of net external liabilities to GDP is 3 percent. A deficit of 3.5 percent would instead be consistent with a stabilization of net external liabilities at 60 percent of GDP. Hence, stabilization of the net external position below 50 percent would require a substantial improvement in Cyprus's current account balance. Clearly, exchange rate fluctuations and valuation changes, which are especially important for foreign direct investment and portfolio

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[2] The estimates only account for capital gains and losses on foreign exchange reserves, which equal the change in the stock of reserves minus the underlying flow. Also, estimates count net errors and omissions (which on average show unrecorded inflows in Cyprus) as unrecorded net exports, thereby allowing for the possibility that exports of services are underestimated.

[3] The difference between the two series is primarily due to the very large Sinn estimate for nonbank private sector assets, which is based on deposits from nonbank Cypriot residents in foreign banks.

Figure 1. Cyprus: Net External Position, Current-Account-Based Estimates, 1980-2002
(Ratio of GDP)
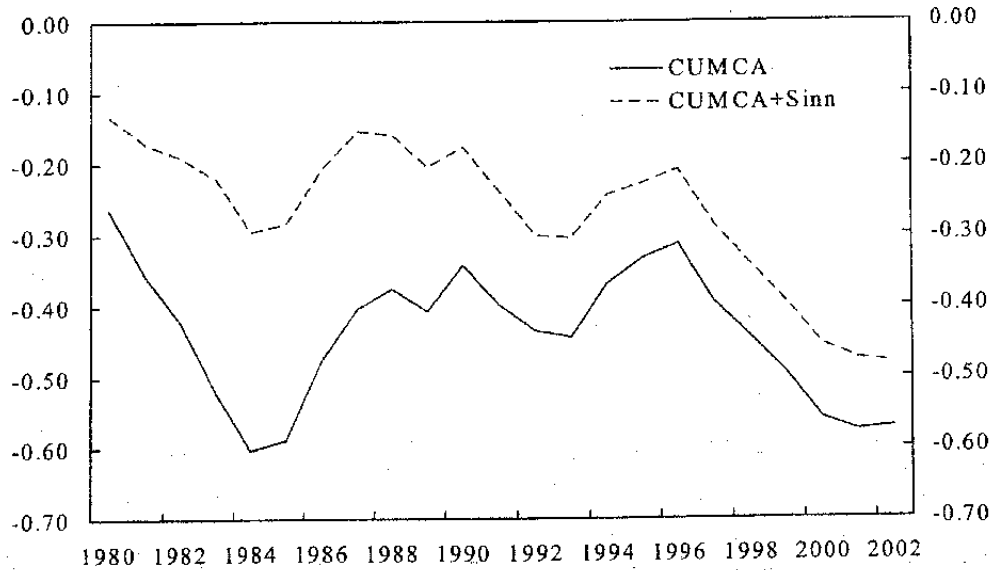
Sources: Sinn (1990); IMF, *International Financial Statistics*; and Fund staff calculations.

equity holdings, can imply changes in the net external position irrespectively of current account behavior.[4] For purposes of comparison, Figure 2 plots the net foreign asset position of advanced OECD economies at end-2001, in relation to their GDP per capita. Net external liabilities in Greece and Portugal, countries with a GDP per capita similar to Cyprus, had net external liabilities of around 40 percent of GDP.

B. Cyprus's International Investment Position

7.   **Cyprus has recently begun to assemble data on its International Investment Position (IIP).** These preliminary data, presented in Table 1, provide a comprehensive coverage of foreign exchange reserves, other investment liabilities, and portfolio assets (both debt and equity instruments), and partial coverage of other investment assets and portfolio debt liabilities. Data which are not yet available include the foreign direct investment position (both assets and liabilities), portfolio equity liabilities, financial derivatives, as well as stocks of other assets and a portion of other liabilities held by the nonfinancial private sector. A notable factor is the high level of foreign deposits in Cyprus banks, and the corresponding high (albeit lower) level of domestic banks' foreign deposits. The IIP data do not include assets and liabilities of the offshore financial sector, which, according to the Balance of

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[4] See Lane and Milesi-Ferretti (2001; 2003) for an illustration of the quantitative importance of capital gains and losses in explaining the dynamics of net foreign asset positions in advanced economies.

Payments Manual 5 convention, meets the one-year physical presence rule for residency. Comprehensive data on portfolio asset holdings, which include the offshore sector, have been compiled in the context of the 2001 Comprehensive Portfolio Investment Survey conducted by the IMF Statistics Department.[5]

8.   **According to the partial 2001 International Investment Position data, Cyprus has a net debt liability position equivalent to around 35 percent of GDP.** This level is somewhat lower than the one obtained by mechanically cumulating debt-creating flows from current account data, which is around 40 percent of GDP. The financial system is the sector with the largest net external exposure, at 30 percent of GDP, primarily on account of large foreign-exchange deposits in the banking system. Foreign exchange reserves exceed government external liabilities, while the (partial) net liabilities of the nonfinancial private sector are around 15 percent of GDP.

9.   **In order to obtain an assessment of the overall external position, it is necessary to estimate those IIP components for which data is not yet available.** Among these, the most important in quantitative terms are direct investment assets and liabilities.[6] Estimating these stocks starting from flow data is complicated by the fact that from 1997 onwards the FDI flows recorded in the balance of payments data include transactions of offshore sector companies with a physical presence in Cyprus (while the pre-1997 data do not). Be it as it may, cumulative balance of payments flow data would suggest that the stock of foreign direct investment liabilities is larger than the stock of assets, with net FDI liabilities of around 16 percent of GDP. On the other hand, recorded investment income receipts from direct investment assets have exceeded investment income payments on direct investment liabilities since 1998; this would suggest that Cyprus residents' FDI holdings abroad may instead exceed foreigners' FDI holdings in Cyprus. In evaluating the pattern of investment income flows, it is important to note that real estate investment in Cyprus by foreigners has been substantial in recent years; this could also partially account for the low dividend payments on Cyprus's FDI liabilities.

C. The External Position: Trends In OECD And Accession Countries

The net external position

10.   **In advanced economies, the net external position is positively correlated with income per capita, both across countries and over time** (Lane and Milesi-Ferretti, 2001; 2002). The cross-country correlation is illustrated in Figure 2, which plots the cross-sectional

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[5] Total portfolio assets including the offshore sector amount to US$5.8 billion, as opposed to US$2.4 billion for domestic residents' holdings.

[6] Among the other missing components, flow data suggest that portfolio equity liabilities are around 3 percent of GDP.

Figure 2. OECD Countries: GDP per Capita and Ratio of Net Foreign Assets to GDP, 2001   1/
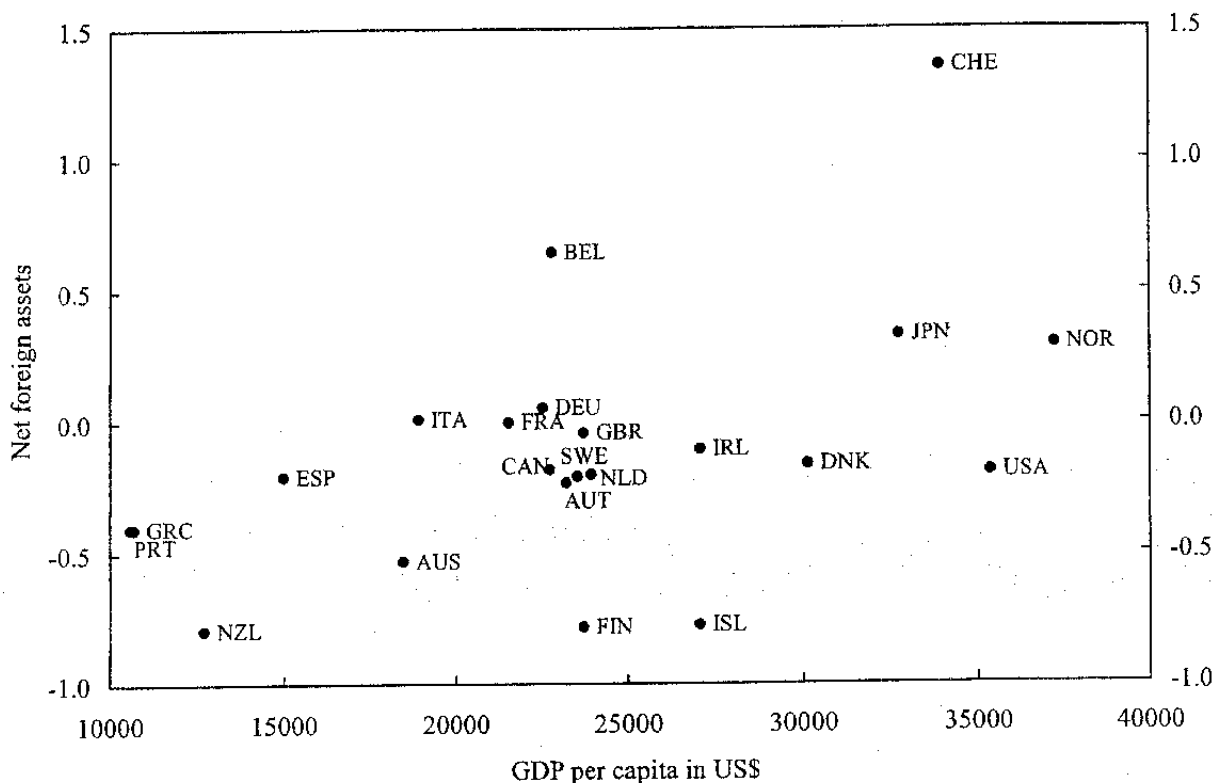
1/ Data for Belgium refer to 2000.

Source: Lane and Milesi-Ferretti (2003) based on IMF, *Balance of Payments Statistics.*

dispersion of net external positions and GDP per capita for 22 OECD economies in 2001. The positive correlation of the net external position with income per capita can be explained by several factors. First, if the domestic marginal product of capital decreases as an economy grows richer, domestic investment will fall and home investors will seek out overseas accumulation opportunities. Along similar lines of reasoning, a positive relation between relative output per capita and the net foreign asset position is also captured in the traditional "stages of the balance of payments" hypothesis (see Halevi, 1971; and Fischer and Frenkel, 1974). Second, an increase in domestic income may lead to a rise in the domestic saving rate—for example, this would be the case if, as an economy grows, habit persistence causes consumption growth to lag output growth (see, for instance, Carroll, Overland and Weil, 2000). Given that Cyprus's potential growth rate is above the level in the euro area, these factors would suggest that Cyprus's net external position is likely to improve over time.

11.   **On the other hand, as a country develops and gets more integrated with international trade and financial markets, liquidity constraints become less binding, thus potentially bringing about an increase in external borrowing.** This argument has been used to explain the rise in current account imbalances in Greece and Portugal in recent

years, and especially following euro-area membership (see, for example, Blanchard and Giavazzi, 2002). In these countries, interest rate differentials, a measure of financial integration, declined substantially, in nominal and real terms, since the second half of the 1990s.[7] While further integration with the EU may well have similar effects for Cyprus, the potential impact on interest rates of entering the euro area is smaller, on account of the relatively small difference between euro and Cyprus pound real interest rates.

The composition of external assets and liabilities

12.   **Cyprus's net debt position is moderate compared to OECD countries, but larger than in other accession countries.**[8] The comparison with advanced economies is presented in Table 1, and shows that, at around 35 percent, Cyprus's net debt position is in line with the one in several small open advanced economies. The comparison with accession countries is illustrated in Figure 3, which plots the net debt position and the level of trade openness. The Figure illustrates both the low level of net debt in most accession countries and its positive correlation with trade openness. This is the mirror image of the net "equity" position, defined as the sum of net portfolio equity and net FDI holdings, which is illustrated in Figure 4. Indeed, most accession countries have relied substantially on FDI flows for external financing, with a strong association between trade openness and cumulative FDI liabilities.

13.   **The recent decade has seen a large rise in international financial integration among advanced economies, as measured by the gross stocks of external assets and liabilities.** This is illustrated in Figure 5, which plots an indicator of overall financial integration and an indicator of "equity" integration. The overall financial integration indicator is constructed as the sum of external assets and liabilities, aggregated over a set of advanced countries, as a ratio of aggregate GDP. The "equity" indicator is the sum of direct investment and portfolio equity assets and liabilities, aggregated over the same set of countries, also expressed as a ratio of aggregate GDP.[9] Over time, this process of financial integration is associated with an increase in trade integration, domestic financial deepening, and the removal of barriers to international capital mobility (Lane and Milesi-Ferretti, 2003), while across countries, international financial integration is positively correlated with trade openness, particularly so for equity holdings.

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[7] However, Decressin and Disyatat (2000) find no compelling evidence that pre-EMU integration among EU countries was significantly different from integration *within* countries.

[8] The net debt position is defined as the sum of foreign reserves, the net portfolio debt position, and the net other investment assets position.

[9] Countries in the sample, chosen for reasons of data availability, are the United States, the United Kingdom, Austria, Belgium, Germany, Italy, the Netherlands, Norway, Sweden, Switzerland, Canada, Japan, Finland, and Spain.

Figure 3. Accession Countries: Net International Debt Position and Trade Openness, 2001 1/
(Ratios of GDP)
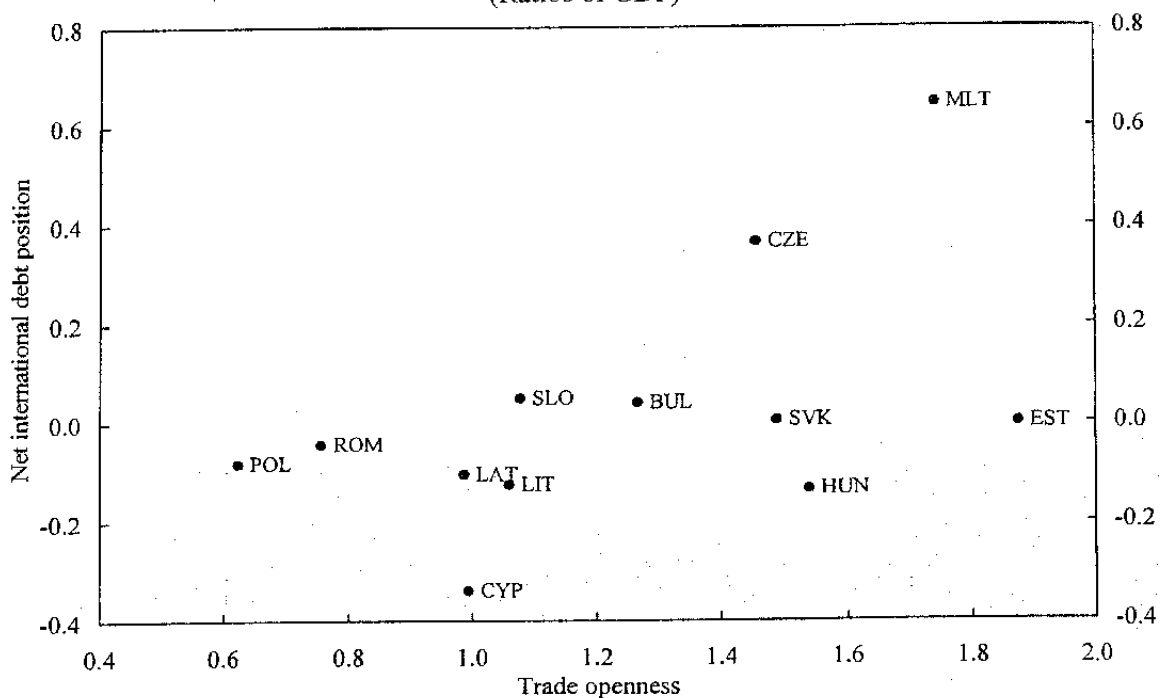
Figure 4. Accession Countries: Net International Equity Position and Trade Openness, 2001 1/
(Ratios of GDP)
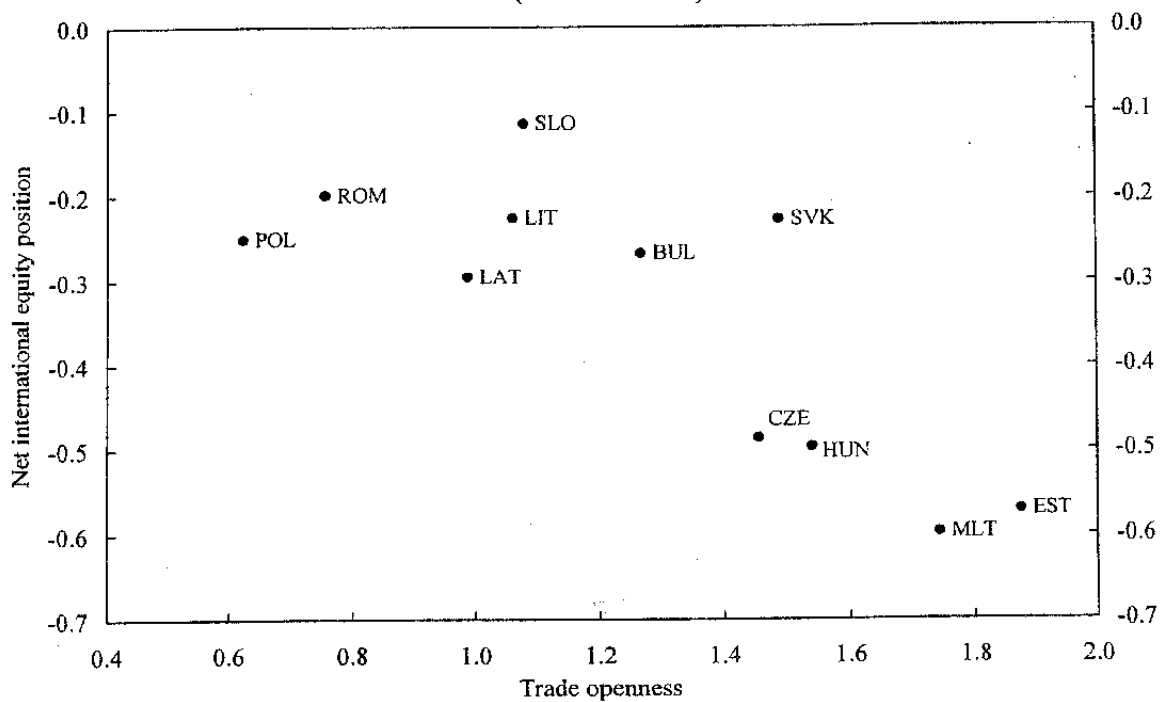
1/ Data for Slovak Republic and Malta refer to the year 2000.
Sources: IMF, *International Financial Statistics* and Fund staff calculations.

