October 1997

IMF Staff Country Report No. 97/103

Hungary—Selected Issues

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International Monetary Fund
Washington, D.C.

INTERNATIONAL MONETARY FUND

HUNGARY

Selected Issues

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Approved by European I Department

August 22, 1997

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I. Hungary's Growth Performance: Has It Lived Up to Its Potential?[1]

A. Introduction

1. Since 1990, as part of its transition from central planning to a market economy, Hungary implemented a comprehensive liberalization of its economic system, correcting relative prices through subsidy cuts, reducing trade distortions, freeing most food prices, hardening enterprise budget constraints, approving new bankruptcy and banking laws, and privatizing state enterprises. As elsewhere in the region, these reforms were accompanied by a sharp drop in output and a surge in inflation. Although the transition toward a market economy is ongoing, the decline in output has been halted and a recovery