Figure 5. Advanced Economies: International Financial Integration, 1982-2001
(Ratio of GDP)
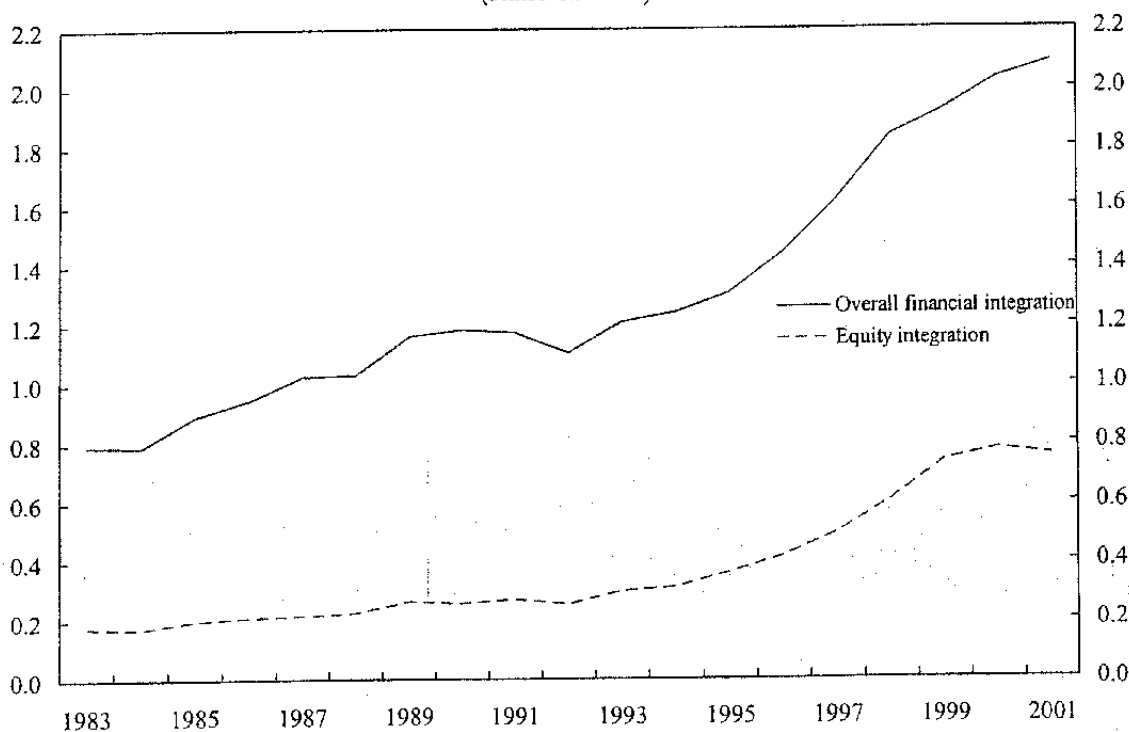
Source: Lane and Milesi-Ferretti (2003) based on IMF, *Balance of Payments Statistics* and national sources.

14.   For Cyprus, according to the IIP data presented in Table 1 the sum of external debt assets and liabilities as a ratio of GDP is around 180 percent. This is broadly in line with levels in advanced economies—the corresponding ratio is 120 percent in Greece and 240 percent in Portugal.[10] However, based on cumulative flow data, the sum of equity assets and liabilities, around 30 percent of GDP, is low by both advanced economies' and accession countries' standards. Hence, the removal of capital controls in Cyprus may well be associated with an increase in equity diversification, with FDI and portfolio equity holdings assuming increasing importance.

D. Concluding Remarks

15.   This Chapter has provided a preliminary assessment of the size and composition of Cyprus's net external position. Cyprus's net debt liabilities are relatively high by the standards of other EU accession countries, but not so by the standards of advanced OECD economies. Estimates of Cyprus's gross and net equity position are fraught with uncertainties, but flow data indicate a much smaller reliance on external equity financing than other

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[10] The mean for a sample of advanced OECD economies and accession countries is just below 200 percent, and the median around 140 percent.

accession countries. Stabilizing the net external position at or below 50 percent of GDP would require a reduction in the current account deficit to an average of 3 percent of GDP or below. Looking forward, international experience suggests that the full removal of barriers to capital mobility is likely to result in an increase in external diversification in general, and in the gross size of equity flows in particular.

Table 1. Cyprus: Partial International Investment Position, 2001 1/
(In millions of U.S. dollars)

	Assets	Liabilities
1. Direct investment	...	....
2. Portfolio investment	1590.3	....
2.1 Equity securities	129.3	....
2.1.1 Monetary authorities	0	
2.1.2 General government	0	
2.1.3 MFIs (excluding central banks)	0	
2.1.4 Other sectors	129.0	
2.2 Debt securities	1460.9	. 1445.1
2.2.1 Bonds and notes	1304.8	1344.1
2.2.1.1 Monetary authorities	0	0
2.2.1.2 General government	0	855.1
2.2.1.3 MFIs (excluding central banks)	1279.6	488.9
2.2.1.4 Other sectors	25.2	0
2.2.2 Money market instruments	156.1	101.0
2.2.2.1 Monetary authorities	0	0
2.2.2.2 General government	0	101.0
2.2.2.3 MFIs (excluding central banks)	156.0	0
2.2.2.4 Other sectors	0	0
3. Financial Derivatives	...	....
3.1 monetary authorities	0	0
3.2 general government	0	0
3.3 MFIs (excluding central banks)	...	...
3.4 Other sectors	...	...
4. Other Investment	4268.9	9806.3
4.1 Monetary authorities	0	40.6
4.1.1 Loans/currency and deposits	0	40.4
4.1.2 Other assets/liabilities	0	0.2
4.2 General government	0	279.9
4.2.1 Trade credits	0	0
4.2.3 Loans/currency and deposits	0	279.9
4.2.4 Other assets/liabilities	0	0
4.3 MFIs (excluding central banks)	4269	7966.2
4.3.1 Loans/currency and deposits	4260	7966.2
4.3.2 Other assets/liabilities.	9	0
4.4 Other sectors	...	1519.5
4.4.1 Trade credits	...	489.1
4.4.3 Loans/currency and deposits	...	1030.5
4.4.4 Other assets/liabilities	...	
5. Reserves Assets	2396.4	0
5.1 Monetary gold	127.5	0
5.2 Special drawing rights.	1.4	0
5.3 Reserve position in the IMF	44.4	0
5.4 Foreign exchange.	2221.9	0
5.4.1 Currency and deposits.	1186.6	0
5.4.2 Securities	1035.4	0
5.5 Other claims	. 1.1	0

Source: Bank of Cyprus.

1/ Preliminary data. The data do not include assets and liaiblities of the offshore sector.

Table 2. Advanced Economies: Net International Debt Position, 2001
(In percent of GDP)

Creditors		Debtors	
Belgium 1/	18.4	Australia	-42.0
France	2.7	Austria	-31.3
Ireland 2/	244.2	Canada	-33.7
Japan	30.5	Denmark	-33.6
Switzerland	112.6	Finland	-15.6
		Germany	-9.1
		Greece	-29.5
		Iceland	-104.6
		Italy	-22.9
		Netherlands	-10.6
		New Zealand	-57.1
		Norway	10.0
		Portugal	-27.9
		Spain	-21.7
		Sweden	-52.0
		United Kingdom	-17.8
		United States	-21.3

1/ Data for Belgium refers to the year 2000.
2/ Includes the International Financial Services Center Enterprises.

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II. AGING AND LONG-TERM FISCAL SUSTAINABILITY IN CYPRUS[11]

A. Introduction and Summary

16.   **Similar to other countries, Cyprus faces a significant aging of its population over the next 50 years.** The ratio of elderly to people of working age will more than double over this period. As the average age of the population increases, spending on pensions and health care will rise. At the same time, the shrinkage in the number of labor force participants will lower tax and social security contribution revenues. This will put pressure on public finances from both the expenditure and revenue side.

17.   **This chapter looks at the fiscal burden facing Cyprus due to aging and the policy steps necessary to address it.** It gives a short description of the Cypriot pension and health care systems, and describes how aging will affect the costs of these systems. It then analyzes the development of age-related spending and the sustainability of general government finances under different scenarios. Finally, it quantifies the primary adjustment required to keep public finances on a sustainable path in the long term and presents a policy reform plan to achieve this. The main conclusions are the following:

- Compared to EU and other European countries, Cyprus currently spends relatively little on public pensions and health care; however, it faces the same relative aging of the population, with an expected doubling of the elderly share.

- The pronounced aging of the population will not only translate into more people claiming pensions and in need of health care, but the increasing average age of elderly will in itself increase the demand for health care, giving rise to a "double-aging" problem.

- Since Cyprus's pension system is a public pay-as-you-go system based on the notion of solidarity among generations, its financial sustainability cannot be examined in isolation. Instead, it should be seen in the wider context of long-term sustainability of general public finances. Thus, in such a system, the burden of aging is a fiscal burden.

- Based on current policies, age-related spending will increase by around 3 percent as a share of GDP and threaten long-term public finance sustainability, even under fairly optimistic assumptions about the success of pension reforms and economic growth. Under less optimistic assumptions, age-related spending will rise by up to 6½ percent as a share of GDP and place public finances onto an unsustainable path.

- Therefore, to safeguard long-term sustainability the authorities need to take timely measures to contain the fiscal pressures associated with aging. Such measures should first and foremost include pension reforms, such as increasing the effective retirement age; moving toward price indexation of pensions in the lower band; and increasing

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[11] Prepared by Leif Lybecker Eskesen.

contribution rates. If needed, additional savings could be generated in other areas, for instance through tax increases, reforms of the civil service, or reductions in non-pension welfare entitlements. In all cases, early action would lessen the required fiscal adjustment.

B. The Cypriot Pension and Health Care Systems

Pension system

18.   **As in most continental European countries, the Cypriot public pension system is built on the concept of solidarity among generations.** The public pay-as-you-go pension system provides the principal source of income for retirees, while private fully funded pension schemes are still not very important despite a build-up over recent years. There are basically two main public schemes: one for private and public sector employees, which is part of the contribution-financed social insurance scheme, and a second, tax-financed scheme for civil servants.

19.   **Public pension schemes provide old-age, disability, and widows' pensions.** Eligibility for old-age pensions in the social insurance scheme depends on the length of the contribution period and age. The statutory retirement age in the social insurance scheme is 65, but with a sufficiently long contribution period it is possible to receive old-age pension from the age of 63. However, eligibility for old-age pension is not contingent on retirement from regular employment--benefits can be drawn independently from employment status. In the civil service scheme the pension age is 60, but earlier retirement is possible. Disability pensions are subject to medical certification and length of contribution, and widows pensions to marital status (and widower pensions to certain conditions of dependence).

20.   **Retiring before reaching the regular pension age is the rule rather than the exception.** In 1997, more than 85 percent of new pensioners were 63, with the remainder being older. Consequently, the average age of new pensioners is significantly below the statutory pension age. In 1997, the average retirement age in the social insurance schemes was around 63 years for both men and women. Civil servants typically retire from civil service at the age of 60.[12] However, the average age of pensioners in Cyprus and the labor force participation rate among elderly are higher than in most EU countries (Figure 1). The latter can also partly be explained by the right of old-age pensioners to continue to work without loss of pension benefits.

Figure 1. Cyprus: Participation Rates
(Elderly, aged 55-64)

Sources: Eurostat, OECD and Authorities

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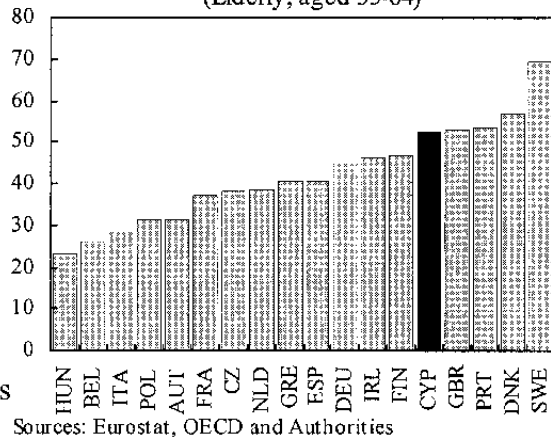
[12] Civil servants are also eligible for a pension from the social insurance scheme from the age of 63, but this is means-tested and is reduced to take into account their civil service pension.

21.   **Pension benefits have two components: a basic pension and a supplementary pension based on the level of insurable earnings.** The earnings on which contributions and benefits are calculated (insurable earnings) are divided into a "lower" and an "upper" band, with the "lower band" consisting of earnings up to a certain "basic" level (fixed at USD 2,180 in 2002) and the "upper band," consisting of earnings in excess of the "basic" level. Gross insurable earnings can reach a maximum of six times the basic level. The basic pension, amounting to 60 percent of the average work life's "lower band" earnings, is supplemented by a pension equivalent to 1.5 percent of cumulative work life "upper band" earnings. In addition, the basic pension is increased by ⅓ for the first dependant and by ⅙ for each of the second and third dependants. Basic pensions are indexed to wage growth and supplementary pensions to inflation. Postponement of receipt of pension from age 63 to 68 will entitle the beneficiary to an increase of 0.5 percent in the old-age pension for each month of postponement. Old-age pensioners continuing to pay contributions from 63 to 65 are entitled to an increase in pensions equal to 1.5 percent of the associated insurable earnings. Spending on pension benefits in Cyprus is low by international standards—total spending on pensions in 2000 was around 5.4 percent of GDP, around half the EU average (Table 1).

Table 1. Cyprus: Public Pension Spending in Selected European Countries in 2000 (In percent of GDP)

Austria	14.5
Italy	13.8
Greece	12.6
France	12.1
Germany	11.8
Finland	11.3
Poland	10.8
Denmark	10.5
Belgium	10.0
Portugal	9.8
Spain	9.4
Sweden	9.0
Netherlands	7.9
Czech Republic	7.8
Luxembourg	7.4
Hungary	6.0
United Kingdom	5.5
Cyprus	**5.4**
Ireland	4.6
EU	10.4

Sources: EU, OECD, Ministry of Finance, and Staff Calculations

22.   **Contributions are currently sufficient to cover total spending on pensions in the social insurance scheme.** Total contribution rates for the social insurance scheme, which in addition to old-age pensions consist of unemployment benefits, sickness benefits, etc., differ between the employed and self-employed persons. Employed persons contribute 12.6 percent of their insurable earnings, shared equally between the employer and employees, while the self-employed contribute 11.6 percent of their insurable income. The central government contributes the equivalent of 4 percent of insurable earnings, bringing total contributions for employed to 16.6 percent. The social insurance fund has three separate accounts: (1) the General Benefit Account; (2) the Supplementary Benefit Account; and (3) the Unemployment Benefit Account. The General Benefit Account is credited with 9.5 percentage points of the contributions and is charged with the payment of all basic periodical benefits (including basic pensions), while the Supplementary Benefit Account is credited with 6 percentage points of the contributions and is charged with the payment of all supplementary earnings-related benefits (including supplementary pensions). The Unemployment Benefit account is credited with the remaining contributions of around 1 percentage point and is charged with payments of unemployment benefits. Both the General Benefit Account and the Supplementary Benefit Account currently receive sufficient

contributions to pay the periodical benefits, and the latter in particular has a big surplus, which to a large extent can be explained by the relative lower maturity of the upper band pension scheme (i.e. the number of recipients is low relative to contributors, and the recipients credited insurable earnings are likewise comparatively low).

Health care system

23. **Health care services are delivered by both public and private providers, but the privately provided health care services have increased in importance.** In general, there are three schemes for health services in Cyprus: public, private, and special schemes. Since the 1990s, the public sector's share of health care provision has been falling, and the private sector now provide over 50 percent of health services.

24. **Under the public health care scheme, services are provided free of charge through public facilities.** People eligible under this scheme are government employees, individuals earning less than C£6,000 per annum, households earning less than C£10,000, and households with more than three children. Individuals with an income between C£6,000 and C£9,000 and households with an income between C£10,000 and C£14,000 have health care provided at 50 percent of the prescribed rates. The range of services offered through the public health care scheme includes visits to general physicians, specialist consultations, inpatient stays, medical care given abroad in special fields not offered in Cyprus, and all prescription drugs. Furthermore, medical care is provided free of charge in all cases of accidents and emergency treatments, irrespective of the economic situation or the nationality of the person involved, including visitors. However, if hospitalization is needed in these cases, subsequent care fees have to be paid. Public provision of health care is funded out of general taxation; health spending, which amounted to 2.6 percent of GDP in 2000, is low relative to the EU average of 5.3 percent (Table 2). However, private spending is relatively high and total spending on health care is, consequently, more in line with spending levels among EU countries.

Table 2. Cyprus: Public Health Care Spending in Selected Countries in 2000 (In percent of GDP)

Czech Republic	7.5
Hungary	6.5
France	6.2
Finland	6.2
Sweden	6.0
Ireland	5.9
Germany	5.7
Portugal	5.4
Belgium	5.3
Austria	5.1
Denmark	5.1
Spain	5.0
Italy	4.9
Greece	4.8
Netherlands	4.7
United Kingdom	4.6
Cyprus	**2.6**
EU (weighted average)	5.3

Sources: EU Economic Policy Committee, and Ministry of Finance.

25. **Private health care provision is financed out-of-pocket and dominated by a large number of physicians in individual practice.** A number of polyclinics have also been established in urban areas with several physicians offering a range of medical services. The Special Schemes include employees and dependants covered under schemes with medical services reimbursed by the Trade Unions (mostly primary health care) or employers, all of which finance medical care mainly provided through public health facilities.

26.   **The government is planning a reform of the health care sector.** The present health care system has long been criticized for the fragmentation of services, the lack of coordination between the public and private health system, the lack of equity in its financing, and, in general, its inability to respond to the expectations of the population. On April 20, 2001, the House of Representatives enacted a law for the introduction of a National Health System (NHS) scheduled for around 2006. It will be universal as regards population coverage, and will be financed by contributions from the state, employers, employees, self-employed, pensioners, and all those who have nonemployment incomes. The NHS will be administered by the Health Insurance Organization, a public law body managed by a tripartite Board. The Organization will purchase health services from the Government and private medical institutions and services.

C. The Effect of Aging on Pension and Health Care Spending in Cyprus

27.   **Like other industrialized countries, Cyprus faces a significant demographic shift over the next 50 years.** A strong decline in fertility and mortality rates since the 1960s will result in an increase in the number of elderly and a fall in the number of working-age people over the next five decades. According to projections by the International Labor Organization, the ratio of elderly (over 64 years of age) to working age people (15-64 years of age) will double by 2040 from its current level of around 0.17, but remain low in international comparison (Figure 2). In addition, the share of very old people (over 79 years of age) will rise by even more.

Figure 2. Cyprus: Ratio of People Aged 65+ to 15-64
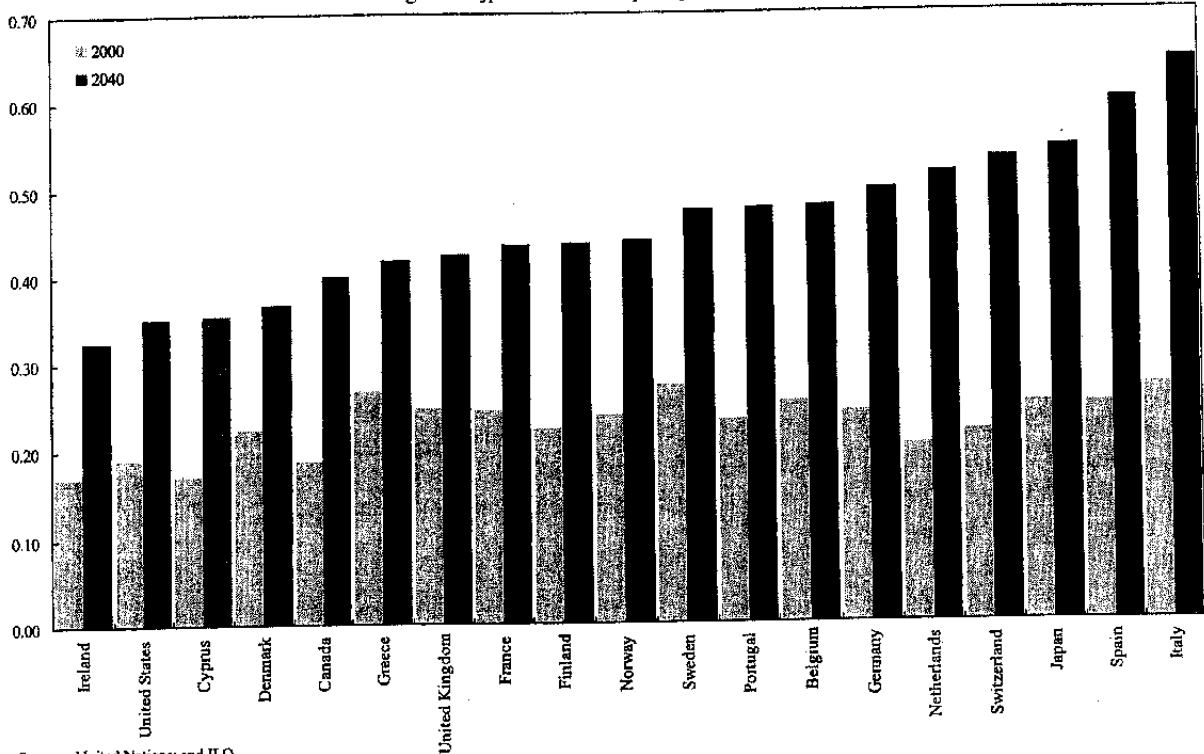
Sources: United Nations; and ILO

28.   **The aging of the population creates a distributional challenge, since the number of contributors will fall relative to the number of recipients.** The increasing number of elderly will lead to higher age-related expenditures on pensions and health care. At the same time, the decline in the labor force will erode the tax and social security contribution base. Absent reforms, these trends will widen the deficit of the pension and health care system, necessitating increasing transfers from general tax revenues. This, in turn, will challenge the solidarity among generations underlying the current welfare system.

29.   **Rising outlays on pensions will be the main driver of age-related spending pressures.** In addition to demographics, developments in employment and the generosity of the pension benefit system—both with respect to eligibility and to the benefit level—will have effects on the outcome. The increase in pension spending will depend on the development of four factors (see Appendix I):

- the relative number of elderly (*aging effect*);
- the share of working-age people in employment (*employment effect*);
- the share of elderly receiving pensions (*eligibility effect*);
- the pension level of recipients (*benefit effect*).

Thus, both labor market and pension reforms aimed at increasing the labor force participation rate of the elderly and others (including women), as well as tightening eligibility for—and lowering the level of—benefits (pension, unemployment, etc.) will be important to accommodate the spending pressures. On the other hand, pension spending is not very sensitive to the age structure of pensioners and the rising share of very old people will therefore not have an effect on outlays.

30.   **Consumption of health care services is also very sensitive to the aging of the population.** Spending on health care services generally increases with the age of the recipient. The rising age profile of spending reflects the fact that health diminishes with age. This means that spending on these categories will not only rise because the share of the elderly rises, but also because the share of very old (aged 80 and older) is projected to increase reflecting higher longevity. There is thus a "double aging" effect on health care spending.

31.   **Finally, the demographic shift will also reduce the number of contributors to the welfare state.** The shrinkage in the size of the working-age population and the labor force resulting from aging will reduce the number of wage earners paying taxes and social contributions. Absent tax increases or hikes in social security contribution rates, this will result in lower revenues.

D. Scenario Analysis: Impact of Age-related Spending on the Public Finances

32.   **Long-term projections of age-related spending and its effect on general government finances are very sensitive to the underlying structural and macro economic assumptions.** Assumptions about demographic changes and the impact of labor market policies and pension reforms have large effects on the path of age-related spending. In addition, aging-induced demand for health care services can absent health care reform

significantly increase public health spending, adding to the age-related spending increase. Furthermore, when spending is measured relative to the size of the economy, the assumptions about economic growth, interest rates, and other macroeconomic variables also play an important role for the outcome of the projections. Altogether, these assumptions determine how much the rise in pension and health care expenditures will impact public finances.

33. **The sensitivity of age-related spending and thus public finances to the economic outlook and to the effectiveness of structural reforms is illustrated in a number of different scenarios.** The scenarios are divided into two groups that explore the outlook for spending and the public finances under (1) "current policies" with different assumptions about economic growth and labor market outcomes and (2) "new policies" with assumptions of additional pension reform and other measures:

Current-policy scenarios

Scenario 1: Assuming that employment growth will remain robust, and that productivity growth is maintained at or above historical levels throughout the projection period (both in line with the authorities' assumptions according to the 2002 Pre-Accession Economic Program) will help contain the increase in pension spending. However, this will not be sufficient to counter the impact of the rise in the dependency ratio, and pension spending is projected to increase by 1.6 percent as a share of GDP. Together with a projected rise of 1.4 percentage points in health care spending, total age-related spending will rise by 3 percentage points by 2050 (after topping in 2032 almost 4 percent above current levels). Combined with lower pension related revenues, this puts public finances under pressure (Figure 3). Absent compensating measures, the debt-to-GDP ratio will rise by almost 100 percentage points. [13] To maintain the debt ratio below the 60 percent Maastricht ceiling, the primary balance would need to be permanently improved by around 1¾ percent of GDP if the entire adjustment took place in 2003, and by close to 3 percent if the adjustment was postponed to 2020 (see Appendix II).

Scenario 2: This (Staff baseline) scenario explores the outlook for public finances under less optimistic assumptions about employment and productivity growth. Thus, relative to scenario 1 employment growth is expected to average around 0.1 percent less, while average productivity growth is assumed around 0.5 percent lower to reflect a fall in productivity as the economy matures. This significantly affects the combined spending share of pensions and health care, which rises by almost 5 percent of GDP by 2050 (Figure 3). Hit also by lower pension related revenues, the debt ratio will rise rapidly and reach almost 200 percent by the end of the forecasting horizon. Ensuring

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[13] In all scenarios it is assumed that total public spending and revenues equal IMF projections from 2001-2007 and that non-pension spending and revenues are calculated as residuals during this period. Thereafter, non-pension spending and revenues are assumed to remain constant as a share of GDP at the 2007 level throughout the forecasting horizon.

Figure 3. Cyprus: Public Finances and Necessary Fiscal Improvement to Ensure Sustainability
Under Scenarios 1-5

Total Age-Related Spending

Scenario 1
Scenario 2
Scenario 3
Scenario 4 and 5

Budget Balance

Scenario 1
Scenario 2
Scenario 3
Scenario 4
Scenario 5

Gross Debt

Scenario 1
Scenario 2
Scenario 3
Scenario 4
Scenario 5

Required Primary Adjustment with Different Timings for Adjustment

Scenario 1
Scenario 2
Scenario 3
Scenario 4
Scenario 5
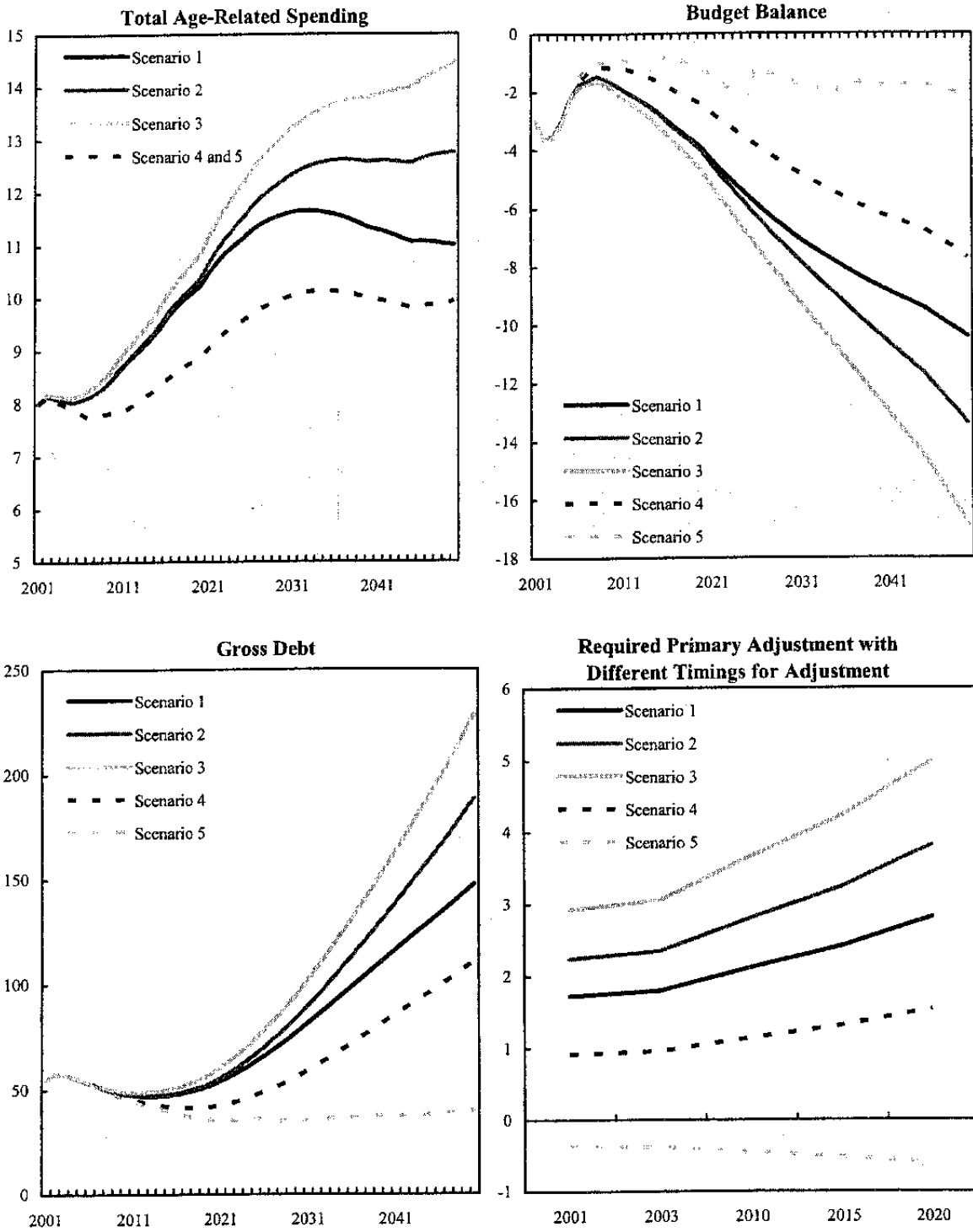
Sources: ILO and Staff estimates

that the Maastricht criteria is respected would demand a primary improvement of public finances of 2-4 percent of GDP, depending on the timing of the adjustment.

Scenario 3: In addition to the difficulties of reaching the higher employment and productivity growth rates envisaged by the authorities under current policies, there is the risk that the cost of health care services could rise even further than contemplated in scenario 1 and 2. This could be driven by the collective effects of the current supply constraints on health care services, the planned introduction of a comprehensive health care system, and the rising demand for these services as the population ages. Assuming that health care costs rise annually by an additional ¾ percent, more than doubles health care spending as a share of GDP. Together with the rise in pension spending, public finances deteriorate even further, and the debt ratio is projected to exceed 200 percent (Figure 3). This in turn would require significant primary savings on other fiscal components to keep the debt ratio under control.

Reform policy scenarios

Scenario 4: If it is assumed that the government takes timely steps to contain the rise in pension spending, the effect on public finances would be significant. Thus, assuming that the government increases the effective retirement age from 63 to 65 by 2010 and switches to price indexation of lower-band pensions, the rise in pension spending will be limited to around ½ percent of GDP, the fall in social security contributions will be more modest, and employment growth will be supported. As a consequence, the debt ratio is projected to rise by around 80 percentage points less than projected in scenario 2 (Figure 3). But, the debt ratio will still reach almost twice the Maastricht criteria of 60 percent. In addition, the debt ratio will still be rising at the end of the forecasting horizon at an unsustainable rate.

Scenario 5: The basic assumptions are the same as in scenario 4, except that the contribution rates are assumed to increase gradually to ensure coverage (on average) of the pay-as-you-go costs on pensions. This will further raise revenues and stabilize the debt ratio, while maintaining it below the Maastricht ceiling, thus ensuring sustainability of public finances (Figure 3).

34.   **These scenarios illustrate a number of points.** *First,* even under optimistic assumption about the macro economic environment and labor force participation rates, the fiscal pressures associated with the aging of the population would still increase significantly. *Second,* under less optimistic assumptions, the fiscal outlook would rapidly and substantially deteriorate. This deterioration would be even more pronounced if the cost of health care increased faster than currently foreseen. *Third,* additional pension measures could ensure public finance sustainability, but the timing is crucial. For example, early action to increase the effective retirement age will have important dynamic effects as savings are realized earlier. Combined with indexation of lower band pensions to inflation instead of wages, and higher contribution rates, this could secure long-term sustainability by stabilizing the debt ratio at a comfortable level. The same effect could be achieved through other measures, such as expenditure savings through civil service reform and higher taxes. Measures could also be

taken to avoid the escalation of health care spending by ensuring a need-driven use of services, for example by introducing user fees.

E. Concluding Remarks

35.   **Over the next 50 years, Cyprus faces a major fiscal challenge from the aging of the population, requiring early and sustained fiscal policy action to tackle it.** Age-related spending is projected to increase significantly, threatening the sustainability of public finances. Bold measures are needed, and their timing is crucial for two reasons. First, the demographic effects will start setting in around 2010, leaving a window of opportunity during the current decade to design and implement the necessary structural reforms to the pension and labor market system. Second, early savings will have considerable positive dynamic effects and thereby reduce the required primary improvement.

36.   **To bring about the necessary primary improvement, the authorities have a number of options.** One is additional pension reform, aimed at increasing the effective retirement age by narrowing eligibility and strengthening disincentives to earlier retirement; reducing benefit generosity, for example by moving towards price indexation of individual lower-band pensions; and increasing contribution rates. Since the problem of Cyprus' s public pay-as-you-go and solidarity-oriented pension system can also be solved in the wider context of public finances, other options include savings on non-pension spending and tax hikes. Finally, it will be important for the government to adhere to fiscal discipline over the long term. Even relatively modest deviations from the primary balance requirement to ensure sustainability may have large dynamic effects in the long term. In this context, adopting a more formalized medium-term fiscal framework could help ensure time consistency of fiscal policy.

DECOMPOSITION OF PENSION SPENDING

37.   The evolution of pension spending as a share of GDP depends on the development in the age structure of the population, pension generosity and eligibility, and the productivity of employment. Thus, the pension share to GDP can be written as

$$(1) \quad \frac{Pension \quad Spending}{GDP} = \left(\frac{Number \quad of \quad Pension \quad Recipients}{Employment} \right) * \left(\frac{Average \quad Pension \quad Benefit}{Average \quad Productivity} \right)$$

38.   The ratio of pensioners to employed can be decomposed further into the product of three ratios: (i) the dependency ratio; (ii) the inverse of the employment ratio; and (iii) the eligibility ratio (Dang, Antolin, and Oxley, 2001). This gives

$$(2) \quad \frac{Pension \quad Spending}{GDP} = \left(\frac{Population \geq 55}{15 \leq Population \leq 64} \right) * \left(\frac{15 \leq Population \leq 64}{Employment} \right) * \left(\frac{Recipients}{Population \geq 55} \right) * \left(\frac{Average \quad Pension \quad Benefit}{Average \quad Productivity} \right)$$
$$\qquad \qquad \qquad \qquad \qquad \qquad 1 \qquad \qquad \qquad \qquad 2 \qquad \qquad \qquad \qquad 3 \qquad \qquad \qquad \qquad 4$$

The first three ratios on the right-hand side are the dependency, inverse employment, and eligibility ratios, respectively. This shows that pension spending as a share of GDP increases with the dependency and eligibility ratios and with the generosity of pensions to average productivity, and decreases with the employment ratio.

39.   The contribution of each of these four ratios to the change in the overall share of pension spending to GDP can be approximated by the linear decomposition

$$(3) \quad \frac{\partial \left(\frac{Pension \quad Spending}{GDP} \right)}{\partial t} \equiv \left(\frac{\partial \quad log(1)}{\partial t} * ps_{t=0} + \frac{\partial \quad log(2)}{\partial t} * ps_{t=0} + \frac{\partial \quad log(3)}{\partial t} * ps_{t=0} + \frac{\partial \quad log(4)}{\partial t} * ps_{t=0} \right) + \varepsilon$$

where $ps_{t=0}$ is current pension spending as a share of GDP and ε is the residual from the log linearization. To minimize the significant residuals normally following from a linearization of a non-linear function with large changes over long periods, one can calculate (3) for shorter sub-periods and add the resulting changes up.

40.   An approximated decomposition for the projected pension spending under scenario 1 and 2 presented in section IV are presented in figure 4 below.

Figure 4: Change in Pension Spending 2001-50 in Percent of GDP
- Total and Decomposed
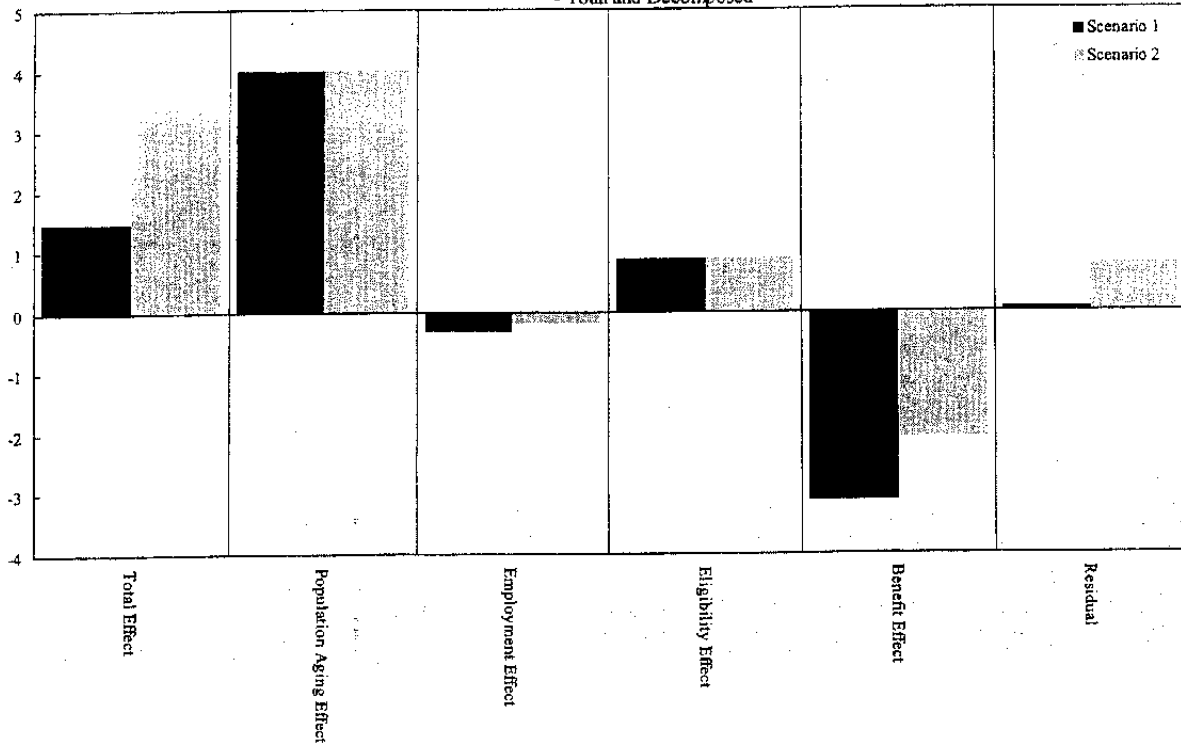
As can be seen, the largest driver of pension spending in both scenarios is the aging and eligibility effect, which is of the same magnitude in both scenarios. Although the employment effect is negative in both scenarios (largest in absolute terms in scenario 1) due to the assumption of an increase in participation rates among 15-64-year olds, the effect is minimal. On the other hand, the benefit effect helps importantly to counter the rise in pension spending, due to the implicit assumption of relatively high productivity growth, especially in scenario 1. It should, however, be noted that these calculations are only indicative and associated with some uncertainty.

ENSURING LONG-TERM PUBLIC FINANCE SUSTAINABILITY

41.   Pension and health care reform is not the only answer to accommodate the projected bulge in age-related spending. Thus, the problem of growing age-related spending in a public pay-as-you-go system based on solidarity among generations should not be thought of as simply an actuarial problem. The sustainability of such a system should be analyzed in the broader context of fiscal sustainability. This section looks at the theoretical concept of fiscal sustainability, its practical application, and presents calculations illustrating a time profile for the primary balance improvement necessary in Cyprus to maintain long-term sustainability under the different scenarios.

Sustainability in theory and practice

42.   Theoretical discussion of fiscal sustainability is typically based on the assumption that the government must satisfy both a static and intertemporal budget constraint (Chalk and Hemming, 2000). Assuming a closed-economy representative agent model and abstracting from monetary conditions, the static budget constraint or every-period condition is

$$(1) \qquad B_{t+1} = (1+r_t) * B_t + PD_t$$

where B_t and B_{t+1} are the initial and subsequent-period nominal government debt levels, respectively, $1+r_t$ is the nominal discount factor between the two periods, and PD_t is the nominal fiscal primary deficit. To derive the intertemporal budget constraint, (1) needs to be solved forward to give

$$(2) \qquad B_t = -\sum_{i=0}^{\infty} D(t,t+i)^{-1} * PD_{t+i} + \lim_{T \to \infty} D(t,t+T)^{-1} * B_{t+T+1}$$

where $D(t,t+i) = \prod_{k=0}^{i} (1+r_{t+k})$ is the discount factor between periods t and $t+i$.

43.   According to the intertemporal budget constraint, fiscal sustainability is secured if the present value of future primary balances exceeds the difference between the present value of the terminal and the initial debt level. If the level of outstanding debt grows at a rate less than r, then the present discounted value of the terminal debt converges to zero over time.

$$(3) \qquad \lim_{T \to \infty} D(t,t+T)^{-1} * B_{t+T+1} = 0$$

Therefore, assuming (3) is fulfilled, the government's intertemporal budget constraint holds if the excess of primary surpluses over primary deficits, in present value terms, matches the outstanding value of initial debt. This gives what is usually referred to as the government's present value budget constraint

$$(4) \qquad B_t = -\sum_{i=0}^{\infty} D(t,t+i)^{-1} * PD_{t+i}$$

In simple terms, (4) says that a government that has outstanding debt must sooner or later run primary budget surpluses, and those surpluses have to be large enough to satisfy (4).

44.   This theoretical concept of sustainability is, however, difficult to apply due to the assumption of an infinite time horizon. Practical applications of the concept of sustainability are based on finite horizons, which also means that the present value of the terminal debt level will normally be larger than zero and (3) will consequently not hold. Sustainability, as a result, boils down to preferences/targets for the end-horizon debt level, typically measured relative to output.

45.   A number of indicators have been developed as tools to assess public finance sustainability. Buiter (1985) argued that a sustainable fiscal policy should maintain the ratio of public sector net worth to output at its current level. To assess fiscal sustainability, Buiter suggested an indicator comparing the current primary deficit to the deficit ensuring the stabilization of net worth. However, despite its intuitive appeal, Buiter's indicator has the problem that it is difficult to obtain accurate information on the net worth of the government. Blanchard (1990) suggested instead to look at the primary deficit or tax rate necessary to maintain the current debt ratio. Blanchard's *primary gap* indicator is calculated as

$$(5) \qquad\qquad \overline{pd} - pd_t = (g_t - r_t)^* b_t - pd_t$$

where $b_t = \dfrac{B_t}{Y_t}$ is the debt-to-output ratio, $\overline{pd}$ is the primary deficit (in percent of output) stabilizing the debt-to-output ratio, pd_t is the actual primary deficit (in percent of output), and g_t is the nominal growth rate of output. A positive value of the *primary gap* indicator suggests that the current primary deficit is sufficiently small (or the surplus sufficiently large) to stabilize the debt ratio, while the opposite is true for a negative value.

Long-term sustainability indicator for Cyprus

46.   The indicator developed in this paper to gauge the long-term sustainability of Cyprus' public finances is built on the *primary gap* indicator suggested by Blanchard. Specifically, the indicator compares the average annual primary deficit $\overline{pd}^t$ implied by the projected debt ratio in 2050 b_{50}^p with the average annual primary deficit $\overline{pd}$ necessary to maintain the debt ratio at the current or targeted level. The average primary deficit implied by the projected debt ratio is given by

where g_a is the average annual growth rate for the entire forecasting period, and b_s and $\bar{r}$, respectively, are the debt ratio at time s ($1 \leq s \leq 50$) and the fixed interest rate. The equation says that the present value of the average implied primary deficit (discounted by GDP growth) equals the difference between the initial debt ratio and the present value of the terminal debt ratio (discounted by GDP growth). The implied deficit increases with the relative size of the terminal debt level and—for given initial and terminal debt levels— decreases with the spread between the interest and growth rate.

47.   The primary deficit necessary to maintain the debt ratio at the current or some "target" level is given by

(7)

$$\sum_{t=s}^{50}\left(\frac{1+\bar{r}}{1+g_a}\right)^{-t} * \overline{pd} = -b_s + b_{50} * \left(\frac{1+\bar{r}}{1+g_a}\right)^{-(50-s)} \; ; b_{50} = b_s$$

$$\Downarrow$$

$$\overline{pd} = \frac{-b_s * \left(1 - \left(\frac{1+\bar{r}}{1+g_a}\right)^{-(50-s)}\right)}{\sum_{t=s}^{50}\left(\frac{1+\bar{r}}{1+g_a}\right)^{-t}}$$

Combining (6) and (7) and rearranging gives the *long-term primary gap* indicator developed in this exercise for Cyprus:

(8)

$$\overline{pd} - \overline{pd}^I = \frac{(b_s - b_{50}^p) * \left(\frac{1+\bar{r}}{1+g_a}\right)^{-(50-s)}}{\sum_{t=s}^{50}\left(\frac{1+\bar{r}}{1+g_t}\right)^{-t}}$$

A positive value indicates that the long-term projected fiscal policy is on a sustainable path, while a negative value indicates that projected primary balances are insufficient to keep the terminal debt ratio on target. The absolute size of the gap shows how much the primary balance at time *t=s* would need to be permanently adjusted to maintain the terminal debt ratio below the current ratio or some other "sustainable" debt ratio target.

48.   Calculations of the *long-term primary gap* for Cyprus are carried out for the scenarios presented earlier and under different assumptions about the timing of the adjustment (see below). The calculations show at different points in time the primary balance improvement necessary to keep the debt ratio in 2050 less than or equal to a 60 percent level, assuming that the total required adjustment is undertaken *once-and-for-all* at the given point in time. This, of course, is not the only possible policy option. There is an infinite number of primary balance time profiles that could achieve the terminal debt level target in each scenario. The objective could for example be reached by initially adjusting the primary balance by less than

suggested by the *long-term primary gap indicator* and later adjust it further. But in this case, the cumulative adjustment over the long term would need to be greater than an immediate once-and-for-all adjustment. For this reason, although the long-term primary gap indicator does not have an immediate prescriptive value, it is useful indicator of the cumulative effort required over the period to reach the target terminal debt level.

Figure 5: Required Primary Adjustment with
Different Timings for Adjustment
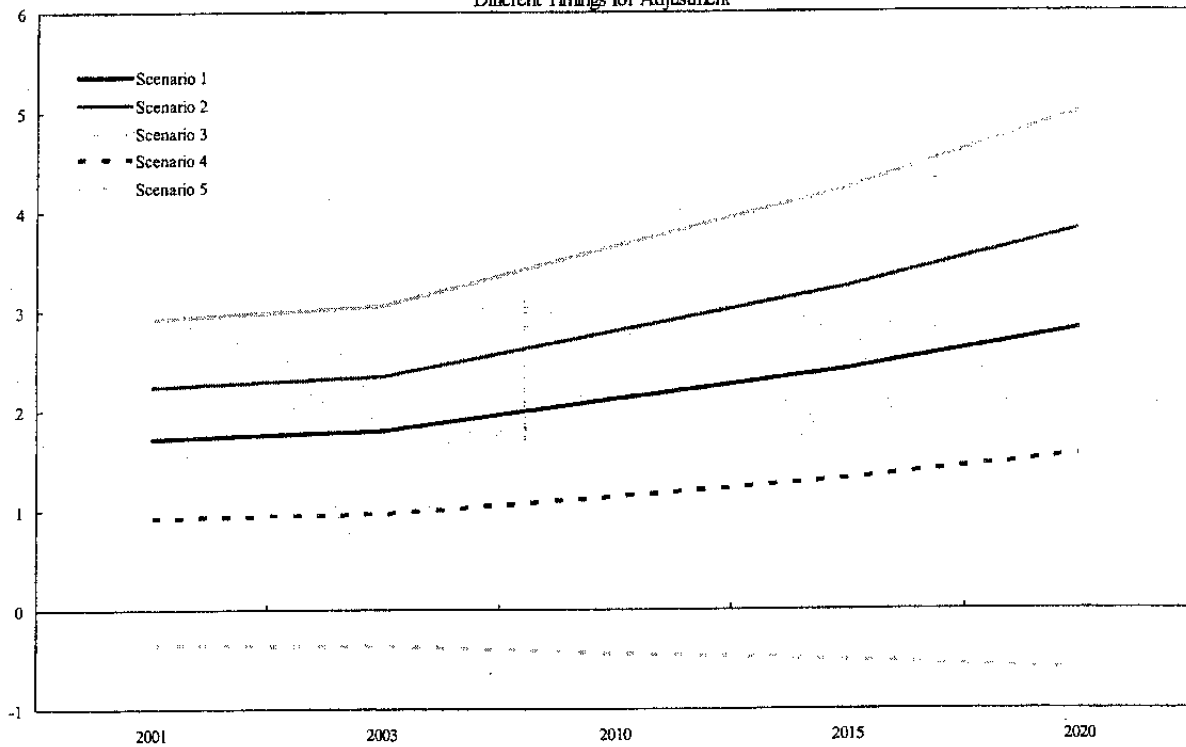
49.   The calculations highlight the need for an immediate improvement in the primary fiscal balance. They show (Figure 5) that the size of the required primary adjustment depends heavily on the assumption about the success of structural reforms, the macro economic environment, as well as on the timing of the adjustment. Even under fairly optimistic assumptions about economic growth and labor market outcomes under current policies (scenario 1), the primary balance still needs to be raised permanently from next year onward by almost 2 percent of GDP. If action is delayed to 2020, the required permanent adjustment rises to more than 2½ percent. In the staff's baseline scenario (scenario 2), the primary balance needs to be raised permanently by around 2¼ percent of GDP if the entire adjustment was undertaken in 2003 to achieve a debt ratio of 60 percent in 2050. Delaying the adjustment to 2015 increases the required improvement to 3 percent. In the event health care costs increase by more than expected (scenario 3), the required adjustment is even higher. Additional pension reform can help bring about the necessary fiscal adjustment (scenario 4) and ensure long-term sustainability. It should be pointed out that the primary adjustment requirement calculated for scenarios 1-4 only ensures that the terminal debt ratio is equal to or less than 60 percent in 2050. However, this is not sufficient to guarantee that the debt ratio is not increasing at an unsustainable rate at that time. Thus, to truly ensure sustainability the

debt ratio needs to be stabilized, therefore requiring additional measures than suggested by the single-measure primary gap indicator. This is done in scenario 5, where higher contributions are assumed ensure actuarial sustainability of the pension system and by that—in this scenario—sustainability of total public finances.

50.   The analysis underscores the need for time consistency in fiscal policy. The calculations presented above assume that the authorities keep to the new primary balance path for the rest of the period. Deviations from this path could seriously worsen the outlook and increase further the primary adjustment required to ensure achievement of the terminal debt ratio and, hence, public finance sustainability. This emphasizes the importance of adhering to the chosen fiscal path over the long term.

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III. Cyprus's Real Exchange Rate And Export Market Share: 1980–2002[14]

A. Introduction

51.   This note provides estimates of the real effective exchange rate and export market share of the Cyprus economy during the period 1980–2002. Cyprus's current account deficit is projected to have increased to 5.5 percent of GDP in 2002 from 4.3 percent of GDP in 2001. Temporary factors, such as the global economic slowdown and the fall in tourism travel following the September 11 events help explain the increase in the current account deficit, but persistent external imbalances could also raise concerns about the competitiveness of the Cyprus economy.[15]

52.   The note concludes that Cyprus's real effective exchange rate is broadly in line with historical trends. Although Cyprus's REER depreciated considerably during the 1980s, part of this gain in price competitiveness was lost during the early 1990s. In the second half of the 1990s, the REER vis-à-vis trading partners was broadly stable, with fluctuations reflecting the dynamics of the U.S. dollar and the sterling. As the real exchange rate dynamics would suggest, Cyprus gained market share during the 1980s, but lost part of it during the 1990s. Part of the loss in price competitiveness and market share during the last decade could be explained by Cyprus's economic convergence to the advanced economies and by the opening up of the developing world to trade. However, the relatively large level of Cyprus's current account deficit, even if partly driven by temporary factors, does not leave room for complacency, and a reduction of the deficit is desirable to prevent large increases in the size of net external liabilities.[16]

B. Real Exchange Rate Indicators

53.   Exchange rate policy in Cyprus has been historically targeting macroeconomic stability through the linkage of the Cyprus pound with a currency anchor. The Cyprus pound was pegged to the U.K. sterling for the period of 1960–72, to the U.S. dollar for a short period in 1972, to an import-weighted currency basket for the period 1973–84, and to a trade-weighted currency basket for the period 1984–92. In 1992, the Cyprus pound was pegged to the ecu, with a central rate of 1CYP=1.7086 ecu and fluctuation margins of ±2.25 percent, and in 1999 to the euro, maintaining a central parity rate of 1CYP=1.7086 euro and fluctuation margins at ±2.25 percent, widened to ±15 percent in August of 2001 following strong capital inflows after partial capital account liberalization.

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[14] Prepared by Athanasios Vamvakidis.

[15] Tourism receipts in Cyprus account for more than 20 percent of GDP.

[16] Chapter 1 discusses the implications of the current account balance for the dynamics of Cyprus's external liabilities.

54.   Various measures of the real effective exchange rate are plotted in Figures 1 and 2. These measures include: CPI-based and unit labor cost (ULC)-based measures with respect to all Cyprus's trading partners and with respect to Cyprus's trading partners in the tourism sector; and a CPI-based measure with respect to the euro area.[17] The trade weights are taken from the IMF's Information Notice System. The ULC-based measures only cover the period 1990–2001, for reasons of data availability.

55.   Cyprus's REER is currently near its recent historical average—some of its price competitiveness gains during the 1980s were reversed in the 1990s. Three main trends can be seen for the movements of the REER measures in Cyprus during 1980–2002. The REER depreciated substantially in the period 1980–90; during most of this period, the current account deficit declined substantially (Figure 3). It gradually appreciated in the period 1991–95, partly offsetting the earlier gains in price competitiveness, which went together with a deterioration in the current account balance.[18] Since 1995, the CPI-based REER appreciated vis-à-vis euro area countries, but remained broadly stable vis-à-vis trading partners more generally, given the strengthening of the U.S. dollar and the sterling vis-à-vis the ecu and then the euro.[19] The larger real appreciation vis-à-vis the euro area is consistent with Cyprus's income convergence toward euro-area levels.

56.   A considerable part of the movements in the real exchange rate of Cyprus is explained by nominal exchange rate movements, since Cyprus's inflation differential with other advanced economies has been relatively low—less than 1 percentage point on average during the last twelve years with respect to OECD economies.

57.   A simple regression for the period 1980–2001 of the balance of goods and services (*bgs*), expressed as a ratio of GDP, on the real effective exchange rate and the growth differential between Cyprus and world growth (*grdif*) suggests a strong comovement between the balance of goods and services and relative prices:

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[17] Given the importance of the tourism sector in Cyprus, the CPI based REER may be more relevant than in other countries. For the weights on tourism see: A. Zanello and D. Desruelle, "A Primer on the IMF's Information Notice System," IMF Working Paper 97/71. For Cyprus, the countries with the largest weights include: the United Kingdom, Germany, France, Greece, the United States, Spain, and Turkey.

[18] It should be noted that most other EU accession countries experienced a considerably larger exchange rate appreciation in real terms than Cyprus did during the 1990s.

[19] REER measures with respect to Cyprus's manufacturing trading partners and with respect to countries with a similar level of real GDP per capita to Cyprus follow similar trends during this period.

$$bgs = 1.9 - 0.43\log(reer) - 0.54grdif \qquad \bar{R}^2 = 0.55$$
$$(4.2)\quad(-4.3)\quad(-1.9)$$

where t-statistics are reported in parenthesis.

Figure 1: Real Effective Exchange Rate, CPI-Based Measures, 1980-2002
(1980=100)

REEREURO
REER
REERTOUR1

Source: IMF, INS facility.

Figure 2: Real Effective Exchange Rate, ULC-Based Measures, 1990-2002
(1990=100)

REER ULC based

--- REER ULC based, Tourism

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001
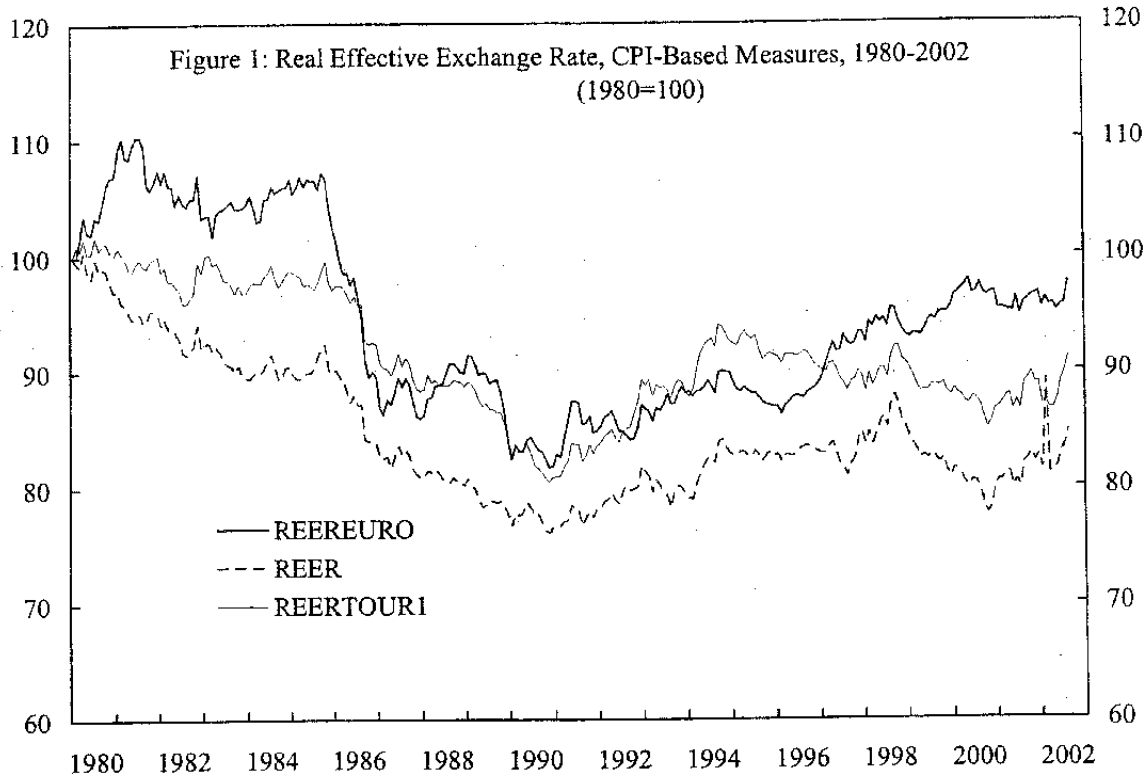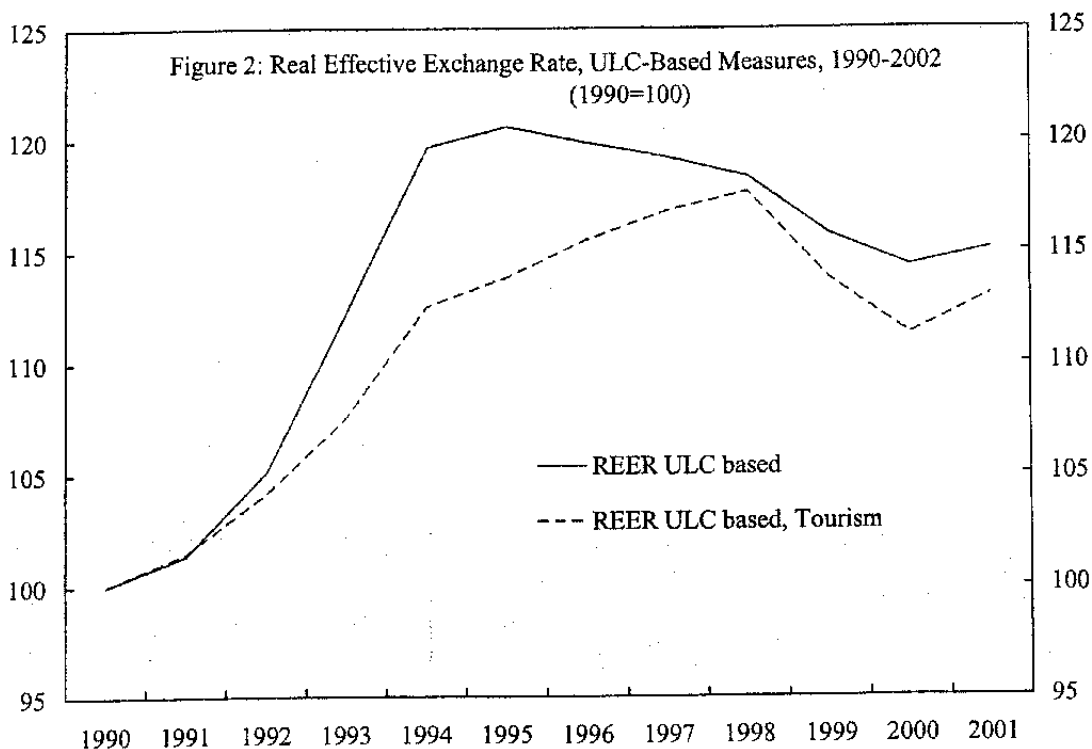
Sources: Ministry of Finance; and Fund staff estimates.

Figure 3: Current Account in Percent of GDP, 1980-2002

1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002
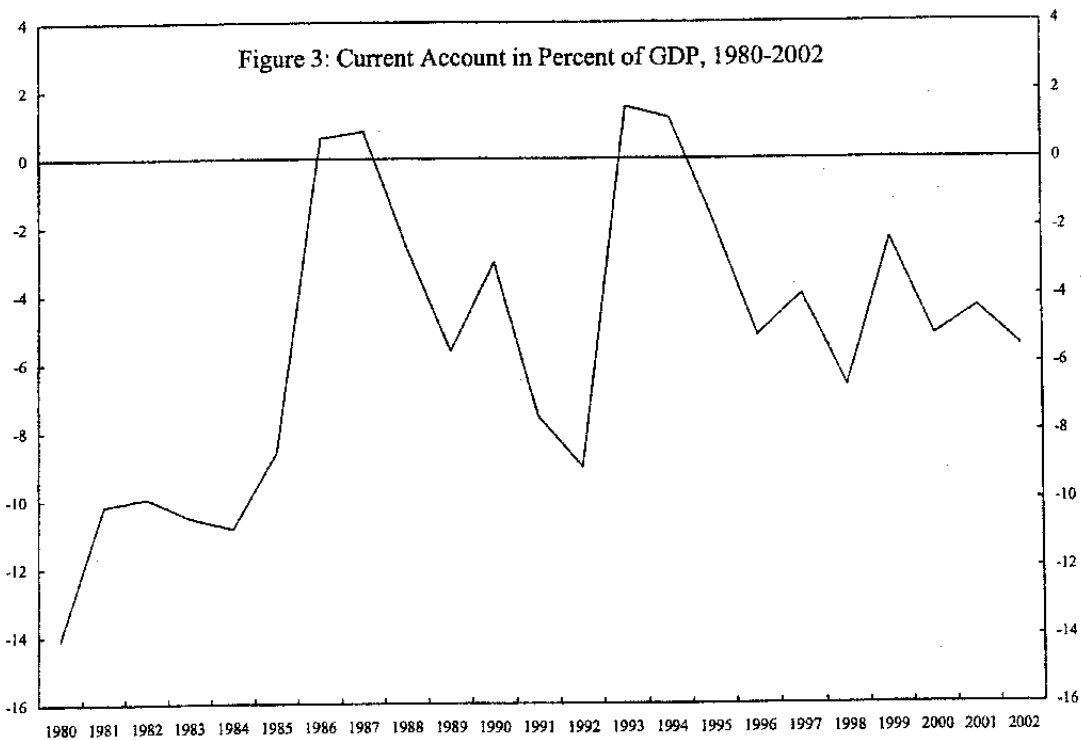
Source: IMF, *World Economic Outlook.*

C. Export Market Share Indicators

58.   Cyprus's export market share movements in the period 1980–2002 are consistent with the REER movements. World and EU market shares for Cyprus are estimated for exports of goods, services, and of goods and services—these are calculated as the ratio of Cyprus's exports to world and EU exports respectively (Figures 4 and 5). Cyprus's market share for goods and services increased considerably in the 1980s, both with respect to the world and the EU, but part of this gain was lost in the 1990s. These movements are driven by Cyprus's marker share in services, while its market share in goods have been consistently following a downward trend during this period. This trend reflects the decline of agriculture and manufacturing and the evolution of Cyprus as a service-oriented economy, as it catches up with income levels in advanced economies; in turn, the decline in the share of the exports of goods is also linked to the opening up of the developing world to trade.

59.   The overall gain in the market share in services is also reflected in Cyprus's market share in tourism. The share of tourist arrivals in Cyprus over world tourist arrivals increased during the 1990s (data for earlier years and for 2002 were not available), in particular in the second half (Figure 6). The overall gain in market share during the 1980s was a continuation of a trend that started in the mid-1970s, as the Cyprus economy recovered from the 1974 invasion.

Figure 4: Cyprus's World Market Share, 1980-2002
(1980=100)

Goods & Services
Goods
Services

Source: IMF, *World Economic Outlook.*

Figure 5: Cyprus's EU Market Share, 1980-2002 (1980=100)

Source: IMF, *World Economic Outlook.*

Figure 6: Tourist Arrivals in Cyprus as a Percent of World Arrivals, 1990-2001
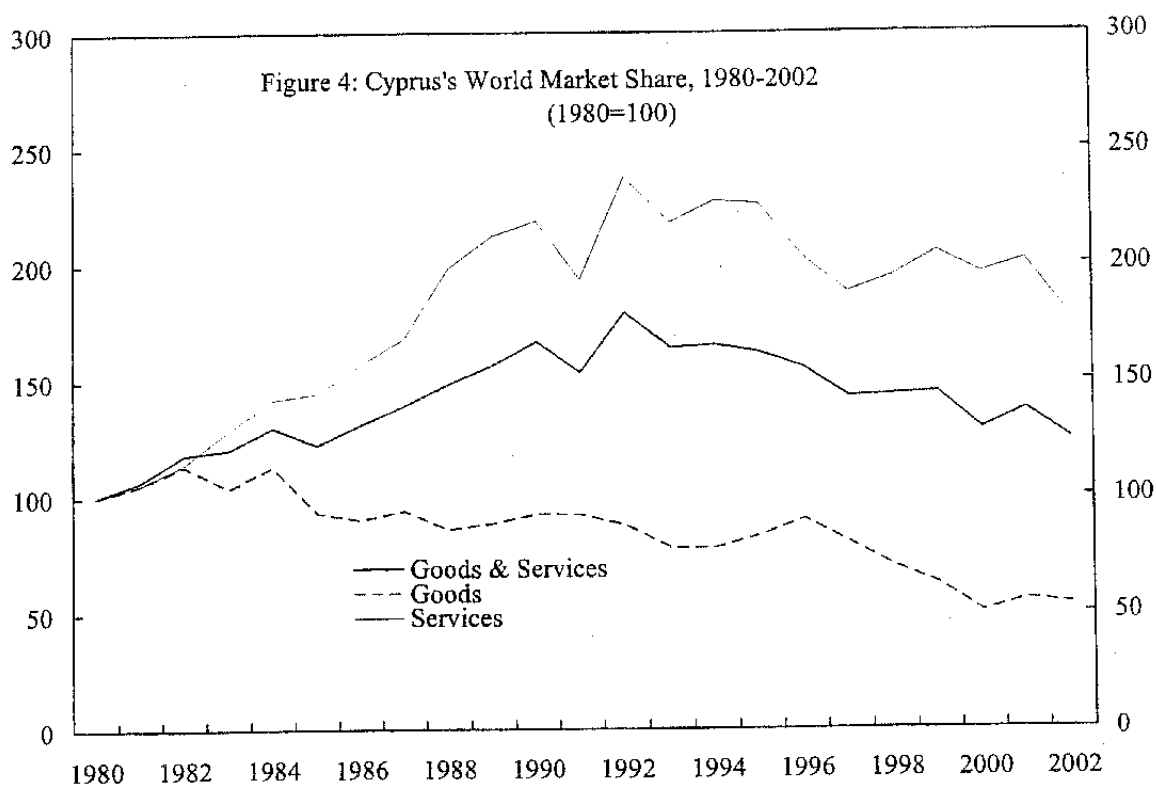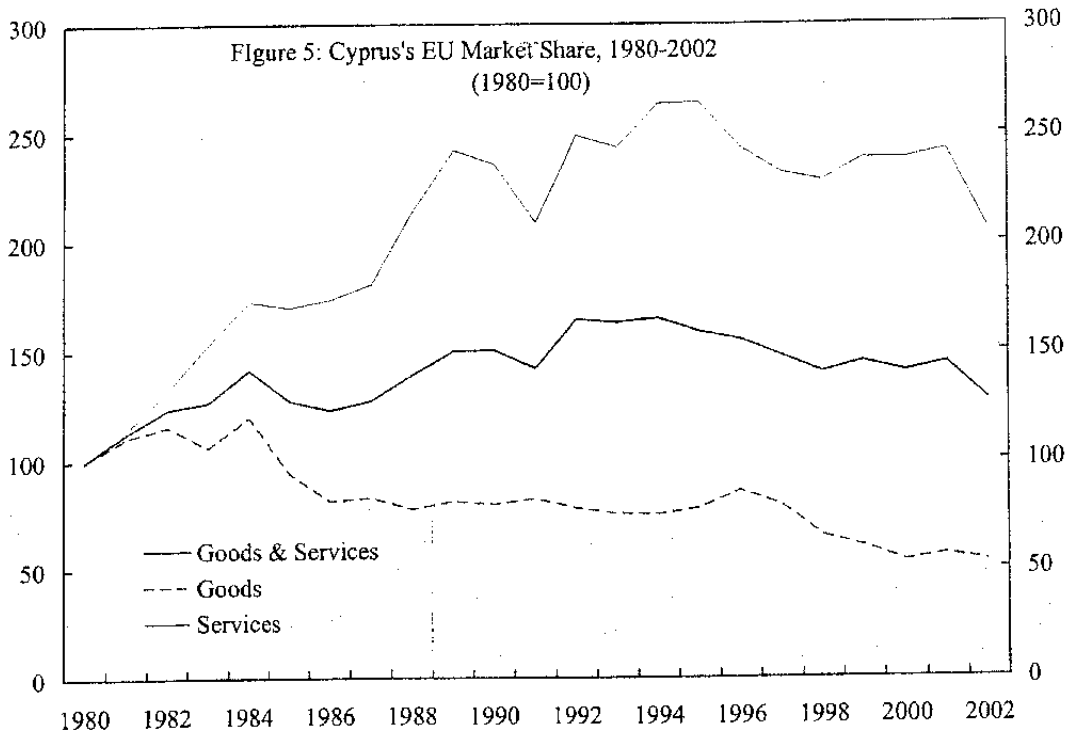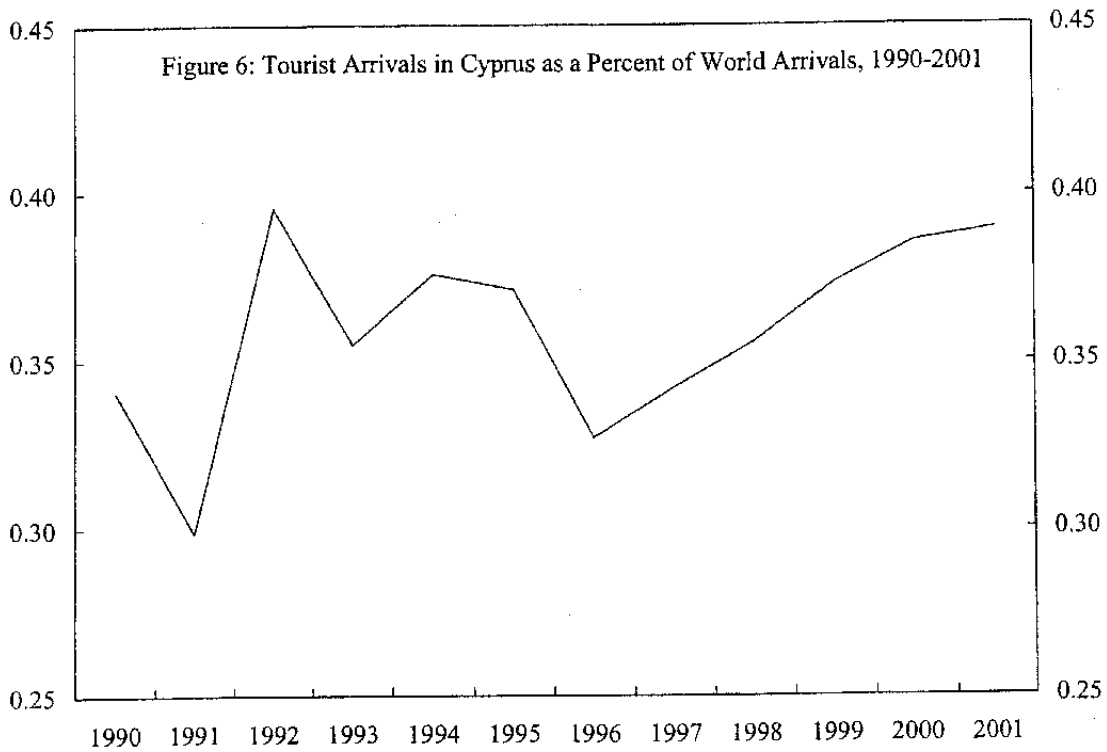
Sources: Cyprus Statistical Service and World Tourism Organization.

D. Conclusions

60.   This note has provided estimates of Cyprus's real exchange rate and export market share. Cyprus's real effective exchange rate appears broadly in line with historical trends; its appreciation and loss of market share during the 1990s have partly offset gains in earlier years. Although part of this loss may be explained by Cyprus's income convergence process, there is no room for complacency, in particular given the relatively large current account deficits in recent years.

Table 1. Cyprus: Aggregate Demand, 1996–2001

(At constant 1995 prices)

	1996	1997	1998	1999	2000	2001
			(In millions of Cyprus pounds)			
GDP at market prices	4,081.7	4,179.7	4,388.7	4,590.1	4,824.2	5,017.2
Consumption	3,367.3	3,502.7	3,788.7	3,818.9	4,067.4	4,308.0
Private	2,641.5	2,748.2	2,979.2	3,071.6	3,339.9	3,506.8
Government	725.8	754.5	809.5	747.3	727.5	801.2
Investment	903.6	822.0	918.2	931.8	944.3	932.0
Of which: change in stocks	76.7	32.7	65.7	91.1	65.0	40.0
Total domestic demand	4,270.9	4,324.7	4,706.9	4,750.7	5,011.7	5,240.0
Foreign balance	-194.4	-186.3	-375.5	-210.2	-245.7	-257.9
Exports of goods and NFS	1,946.1	1,962.2	1,914.8	2,036.3	2,225.9	2,313.7
Imports of goods and NFS	2,140.5	2,148.5	2,290.3	2,246.5	2,471.6	2,571.6
Statistical discrepancy	5.2	41.3	57.3	49.6	58.2	35.1
Net factor income from abroad	23.9	36.0	25.5	13.3	9.0	11.0
GNP at market prices	4,105.6	4,215.7	4,414.2	4,603.4	4,833.2	5,028.2
			(Annual percentage changes)			
GDP at market prices	1.9	2.4	5.0	4.6	5.1	4.0
Consumption	5.3	4.0	8.2	0.8	6.5	5.9
Private	3.5	4.0	8.4	3.1	8.7	5.0
Government	12.6	4.0	7.3	-7.7	-2.6	10.1
Investment	2.7	-9.0	11.7	1.5	1.3	-1.3
Total domestic demand	4.8	1.3	8.8	0.9	5.5	4.6
Exports of goods and NFS	4.1	0.8	-2.4	6.3	9.3	3.9
Imports of good and NFS	7.0	0.4	6.6	-1.9	10.0	4.0
			(Contribution to growth of real GDP)			
GDP at market prices	1.9	2.4	5.0	4.6	5.1	4.0
Consumption	4.3	3.3	6.8	0.7	5.4	5.0
Private	2.2	2.6	5.5	2.1	5.8	3.5
Public	2.0	0.7	1.3	-1.4	-0.4	1.5
Investment	0.6	-2.0	2.3	0.3	0.3	-0.3
Total domestic demand	4.9	1.3	9.1	1.0	5.7	4.7
Foreign balance	-1.6	0.2	-4.5	3.8	-0.8	-0.3
Exports of goods and NFS	1.9	0.4	-1.1	2.8	4.1	1.8
Imports of good and NFS	3.5	0.2	3.4	-1.0	4.9	2.1

Source: Ministry of Finance.

Table 2. Cyprus: Aggregate Demand, 1996–2001

(At current prices)

	1996	1997	1998	1999	2000	2001
	(In millions of Cyprus pounds)					
GDP at market prices	4159.5	4369.3	4693.7	5018.7	5326.0	5767.9
Consumption	3453.3	3706.1	4070.6	4185.5	4668.1	5046.9
Private	2704.4	2884.5	3168.1	3325.2	3764.1	4030.1
Government	748.9	821.6	902.5	860.3	904.0	1016.8
Investment	926.4	864.3	974.8	969.9	1047.4	1082.8
Gross fixed-capital formation	848.1	829.8	903.9	909.9	973.1	1012.8
Change in stocks	78.3	34.5	70.9	60.0	74.3	70.0
Total domestic demand	4379.7	4570.4	5045.4	5155.4	5715.5	6129.7
Foreign balance	-256.7	-217.9	-352.4	-153.0	-480.5	-386.1
Exports of goods and NFS	1952.1	2056.9	2041.6	2233.9	2550.0	2743.4
Imports of goods and NFS	2208.8	2274.8	2394.0	2386.9	3030.5	3129.5
Statistical discrepancy	36.5	16.8	0.7	16.3	91.0	24.3
Net factor income from abroad	25.9	38.2	22.3	17.6	23.5	18.9
GNP at market prices	4185.4	4407.5	4716.0	5036.3	5349.5	5786.8
	(In percent of GDP)					
Consumption	83.0	84.8	86.7	83.4	87.6	87.5
Private	65.0	66.0	67.5	66.3	70.7	69.9
Public	18.0	18.8	19.2	17.1	17.0	17.6
Investment	22.3	19.8	20.8	19.3	19.7	18.8
Gross fixed-capital formation	20.4	19.0	19.3	18.1	18.3	17.6
Change in stocks	1.9	0.8	1.5	1.2	1.4	1.2
Total domestic demand	105.3	104.6	107.5	102.7	107.3	106.3
Foreign balance	-6.2	-5.0	-7.5	-3.0	-9.0	-6.7
Exports of goods and NFS	46.9	47.1	43.5	44.5	47.9	47.6
Imports of goods and NFS	53.1	52.1	51.0	47.6	56.9	54.3
Statistical discrepancy	0.9	0.4	0.0	0.3	1.7	0.4

Source: Ministry of Finance.

Table 3. Cyprus: Origin of Gross Domestic Product, 1996–2001

	1996	1997	1998	1999	2000	2001
	(In millions of Cyprus pounds at constant 1995 prices)					
Primary sector	209.3	185.0	200.0	221.4	203.2	215.8
Agriculture and hunting	188.2	162.9	174.9	193.7	171.5	185.2
Fishing	9.5	10.3	10.7	12.4	15.8	15.9
Mining	11.6	11.8	14.4	15.3	15.9	14.7
Industry	883.1	873.0	885.1	890.5	905.9	906.2
Manufacturing	462.1	463.9	469.3	471.2	485.3	472.5
Electricity, gas, and water	87.4	88.4	96.1	101.7	110.0	116.9
Construction	333.6	320.7	319.7	317.6	310.6	316.8
Services	2,729.6	2,857.6	3,026.4	3,189.7	3,411.7	3,578.5
Transport, storage and communications	332.4	351.7	382.3	420.9	477.5	525.3
Trade, restaurants, and hotels	857.9	884.6	941.9	981.6	1,050.4	1,092.4
Finance, insurance, and real estate	731.1	770.6	816.1	868.2	927.6	971.1
Community, social, and personal	256.5	275.7	287.1	301.5	321.9	337.5
Public administration	533.9	555.4	577.3	593.7	606.7	619.7
Other	17.8	19.6	21.7	23.8	27.6	32.5
Less imputed bank charges	131.5	140.0	151.4	168.3	184.0	195.4
Plus import duties and VAT (net)	391.2	404.1	428.6	456.8	487.4	512.1
GDP at constant 1995 prices	4,081.7	4,179.7	4,388.7	4,590.1	4,824.2	5,017.2
	(Annual percentage changes at constant 1995 prices)					
Primary sector	-0.7	-11.6	8.1	10.7	13.1	6.2
Agriculture	-0.9	-12.4	7.2	11.0	10.1	7.4
Mining	3.6	1.7	22.0	6.3	67.4	-7.5
Industry	-0.3	-1.1	1.4	0.6	31.1	0.0
Manufacturing	-1.5	0.4	1.2	0.4	34.6	-2.6
Electricity, gas, and water	6.3	1.1	8.7	5.8	17.6	6.3
Construction	-0.2	-3.9	-0.3	-0.7	31.1	2.0
Services	2.5	4.7	5.9	5.4	70.8	4.9
Transport, storage, and communications	4.5	5.8	8.7	10.1	40.9	10.0
Trade, restaurants, and hotels	-0.2	3.1	6.5	4.2	42.9	4.0
Finance, insurance, and real estate	4.3	5.4	5.9	6.4	42.0	4.7
Community, social and personal	4.2	7.5	4.1	5.0	19.5	4.8
Public administration	3.1	4.0	3.9	2.8	44.9	2.1
Other	33.6	10.1	10.7	9.7	-6.4	17.8
	(Contribution to real GDP growth)					
Primary sector	0.0	-0.6	0.4	0.5	-0.4	0.3
Agriculture	0.0	-0.6	0.3	0.5	0.5	0.3
Mining	0.0	0.0	0.1	0.0	0.0	0.0
Industry	-0.1	-0.2	0.3	0.1	0.3	0.0
Manufacturing	-0.2	0.0	0.1	0.0	0.3	-0.3
Electricity, gas, and water	0.1	0.0	0.2	0.1	0.2	0.1
Construction	0.0	-0.3	0.0	0.0	-0.2	0.1
Services	1.3	3.1	4.0	3.7	4.8	3.5
Transport, storage, and communications	0.4	0.5	0.7	0.9	1.2	1.0
Trade, restaurants, and hotels	0.0	0.7	1.4	0.9	1.5	0.9
Finance, insurance, and real estate	0.8	1.0	1.1	1.2	1.3	0.9
Community, social, and personal	0.3	0.5	0.3	0.3	0.4	0.3
Public administration	0.4	0.5	0.5	0.4	0.3	0.3
Other	0.1	0.0	0.1	0.0	0.1	0.1

Source: Ministry of Finance.

Table 4. Cyprus: Origin of Gross Domestic Product, 1996–2001

(At current prices)

	1996	1997	1998	1999	2000	2001
	(In millions of Cyprus pounds)					
Primary sector	200.4	189.1	213.0	218.7	212.1	234.4
Agriculture, forestry	178.5	167.1	188.2	191.4	184.9	207.8
Fishing	10.5	11.0	10.7	12.4	11.4	11.6
Mining and quarrying	11.4	11.0	14.1	14.9	15.8	15.0
Secondary Sectors	913.8	930.4	964.7	992.9	1047.5	1076.4
Manufacturing	479.2	491.6	508.9	526.8	561.0	562.7
Electricity, gas, and water	85.9	88.5	95.4	94.9	112.5	115.2
Construction	348.7	350.3	360.4	371.2	374.0	398.5
Services	2803.7	3041.2	3318.4	3617.5	3999.7	4292.4
Transport, storage, and communications	336.3	359.3	399.9	446.2	494.5	557.8
Trade, restaurants and hotels	862.7	918.5	1005.5	1069.1	1184.4	1267.7
Finance, insurance, estate, business	756.1	825.1	896.1	1022.2	1132.4	1194.3
Community, social and personal services	290.1	326.0	359.2	388.0	428.6	467.0
Government Services	558.5	612.3	657.7	692.0	759.8	805.6
Less imputed bank service charges	134.8	148.7	165.6	188.8	214.0	233.0
Plus import duties	178.4	150.9	137.3	142.3	145.0	152.3
Plus value added tax, net	198.0	206.4	225.8	236.1	296.6	344.7
GDP at current prices	4159.5	4369.3	4693.6	5018.7	5486.9	5867.2
	(Percentage share of GDP)					
Primary sector	4.8	4.3	4.5	4.4	3.9	4.0
Agriculture, forestry, and fishing	4.5	4.1	4.2	4.1	3.6	3.7
Mining and quarrying	0.3	0.3	0.3	0.3	0.3	0.3
Secondary sector	22.0	21.3	20.6	19.8	19.1	18.3
Manufacturing	11.5	11.3	10.8	10.5	10.2	9.6
Construction	2.1	2.0	2.0	1.9	2.1	2.0
Electricity, gas, and water	8.4	8.0	7.7	7.4	6.8	6.8
Services	67.4	69.6	70.7	72.1	72.9	73.2
Transport, storage, and communications	8.1	8.2	8.5	8.9	9.0	9.5
Trade, restaurants and hotels	20.7	21.0	21.4	21.3	21.6	21.6
Finance, insurance, estate, business	18.2	18.9	19.1	20.4	20.6	20.4
Community, social and personal services	7.0	7.5	7.7	7.7	7.8	8.0
Government Services	13.4	14.0	14.0	13.8	13.8	13.7

Source: Ministry of Finance.

Table 5. Cyprus: Gross Manufacturing Output by Major Industries, 1996–2001

	1996	1997	1998	1999	2000	2001
	(In millions of Cyprus pounds)					
Food, beverages, and tobacco	467.0	487.7	511.8	534.1	577.6	608.0
Textiles and textile products	138.9	120.6	105.1	90.7	81.8	74.7
Leather and leather products	27.7	28.3	25.1	19.3	16.2	15.4
Wood and wood products	64.8	68.8	72.1	75.6	76.4	78.8
Pulp; Paper and paper products, printing, and publishing	87.1	92.2	93.6	95.9	103.6	110.1
Refined petroleum products	65.7	85.5	63.4	96.1	160.9	138.0
Chemicals, chemical products and man-made fibres	73.8	75.7	75.3	81.0	89.4	93.0
Rubber and plastic products	39.1	37.9	41.8	39.7	41.0	42.1
Nonmetallic mineral products	120.1	118.6	117.4	124.8	144.9	154.8
Basic metals and fabricated metal products	90.9	102.3	113.3	116.2	124.1	128.9
Mashinery and equipment	31.2	29.8	29.7	30.6	34.0	35.1
Electrical and optical equipment	18.8	19.3	18.8	18.1	24.0	22.9
Transport equipment	9.4	9.2	10.0	10.9	12.5	13.4
Manufacturing n.e.c. (including cottage industry)	94.7	90.6	87.9	93.8	95.1	99.0
Total	1329.2	1366.5	1365.3	1426.8	1581.5	1614.2
	(In percent of total)					
Food, beverages, and tobacco	35.1	35.7	37.5	37.4	36.5	37.7
Textiles and textile products	10.4	8.8	7.7	6.4	5.2	4.6
Leather and leather products	2.1	2.1	1.8	1.4	1.0	1.0
Wood and wood products	4.9	5.0	5.3	5.3	4.8	4.9
Pulp; Paper and paper products, printing, and publishing	6.6	6.7	6.9	6.7	6.6	6.8
Refined petroleum products	4.9	6.3	4.6	6.7	10.2	8.5
Chemicals, chemical products and man-made fibres	5.6	5.5	5.5	5.7	5.7	5.8
Rubber and plastic products	2.9	2.8	3.1	2.8	2.6	2.6
Basic metals and fabricated metal products	6.8	7.5	8.3	8.1	7.8	8.0
Mashinery and equipment	2.3	2.2	2.2	2.1	2.1	2.2
Electrical and optical equipment	1.4	1.4	1.4	1.3	1.5	1.4
Transport equipment	0.7	0.7	0.7	0.8	0.8	0.8
Manufacturing n.e.c. (including cottage industry)	7.1	6.6	6.4	6.6	6.0	6.1

Source: Central Bank of Cyprus.

Table 6. Cyprus: Tourist Arrivals and Receipts, 1996–2001

	1996	1997	1998	1999	2000	2001
	(In thousands)					
Total arrivals	1,950.0	2,088.0	2,222.7	2,434.3	2,686.2	2,696.7
United Kingdom	720.0	846.3	1,015.2	1,155.6	1,362.9	1,486.7
Germany	240.0	250.1	208.4	238.8	233.7	214.2
Greece	75.0	67.7	70.8	83.1	100.1	89.8
Switzerland	88.0	95.3	83.7	88.7	79.0	76.6
Netherlands	58.0	45.7	48.2	53.6	55.4	50.7
Nordic countries	235.0	225.0	242.4	265.3	264.2	270.8
Russia and other ex-Soviet countries	130.0	221.9	197.6	134.2	146.0	128.5
	(Changes in percent)					
Total arrivals	-7.1	7.1	6.5	9.5	10.3	0.4
United Kingdom	-15.3	17.5	20.0	13.8	17.9	9.1
Germany	2.1	4.2	-16.7	14.6	-2.1	-8.3
Greece	15.4	-9.7	4.6	17.4	20.5	-10.3
Switzerland	-20.0	8.3	-12.2	6.0	-10.9	-3.0
Netherlands	0.0	-21.2	5.5	11.2	3.4	-8.5
Nordic countries	2.2	-4.3	7.7	9.4	-0.4	2.5
Russia and other ex-Soviet countries	36.8	70.7	-11.0	-32.1	8.8	-12.0
	(In percent of total)					
Total arrivals	100.0	100.0	100.0	100.0	100.0	100.0
United Kingdom	36.9	40.5	45.7	47.5	50.7	55.1
Germany	12.3	12.0	9.4	9.8	8.7	7.9
Greece	3.8	3.2	3.2	3.4	3.7	3.3
Switzerland	4.5	4.6	3.8	3.6	2.9	2.8
Netherlands	3.0	2.2	2.2	2.2	2.1	1.9
Nordic countries	12.1	10.8	10.9	10.9	9.8	10.0
Russia and other ex-Soviet countries	6.7	10.6	8.9	5.5	5.4	4.8
	(In millions of Cyprus pounds at current prices)					
Foreign exchange receipts from tourism	780.0	843.0	878.0	1,025.0	1,194.0	1,293

Source: CYSTAT

Table 7. Cyprus: Labor Force and Employment by Sector, 1996–2001

	1996	1997	1998	1999	2000	2001
	(In thousands)					
Total labor force	305.6	307.1	310.6	317.9	321.8	326.2
Employed domestically	285.5	285.6	288.3	294.5	301.4	307.1
Primary sectors	29.3	26.8	26.7	26.2	25.8	25.3
Agriculture, forestry, and fishing	28.6	26.2	26.1	25.6	25.2	24.7
Mining and quarrying	0.7	0.6	0.6	0.6	0.6	0.6
Industry	70.9	69.1	67.2	65.7	64.7	65.6
Manufacturing	42.2	40.8	39.6	38.0	36.7	37.2
Electricity, gas, and water	1.4	1.4	1.5	1.5	1.5	1.5
Construction	27.3	26.9	26.1	26.2	26.5	26.9
Services	185.3	189.7	194.4	202.6	210.9	216.2
Trade, restaurants, hotels	80.8	81.0	82.4	84.6	87.2	88.2
Transport, communications	18.4	19.1	19.7	20.4	21.4	22.2
Finance, insurance, real estate	25.3	26.1	27.5	29.8	30.9	31.1
Other services	60.8	63.5	64.8	67.8	71.4	74.7
Employed abroad and other 1/	10.7	11.1	11.9	12.0	9.5	9.4
Unemployed	9.4	10.4	10.4	11.4	10.9	9.7
	(In percent of total)					
Employed domestically	93.4	93.0	92.8	92.6	93.7	94.1
Primary sector	9.6	8.7	8.6	8.2	8.0	7.8
Agriculture, forestry, and fishing	9.4	8.5	8.4	8.1	7.8	7.6
Mining and quarrying	0.2	0.2	0.2	0.2	0.2	0.2
Industry	23.2	22.5	21.6	20.7	20.1	20.1
Manufacturing	13.8	13.3	12.7	12.0	11.4	11.4
Electricity, gas and water	0.5	0.5	0.5	0.5	0.5	0.5
Construction	8.9	8.8	8.4	8.2	8.2	8.2
Services	60.6	61.8	62.6	63.7	65.5	66.3
Trade, restaurants, hotels	26.4	26.4	26.5	26.6	27.1	27.0
Transport, storage, and communications	6.0	6.2	6.3	6.4	6.7	6.8
Finance, insurance, real estate, business	8.3	8.5	8.9	9.4	9.6	9.5
Other services	19.9	20.7	20.9	21.3	22.2	22.9
Employed abroad and other 1/	3.5	3.6	3.8	3.8	3.0	2.9
Unemployed	3.1	3.4	3.6	3.9	3.6	3.2
Memorandum items:						
Percentage change in total labor force	1.3	0.5	1.1	2.4	1.2	1.4
Percentage change in employment	0.8	0.0	0.9	2.2	2.3	1.9

Source: Ministry of Finance.

1/ Includes employees of British military authorities and the national guard.

Table 8. Cyprus: Wage and Productivity Indicators, 1996–2001

(Percentage change over previous year)

	1996	1997	1998	1999	2000	2001
Average wage 1/	6.1	6.8	5.2	4.8	7.2	5.0
Of which:						
Agriculture	5.8	5.0	3.9	4.0	6.7	4.0
Manufacturing	5.8	5.7	4.2	4.2	6.2	4.0
Construction	6.0	6.7	4.4	4.0	6.4	4.4
Trade, restaurants, and hotels	6.3	6.3	5.1	4.8	7.2	5.0
Government	5.8	8.2	6.0	4.7	8.1	5.0
Output per person employed	0.9	2.4	4.0	2.4	2.7	2.1
Of which:						
Agriculture	0.2	-5.5	7.8	12.9	-10.1	10.2
Manufacturing	2.7	3.8	4.2	4.6	6.6	-3.9
Construction	1.3	-2.4	2.7	-1.0	-3.3	0.5
Trade, restaurants, and hotels	-2.5	2.9	4.7	1.5	3.8	0.5
Memorandum items:						
Average real wage						
deflated by the CPI	3.1	3.2	3.0	2.3	3.0	2.9
Unit labor cost 2/	5.2	4.1	0.9	2.4	4.2	2.6
Real unit labor cost 3/	2.2	1.5	-1.4	0.3	0.1	-0.2

Source: Ministry of Finance.

1/ Including basic wages or salaries, cost of living and other allowances, bonuses, gratuities, and payments in kind. Data exclude overtime payments and are gross of income tax and social security deductions.

2/ Based on average earnings.

3/ Deflated by the GDP deflator.

Table 9. Cyprus: Price Indices, 2000–02 1/

	Weights	2000	2001	2002	2000	2001	2002
		(Annual percentage change)			(Contribution to growth) 2/		
Food and non-alcoholic beverages	18.2	5.5	4.1	4.6	1.0	0.7	0.9
Alcoholic beverages and tobacco	1.8	8.2	2.8	13.3	0.2	0.1	0.3
Clothing and footwear	8.2	-0.5	-6.8	-3.5	0.0	-0.5	-0.3
Housing, water, electricity and gas	21.3	5.5	1.6	4.1	1.2	0.3	0.9
Furnishings, household equipment and supplies	7.1	1.5	0.1	0.8	0.1	0.0	0.1
Health	4.9	6.2	5.4	4.7	0.3	0.3	0.2
Transport	17.4	5.7	2.3	0.4	1.0	0.4	0.1
Communication	1.8	-10.4	1.7	-8.8	-0.2	0.0	-0.1
Recreation and culture	5.9	-0.2	-0.5	2.2	0.0	0.0	0.1
Education	2.3	3.9	4.6	5.7	0.1	0.1	0.1
Restaurants and hotels	6.1	5.8	6.0	4.0	0.4	0.4	0.3
Miscellaneous goods and services	5.0	4.2	4.0	5.5	0.2	0.2	0.3
Total	100.0	4.1	2.0	2.8	4.1	2.0	2.8

Source: Ministry of Finance.

1/ The components of the CPI index in Cyprus changed in 2000.
2/ Components may not sum to totals due to rounding.

Table 10. Cyprus: Implicit Deflators, 1996–2001

(Annual percentage change)

	1996	1997	1998	1999	2000	2001
Consumption	2.6	3.2	1.5	2.0	4.7	2.1
Private	2.4	2.5	1.3	1.8	4.1	2.0
Public	3.2	5.5	2.4	3.3	7.9	2.1
Investment	2.5	2.6	1.0	-2.0	6.6	4.7
Fixed capital	2.6	2.5	0.9	2.1	2.3	2.6
Total domestic demand	2.5	3.1	1.4	1.2	5.1	2.6
Exports	0.3	4.5	1.7	2.9	4.4	3.5
Imports	3.2	2.6	-1.3	1.6	9.3	1.5
GDP at market prices	1.9	2.6	2.3	2.1	4.1	2.8

Source: Ministry of Finance.

Table 11. Cyprus: Consolidated Central Government Budget, 1996–2001

(In millions of Cyprus pounds)

	1996	1997	1998	1999	2000	2001
Revenue	1,323.7	1,375.0	1,473.9	1,591.0	1,865.6	2,073.1
Current revenue	1,320.5	1,372.8	1,472.3	1,589.5	1,862.4	2,069.8
Tax revenue	1,058.3	1,072.4	1,175.7	1,283.7	1,455.6	1,659.4
Direct taxes	353.1	374.4	421.7	494.0	558.1	659.4
Indirect taxes	507.6	491.6	534.1	562.8	653.6	722.0
Social security contributions	197.5	206.4	219.9	226.8	244.0	278.0
Nontax	262.3	300.4	296.6	305.8	406.8	410.4
Capital revenue	0.8	0.6	0.9	0.6	0.7	0.8
Foreign grants	2.4	1.6	0.7	0.9	2.5	2.5
Expenditure	1,465.8	1,606.2	1,731.5	1,792.3	2,016.0	2,239.7
Current expenditure	1,318.2	1,442.6	1,553.6	1,594.9	1,789.8	2,006.0
Wages and salaries	396.8	429.9	458.9	482.7	526.3	559.7
Other goods and services	111.5	131.8	141.1	148.2	160.9	182.4
Subsidies	46.5	36.3	33.9	39.0	79.5	91.1
Interest payments	221.7	230.0	269.2	285.0	311.8	330.0
Social security payments	217.8	235.0	253.5	273.0	304.2	318.8
Other transfers	210.6	252.9	281.3	310.3	347.2	395.7
Other	113.3	126.8	115.7	56.6	59.9	128.4
Capital	144.6	160.9	178.1	192.8	215.8	217.2
Investment	96.9	107.3	124.9	131.1	153.2	155.6
Transfers	47.7	53.7	53.2	61.8	62.5	61.7
Net lending	3.0	2.7	-0.2	4.6	10.4	16.5
Overall balance	-142.1	-231.2	-257.6	-201.3	-150.5	-166.5
Primary balance	79.7	-1.2	11.6	83.8	161.4	163.5
Without intragovernmental interest	-4.8	-97.0	-97.8	-36.1	30.3	37.0
Financing	142.1	231.3	257.6	201.3	150.5	166.5
Domestic	203.9	143.2	109.3	52.6	185.3	231.5
Bank	146.9	108.9	122.2	-38.1	178.4	263.4
Of which: Short-term borrowing from Central Bank	-104.4	-19.2	106.4	-207.3	396.8	-118.7
Nonbank	57.0	34.3	-12.9	90.7	6.9	-31.9
Foreign, net	-61.8	88.1	148.3	148.7	-34.8	-65.0
Medium- and long-term	-41.4	95.9	187.1	138.9	19.8	-69.7
Amortization	-69.9	-68.7	-33.3	-32.1	-16.0	-83.1
Short-term foreign borrowing 1/	-17.2	-7.4	-38.7	16.9	-54.6	4.7
Suppliers' credits	-3.3	-0.5	-0.1	0.0	0.0	0.0
Receipts	0.0	0.0	0.0	0.0	0.0	0.0
Payments	-3.3	-0.5	-0.1	0.0	0.0	0.0
Net IMF transactions	0.0	0.0	0.0	-7.1	0.0	0.0

Source: Ministry of Finance.

1/ Euro-commercial paper.

Table 12. Cyprus: Consolidated Central Government Budget, 1996–2001

(In percent of GDP)

	1996	1997	1998	1999	2000	2001
Revenue	31.8	31.5	31.4	31.7	34.0	35.3
Current revenue	31.8	31.4	31.4	31.7	33.9	35.3
Tax revenue	25.5	24.6	25.0	25.6	26.5	28.3
Direct taxes	8.5	8.6	9.0	9.8	10.2	11.2
Indirect taxes	12.2	11.3	11.4	11.2	11.9	12.3
Social security contributions	4.8	4.7	4.7	4.5	4.4	4.7
Nontax	6.3	6.9	6.3	6.1	7.4	7.0
Capital revenue	0.0	0.0	0.0	0.0	0.0	0.0
Foreign grants	0.1	0.0	0.0	0.0	0.0	0.0
Expenditure	35.3	36.8	36.9	35.7	36.7	38.2
Current expenditure	31.7	33.0	33.1	31.8	32.6	34.2
Wages and salaries	9.5	9.8	9.8	9.6	9.6	9.5
Other goods and services	2.7	3.0	3.0	3.0	2.9	3.1
Subsidies	1.1	0.8	0.7	0.8	1.4	1.6
Interest payments	5.3	5.3	5.7	5.7	5.7	5.6
Social security payments	5.2	5.4	5.4	5.4	5.5	5.4
Other transfers	5.1	5.8	6.0	6.2	6.3	6.7
Other	2.7	2.9	2.5	1.1	1.1	2.2
Capital	3.5	3.7	3.8	3.8	3.9	3.7
Investment	2.3	2.5	2.7	2.6	2.8	2.7
Transfers	1.1	1.2	1.1	1.2	1.1	1.1
Net lending	0.1	0.1	0.0	0.1	0.2	0.3
Overall balance	-3.4	-5.3	-5.5	-4.0	-2.7	-2.8
Primary balance	1.9	0.0	0.2	1.7	2.9	2.8
without intragovernmental interest	-0.1	-2.2	-2.1	-0.7	0.6	0.6

Source: Ministry of Finance.

Table 13. Cyprus: Consolidated Central Government Budgets, 1996–2001

(In millions of Cyprus pounds)

	1996	1997	1998	1999	2000	2001
Total revenue and grants	1323.7	1375.0	1473.9	1591.0	1865.6	2073.1
Ordinary budget	888.5	927.1	962.9	1028.2	1309.8	1472.4
Public loans fund	2.7	2.9	3.3	2.6	2.7	3.1
Social insurance funds	281.9	302.2	329.3	346.7	369.7	408.3
Sinking funds	24.0	26.1	22.8	25.7	26.4	33.4
Defense funds	108.0	116.7	155.7	187.9	157.0	156.1
Total expenditure and net lending	1465.8	1606.2	1731.5	1792.3	2016.0	2239.7
Ordinary budget	877.5	1199.3	1321.6	1419.7	1612.6	1734.3
Public loans fund	0.3	0.3	3.0	-0.2	4.2	6.4
Social insurance funds	228.0	246.0	263.0	284.5	316.4	331.6
Cyprus grain commission deficit	27.7	16.7	12.9	20.3	23.0	39.1
Defense fund	128.7	143.8	130.1	68.4	60.2	128.0
Adjustments to expenditure and net lending	0.6	0.1	0.9	-0.4	-0.3	0.3
Overall balance	-142.1	-231.2	-257.6	-201.3	-150.5	-166.6

Source: Ministry of Finance.

Table 14. Cyprus: Government and Government-Guaranteed Net Debt, 1996–2001

	1996	1997	1998	1999	2000	2001
	(In millions of Cyprus pounds; end of period)					
Total government debt	2199	2498	2612	2858	3008	3203
Domestic debt 1/	1796	1982	1947	2007	2188	2443
Short term	1313	1305	1069	994	1013	863
Long term	484	677	879	1013	1175	1580
Foreign debt	403	515	665	851	821	761
Short term 2/	120	125	89	111	56	64
Long term	283	391	576	739	765	697
Government-guaranteed debt	431	472	519	555	534	616
Total government and government-guaranteed debt	2630	2969	3131	3412	3543	3819
	(In percent of GDP)					
Total government debt	52.9	57.2	55.6	56.9	54.8	54.6
Domestic debt 1/	43.2	45.4	41.5	40.0	39.9	41.6
Short term	31.6	29.9	22.8	19.8	18.5	14.7
Long term	11.6	15.5	18.7	20.2	21.4	26.9
Foreign debt	9.7	11.8	14.2	17.0	15.0	13.0
Short term 2/	2.9	2.9	1.9	2.2	1.0	1.1
Long term	6.8	8.9	12.3	14.7	13.9	11.9
Government-guaranteed debt	10.4	10.8	11.0	11.0	9.7	10.5
Total government and government-guaranteed debt	63.3	68.0	66.7	68.0	64.6	65.1

Source: Ministry of Finance.

1/ Excludes intragovernmental debt.
2/ Excludes short-term liabilities of the central bank.

Table 15. Cyprus: Total Gross Public Debt by Instrument and Lender, 1996–2001 1/
(In million of Cyprus pounds)

	1996	1997	1998	1999	2000	2001
Domestic	3102.5	3462.0	3295.2	3826.9	4184.0	4660.0
Long term	484.1	677.6	879.2	1013.5	1175.4	1580.5
Development stocks	454.0	644.6	736.4	862.8	1012.6	1368.1
Central bank	30.9	42.9	45.5	77.5	75.8	70.0
Deposit money banks	0.0	111.8	145.5	173.5	253.1	695.2
Private sector	422.7	489.4	544.9	611.3	683.2	602.5
Sinking funds 2/	0.0	0.0	0.0	0.0	0.0	0.0
Social security funds 2/	0.5	0.5	0.5	0.5	0.5	0.5
Savings bonds	21.0	22.5	22.5	20.0	19.8	20.0
Central bank	2.0	3.5	3.6	0.8	1.9	3.1
Private sector	19.0	19.0	18.9	19.2	17.9	16.9
Savings certificates	9.1	10.5	13.3	18.0	23.8	45.7
Private sector	9.1	10.5	13.3	18.0	23.8	45.7
Other	0.0	0.0	107.0	112.8	119.2	146.7
Short term	2618.4	2784.4	2416.0	2813.4	3008.6	3079.6
Treasury bills	2286.1	2422.6	2333.0	2435.8	2423.2	2540.9
Central bank	205.8	191.8	277.2	75.1	205.8	119.0
Deposit money banks	722.1	722.7	708.4	791.2	627.9	689.2
Private sector	52.6	28.9	0.0	16.1	-12.2	23.7
Sinking funds	0.0	0.0	-286.0	-266.2	-394.2	-507.2
Social security funds 2/	1305.7	1479.2	1633.3	1819.6	1996.0	2216.2
Central bank advances	332.3	361.8	83.0	377.6	585.4	538.7
Foreign	407.7	520.2	669.5	855.4	825.6	765.3
Short-term liabilities of the Central bank to the IMF	4.8	4.8	4.8	4.8	4.8	4.8
Long-term loans	282.9	236.8	220.3	223.4	249.1	180.8
Of which: Defense fund	3.6	2.2	1.8	1.4		
Medium-term loans (E.M.T.N.)	0.0	153.8	355.5	515.9	515.9	515.9
Short-term loans (E.C.P.)	120.1	124.8	89.0	111.4	55.8	63.9
Total debt	3510.2	3982.1	3964.7	4682.4	5009.5	5425.4
Net of Intragov. Debt	2199.3	2497.6	2612.0	2857.5	3008.3	3203.3

Source: Ministry of Finance.

1/ Includes intragovernmental debt and short-term liabilities of the central bank.
2/ Intragovernmental debt.

Table 16. Cyprus: Monetary and Credit Aggregates, 1996–2002

	1996	1997	1998	1999	2000	2001	2002 1/
	(Rates of growth, in percent)						
Total liquidity (M2)	11.0	10.7	8.8	15.1	8.2	13.3	11.2
Domestic credit	15.2	11.1	12.0	11.5	13.9	15.5	10.1
Credit to private sector	13.4	12.2	14.3	13.9	14.9	12.7	8.6
Gross domestic product	3.8	5.0	7.5	6.8	9.4	7.0	...
	(As a ratio to average M2)						
Memorandum items: Income velocity of M2	1.0	1.1	1.1	1.2	1.2	1.2	...
Rate of change, in percent	6.5	7.7	1.2	7.7	-1.1	6.0	...

Source: Central Bank of Cyprus.

1/ 12-month growth as of October, 2002.

Table 17. Cyprus: Monetary Survey, 1996–2002

	1996	1997	1998	1999	2000	2001	2002 1/
	(In millions of Cyprus pounds, end-of-period stocks)						
Foreign assets, net	317.7	257.7	94.9	227.6	231.8	353.7	303.5
Official reserves 2/	778.7	764.3	725.7	1,107.2	1,138.2	1,532.1	1,678.5
Banks	-460.9	-506.5	-630.7	-879.6	-906.4	-1,178.3	-1,375.0
Payments agreements	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0
Domestic credit, net	4803.3	5370.6	6071.6	6811.5	7662.5	8828.8	9349.1
Public sector	919.5	1012.2	1088.9	1138.0	1145.0	1484.0	1635.2
Central government	931.2	1026.5	1101.8	1163.0	1177.8	1512.0	1674.6
Advances	342.7	332.3	298.7	351.3	453.1	570.0	1,022.0
Treasury bills and securities	971.6	1,083.0	1,181.7	1,187.9	1,241.6	1,567.5	1,453.1
Deposits	-383.0	-388.8	-378.6	-376.1	-517.0	-625.6	-800.4
Government agencies	5.5	3.7	4.6	2.8	-4.3	0.9	-1.9
Other	-17.2	-18.0	-17.5	-27.8	-28.5	-28.9	-37.5
Private sector	3,883.8	4,358.4	4,982.7	5,673.5	6,517.5	7,344.8	7,713.9
Other items, net	-873.3	-927.1	-1,052.6	-1,153.8	-1,525.6	-1,963.7	-1,977.7
Broad money (M2)	4,247.7	4,701.1	5,113.9	5,885.2	6,368.7	7,218.8	7,675.0
Money supply (M1)	653.7	711.1	735.6	1,039.7	1,080.9	1,102.4	920.1
Currency in circulation	265.6	276.2	289.9	313.6	333.3	356.5	356.1
Demand deposits	387.6	430.3	442.9	723.5	743.9	740.1	556.9
Foreign currency	0.5	4.6	2.8	2.6	3.7	5.8	7.1
Quasi-money	3,594.0	3,990.0	4,378.3	4,845.5	5,287.8	6,116.4	6,754.9
Savings deposits	170.9	176.2	179.8	185.2	200.4	219.9	226.0
Time deposits	3,353.6	3,741.6	4,125.3	4,584.1	4,983.1	5,736.8	6,370.3
Foreign currency	69.5	72.2	73.2	76.2	104.3	159.7	158.6
	(Absolute change over preceding 12 months)						
Foreign assets, net	-180.9	-60.0	-162.8	132.7	4.2	121.9	-50.2
Official reserves 2/	-19.1	-14.4	-38.6	381.5	31.0	393.9	146.4
Banks		-45.6	-124.2	-248.9	-26.8	-271.9	-196.7
Payments agreements	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Domestic credit, net	745.7	567.3	701.0	739.9	851.0	1166.3	520.4
Public sector	118.6	92.7	76.7	49.1	7.0	339.0	151.2
Central government	111.9	95.3	75.3	61.2	14.7	334.2	162.6
Advances	34.0	-10.4	-33.6	52.5	101.8	117.0	451.9
Treasury bills and securities	194.9	111.4	98.7	6.2	53.8	325.9	-114.4
Deposits	-116.9	-5.7	10.1	2.5	-140.8	-108.6	-174.8
Government agencies	6.6	-1.8	0.9	-1.8	-7.1	5.2	-2.8
Other	0.1	-0.8	0.5	-10.3	-0.7	-0.4	-8.6
Private sector	627.1	474.6	624.3	690.8	844.0	827.3	369.2
Other items, net	-397.6	-53.8	-125.5	-101.3	-371.7	-438.1	-14.0
Broad money (M2)	487.5	453.4	412.8	771.3	483.5	850.1	456.2
Money supply (M1)	39.9	57.4	24.5	304.1	41.2	21.5	-182.3
Currency in circulation	8.5	10.6	13.7	23.7	19.7	23.2	-0.4
Demand deposits	30.9	42.7	12.6	280.6	20.4	-3.8	-183.2
Foreign currency		4.1	-1.8	-0.2	1.1	2.1	1.3
Quasi-money	447.6	396.0	388.3	467.2	442.3	828.6	638.5
Savings deposits	3.8	5.3	3.6	5.4	15.2	19.5	6.1
Time deposits	374.4	388.0	383.7	458.8	399.0	753.7	633.5
Foreign currency		2.7	1.0	3.0	28.1	55.4	-1.1
Memorandum items:							
Income velocity of M2 3/	1.0	1.0	1.0	0.9	0.9	0.9	0.8
Income velocity of M1 3/	6.6	6.4	6.5	5.7	5.2	5.4	6.1
Deposits with cooperatives 4/	1,976.3	2,188.2	2,416.4	2,570.7	2,821.6	3,109.1	3360,5 5/
Loans by cooperatives 4/	1,838.0	1,991.3	2,132.8	2,410.2	2,483.9	2,519.1	2522,6 5/

Source: Central Bank of Cyprus.

1/ As of November, 2002.
2/ Includes holdings of SDRs, government holdings of foreign exchange, and reserve position in the IMF.
3/ Nominal GDP/average of money stock at beginning and end of year.
4/ Data exclude the operations of the Cooperative Central Bank, which is included in the monetary survey.
5/ As of September 2002.

Table 18. Cyprus: Credit by Banks to the Private Sector, 1996–2002

	1995	1996	1997	1998	1999	2000	2001	2002 1/
	(End-of-period stocks, millions of Cyprus pounds)							
Personal loans	982.4	1209.4	1431.1	1731.2	2341.0	2826.8	3190.3	3372.4
Foreign and domestic trade	842.2	930.0	1037.6	1152.3	1254.6	1386.5	1556.9	1587.9
Manufacturing	430.6	467.3	482.9	526.4	523.9	545.7	557.6	558.3
Building and construction	566.0	630.9	700.0	765.0	813.2	910.3	1056.3	1153.5
Tourism	378.7	441.6	484.6	557.4	608.7	371.3	788.5	824.0
Other	243.7	260.2	295.3	356.5	392.4	725.1	502.3	518.8
Total	3443.6	3939.4	4431.5	5088.8	5933.8	6765.7	7651.9	8014.9
	(As a percentage of end-of-period stocks)							
Personal loans	28.5	30.7	32.3	34.0	39.5	41.8	41.7	42.1
Foreign and domestic trade	24.5	23.6	23.4	22.6	21.1	20.5	20.3	19.8
Manufacturing	12.5	11.9	10.9	10.3	8.8	8.1	7.3	7.0
Building and construction	16.4	16.0	15.8	15.0	13.7	13.5	13.8	14.4
Tourism	11.0	11.2	10.9	11.0	10.3	5.5	10.3	10.3
Other	7.1	6.6	6.7	7.0	6.6	10.7	6.6	6.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(Flows of new credit, millions of Cyprus pounds)							
Personal loans	218.1	227	222	300	610	1,093	-182	3,372
Foreign and domestic trade	126.9	88	108	115	102	206	-31	1,588
Manufacturing	57.9	37	16	44	-3	62	-1	558
Building and construction	134.5	65	69	65	48	258	-97	1,154
Tourism	76.3	63	43	73	51	-183	-36	824
Other	32.6	17	35	61	36	353	-17	519
Total	646.3	496	492	657	845	1,789	-363	8,015
	(As a percentage of total flow of new credit)							
Personal loans	33.7	45.8	45.1	45.7	72.2	61.1	50.2	42.1
Foreign and domestic trade	19.6	17.7	21.9	17.5	12.1	11.5	8.5	19.8
Manufacturing	9.0	7.4	3.2	6.6	-0.3	3.5	0.2	7.0
Building and construction	20.8	13.1	14.0	9.9	5.7	14.4	26.8	14.4
Tourism	11.8	12.7	8.7	11.1	6.1	-10.2	9.8	10.3
Other	5.0	3.3	7.1	9.3	4.2	19.7	4.5	6.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Bank of Cyprus.

1/ As of November, 2002.

Table 19. Cyprus: Balance Sheet of the Central Bank, 1996–2002

	1996	1997	1998	1999	2000	2001	2002 1/
	(In millions of Cyprus pounds, end-of-period stocks)						
Total assets	1421.4	1398.7	1501.9	1712.1	1975.7	2296.6	2735.3
International reserves 2/	787.3	783.9	735.8	1107.2	1124.1	1528.8	1649.0
Loans to banks	6.5	0.1	5.6	0.1	3.1	0.0	0.0
Loans to government	349.1	338.3	304.0	357.3	458.9	530.7	961.1
Government securities	239.0	238.5	310.9	206.1	340.9	194.7	75.8
other assets	39.5	37.9	145.6	41.4	48.7	42.4	49.4
Total liabilities	1421.4	1398.7	1501.9	1712.1	1975.7	2296.6	2735.3
Currency	294.0	305.9	324.2	352.8	376.4	409.2	397.4
Deposits by banks	501.0	497.6	593.5	699.0	775.3	838.3	885.5
Deposits by government, others	346.0	342.0	328.2	319.2	454.6	563.3	737.3
Capital and other liabilities 1/	280.4	253.2	256.0	341.1	369.4	485.8	715.1
Monetary base	795.0	803.5	917.7	1051.8	1151.7	1247.5	1282.9
Currency	294.0	305.9	324.2	352.8	376.4	409.2	397.4
Deposits by banks	501.0	497.6	593.5	699.0	775.3	838.3	885.5
	(Percentage change)						
Monetary base	-10.2	1.1	14.2	14.6	9.5	8.3	2.8
International reserves 3/	-3.8	-0.4	-6.0	40.5	1.6	35.1	9.6
Domestic assets 4/	-6.4	1.5	20.2	-25.9	7.9	-26.8	-6.8
Currency 5/	1.3	1.5	2.3	3.1	2.2	2.8	-0.9
Deposits by banks 5/	-11.5	-0.4	11.9	11.5	7.3	5.5	3.8
Memorandum items:							
M1 multiplier	0.8	0.9	0.8	1.0	0.9	0.9	0.7
M2 multiplier	5.3	5.9	5.6	5.6	5.5	5.8	6.0
International reserves (in months of GNFS imports)	4.6	4.5	4.2	6.3	5.3	7.1	8.1

Source: Central Bank of Cyprus.

1/ As of November, 2002.
2/ Revaluation of assets in 1996 corresponds to an increase by £C 288.4 million.
3/ Contribution to growth of monetary base, excludes the effect of the revaluation.
4/ Monetary base minus international reserves, contribution to growth in monetary base.
5/ Contribution to growth in monetary base.

Table 20. Cyprus: Selected Interest Rates, 1996–2002

(In percent per annum)

	1996	1997	1998	1999	2000	2001	2002 1/
Central bank rates							
Lombard facility	7.5	7.0	7.0	7.0	7.0	6.5	5.5
Overnight Deposits	5.0	4.0	4.0	4.0	4.0	3.5	2.5
Repurchase rate	6.0	4.2	4.1	4.9	4.1	4.7	4.0
Interbank money market rate	6.9	4.7	4.8	5.2	10.0	4.9	3.3
Deposits-3-month notice	5.8	6	6.5	6.5	6.5	4.8	4.1
Deposits-fixed deposits	7.0	6.5	6.5	6.5	6.5	6.0	4.8
Enterprises-secured loans	8.5	8.0	8.0	8.0	8.0	7.5	7.1
Rates on government paper							
Treasury bills 2/	6.1	5.4	5.5	5.5	5.8	6.0	4.0
Long-term bond yield 3/	7.0	6.9	7.2	7.4	7.6	7.7	5.4

Source: Central Bank of Cyprus.

1/ As of July 31, 2002.
2/ Period average on bills of 13-week maturity.
3/ Data from 1997 on refer to rate on 10-year bond.

Table 21. Cyprus: Balance of Payments Summary, 1996–2001

(In millions of Cyprus pounds)

	1996	1997	1998	1999	2000	2001
Current account balance	-215.3	-173.9	-312.2	-118.0	-283.7	-254.0
Trade balance	-1018.1	-1064.5	-1256.1	-1253.8	-1621.8	-1640.2
Exports	649.3	640.2	551.3	543.1	591.9	628.1
Imports	1667.4	1704.7	1807.4	1796.9	2213.7	2268.3
Fuel and lubricants	157.8	137.8	108.0	152.3	269.3	266.1
Services	798.0	882.9	943.6	1109.1	1273.8	1394.0
Exports	1339.4	1453.0	1530.1	1732.0	1995.7	2156.2
Travel (mainly tourism)	783.1	851.5	888.3	1036.0	1206.0	1290.0
Imports	541.4	570.1	586.5	622.9	721.9	762.2
Investment income, net	-18.8	-5.6	-14.8	-20.7	-14.0	-21.7
Transfers, net	15.5	13.3	15.1	47.4	78.3	13.9
Financial account balance	229.4	221.3	383.4	199.7	169.1	150.1
Direct foreign investment, net	8.9	22.2	-0.1	-13.5	-24.8	-35.0
Portfolio investment, net	-22.3	73.2	101.9	0.9	-126.6	52.0
Other investment, net	214.9	101.8	238.9	559.0	315.4	526.9
Reserve assets	27.9	24.1	42.7	-346.7	5.1	-393.8
Net errors and omissions	-14.1	-47.4	-71.2	-81.6	114.6	103.9
Change in official reserves	-123.6	-177.2	-16.2	456.5	-106.6	526.4

Source: Central Bank of Cyprus.

Table 22. Cyprus: Imports by Commodity, 1996–2001 1/

	1996	1997	1998	1999	2000	2001
	(In millions of Cyprus pounds)					
Total imports, c.i.f.	1857.4	1899.2	2014.8	2003.9	2468.9	2528.7
Consumer goods	320.7	368.5	446.7	481.6	569.6	617.7
Intermediate inputs	584.9	568.7	627.0	579.8	675.1	710.3
Capital goods	161.0	162.4	201.7	189.5	237.1	258.3
Transportation equipment	161.5	149.3	182.9	180.9	186.4	226.6
Fuel and lubricants	133.8	137.8	108.0	152.3	269.3	266.1
Military equipment	103.2	95.7	124.2	78.5	98.1	97.9
Imports for re-exports	392.3	416.8	324.3	341.3	433.3	351.9
	(Percent of total imports)					
Consumer goods	17.3	19.4	22.2	24.0	23.1	24.4
Intermediate inputs	31.5	29.9	31.1	28.9	27.3	28.1
Capital goods	8.7	8.6	10.0	9.5	9.6	10.2
Transportation equipment	8.7	7.9	9.1	9.0	7.5	9.0
Fuel and lubricants	7.2	7.3	5.4	7.6	10.9	10.5
Military equipment	5.6	5.0	6.2	3.9	4.0	3.9
Imports for re-exports	21.1	21.9	16.1	17.0	17.6	13.9
Total imports	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Bank of Cyprus.

1/ Data on a customs basis; excluding imports of foreign embassies and military bases.

Table 23. Cyprus: Exports (f.o.b.) by Commodity, 1996–2001

	1996	1997	1998	1999	2000	2001
	(In millions of Cyprus pounds)					
Total domestic exports, f.o.b.	221.7	213.7	213.2	206.7	224.0	233.9
Agricultural products	53.3	35.9	40.5	36.5	34.4	43.8
Industrial products - agricultural	31.2	28.1	24.4	25.3	28.2	28.0
Industrial Products - manufacturing	131.8	139.7	137.7	133.0	148.8	150.5
Minerals	5.0	9.6	10.4	11.5	12.4	11.6
Unclassified	0.4	0.4	0.2	0.4	0.2	0.1
Re-exports	375.5	391.9	306.6	297.6	299.6	337.0
Shipstores	52.2	34.6	31.4	38.7	68.3	57.1
Total exports	649.4	640.2	551.2	543.1	591.9	628.0
	(Percent of total exports)					
Total domestic exports, f.o.b.	34.1	33.4	38.7	38.1	37.8	37.2
Agricultural products	8.2	5.6	7.3	6.7	5.8	7.0
Industrial products - agricultural	4.8	4.4	4.4	4.7	4.8	4.5
Industrial products - manufacturing	20.3	21.8	25.0	24.5	25.1	24.0
Minerals	0.8	1.5	1.9	2.1	2.1	1.8
Re-exports	57.8	61.2	55.6	54.8	50.6	53.7
Shipstores	8.0	5.4	5.7	7.1	11.5	9.1
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Bank of Cyprus.

Table 24. Cyprus: Services, 1996–2001

(In millions of Cyprus pounds)

	1996	1997	1998	1999	2000	2001
Services balance	798.0	882.9	943.6	1109.1	1273.8	1394.0
Total exports of services	1339.4	1453.0	1530.1	1732.0	1995.7	2156.2
Transport	183.4	189.1	191.0	203.6	250.7	277.4
Sea transport	38.2	39.7	45.2	46.0	51.4	58.1
Air transport	145.2	149.4	145.8	157.6	199.3	219.3
Other transportation	0.0	0.0	0.0	0.0	0.0	0.0
Travel	783.1	851.5	888.3	1036.0	1206.0	1290.0
Business travel	0.0	0.0	0.0	0.0	0.0	0.0
Personal travel	783.1	851.5	888.3	1036.0	1206.0	1290.0
Other services	372.9	412.4	450.8	492.4	539.0	588.8
Total imports of services	541.4	570.1	586.5	622.9	721.9	762.2
Transport	279.0	274.8	290.4	296.2	358.4	373.2
Sea transport	172.7	176.0	186.2	183.0	226.2	234.3
Air transport	106.3	98.8	104.2	113.2	132.2	138.9
Other transportation	0.0	0.0	0.0	0.0	0.0	0.0
Travel	170.3	198.0	211.2	233.9	257.3	275.0
Business travel	10.1	11.0	12.9	13.7	12.7	12.8
Personal travel	160.2	187.0	198.3	220.2	244.6	262.2
Other services	92.1	97.3	84.9	92.8	106.2	114.0

Source: Central Bank of Cyprus.

Table 25. Cyprus: Balance of Payments Financial Account, 1996–2001

(In millions of Cyprus pounds; end of period)

	1996	1997	1998	1999	2000	2001
Financial Account	229.4	221.3	383.4	199.7	169.1	150.1
Direct Investment (net inflows)	8.9	22.2	-0.1	-13.5	-24.8	-35.0
Abroad	16.4	16.8	35.7	79.4	126.0	140.0
In Cyprus	25.3	39.0	35.6	65.9	101.2	105.0
Portfolio Investment (net inflows)	-22.3	73.2	101.9	0.9	-126.6	52.0
Assets	54.8	64.7	55.0	257.8	182.2	285.0
Liabilities	32.5	137.9	156.9	258.7	55.6	337.0
Financial Derivatives	0.0	0.0	0.0	0.0	0.0	0.0
Other Investment (net inflows)	214.9	101.8	238.9	559.0	315.4	526.9
Assets	73.7	360.0	102.4	211.6	864.3	347.6
Liabilities	288.6	461.8	341.3	770.6	1179.7	874.5
Official Reserve Assets	27.9	24.1	42.7	-346.7	5.1	-393.8
Net Errors and Omissions	-14.1	-47.4	-71.2	-81.6	114.6	103.9

Source: Central Bank of Cyprus.

Table 26. Cyprus: International Reserves, 1996–2001

(In millions of U.S. dollars, end of period)

	1996	1997	1998	1999	2000	2001
Monetary authorities (net)	1657.2	1462.6	1462.7	1928.6	1845.4	2355.9
Foreign assets	1713.6	1536.3	1520.1	1978.3	1870.0	2396.4
Central bank	1675.5	1500.4	1483.3	1928.7	1822.6	2350.8
Reserve position in IMF	36.6	34.5	35.3	48.4	46.1	44.4
Other claims	1.6	1.4	1.5	1.3	1.2	1.1
Foreign liabilities	-56.4	-73.7	-57.3	-49.7	-24.5	-40.5
Commercial banks (net)	-1047.8	-1088.9	-1276.6	-1557.4	-1506.1	-1799.8
Foreign Assets	3255.1	3635.1	3534.9	3901.5	5335.1	6155.2
Foreign Liabilities	-4302.8	-4724.0	-4811.5	-5458.9	-6841.2	-7955.0
Net foreign assets	609.4	373.7	186.2	371.3	339.3	556.1

Sources: Central Bank of Cyprus; IMF, *International Financial Statistics.*

Table 27. Cyprus: Outstanding External Debt and Debt Service, 1996–2001

	1996	1997	1998	1999	2000	2001
	(In millions of Cyprus pounds)					
Total outstanding external debt	1229.8	1426.9	1601.0	1852.0	1890.0	2352.8
Public sector	735.5	906.1	1054.7	1296.5	1276.0	1222.8
Medium and long term	582.7	753.7	944.0	1161.8	1194.5	1137.1
Government	280.8	388.8	576.6	762.0	795.6	738.2
Public enterprises	301.9	364.9	367.4	399.8	398.9	398.9
Short term 1/	152.8	152.4	110.7	134.7	81.5	85.7
Government	137.8	128.6	90.7	112.7	57.5	65.7
Public enterprises	15.0	23.8	20.0	22.0	24.0	20.0
Private sector	494.3	520.8	546.3	555.5	614.0	1130.0
Medium and long term	314.3	330.8	361.3	340.5	344.0	875.0
Short term 1/	180.0	190.0	185.0	215.0	270.0	255.0
Service payments of external debt 2/	203.2	183.5	185.0	151.9	224.1	285.9
Public sector	173.7	145.8	143.5	111.6	186.9	235.9
Amortization	135.1	110.8	101.3	63.7	121.6	169.3
Interest	38.6	35.0	42.2	47.9	65.3	66.6
Private sector	29.5	37.7	41.5	40.3	37.2	50.0
Amortization	23.0	25.0	28.0	30.0	26.0	31.0
Interest	6.5	12.7	13.5	10.3	11.2	19.0
	(Percent of GDP)					
Outstanding external debt	29.6	32.7	34.1	36.9	34.4	40.1
Public sector	17.7	20.7	22.5	25.8	23.3	20.8
Medium and long term	14.0	17.3	20.1	23.1	21.8	19.4
Short-term debt	3.7	3.5	2.4	2.7	1.5	1.5
Private sector	11.9	11.9	11.6	11.1	11.2	19.3
Medium and long term	7.6	7.6	7.7	6.8	6.3	14.9
Short-term debt	4.3	4.3	3.9	4.3	4.9	4.3
	(Percent of goods and services exports)					
Service payments	10.0	8.6	8.9	6.7	8.7	10.3
Public sector	8.6	6.9	6.9	4.9	7.2	8.5
Private sector	1.5	1.8	2.0	1.8	1.4	1.8

Source: Central Bank of Cyprus.

1/ Excludes short-term liabilities of the banking system.
2/ Medium and long term.

Table 28. Cyprus: Nominal and Real Exchange Rate Indices, 1996–2001

(Period averages, 1995 = 100)

	Nominal Exchange Rate Indices			Real Exchange Rate Indices		
	U.S. dollar/ Cyprus pound	euro/ Cyprus pound	Pound sterling/ Cyprus pound	Nominal Effective Exchange Rate 1/	Relative Consumer Price Index 1/	Real Effective Exchange Rate 1/
1996	97.0	100.0	98.0	102.0	98.3	100.3
1997	88.1	101.5	84.7	102.8	97.4	100.1
1998	87.5	102.1	83.2	108.3	95.4	103.3
1999	83.4	102.2	81.3	106.0	94.1	99.7
2000	73.0	88.7	75.8	102.2	94.5	96.5
2001	70.2	85.8	72.3	106.0	92.6	98.2
2000						
I	76.6	93.5	78.3	103.3	95.0	98.2
II	73.9	90.6	76.3	102.3	94.8	97.0
III	71.6	86.7	73.8	101.9	94.2	96.1
IV	70.2	85.8	73.3	101.2	93.8	94.9
2001						
I	71.6	87.7	72.3	104.7	93.2	97.5
II	68.0	82.9	71.3	105.0	92.7	97.3
III	71.6	85.8	72.8	106.9	92.0	98.4
IV	70.7	86.7	72.8	107.6	92.7	99.7

Source: IMF, *International Financial Statistics.*

1/ INS weights.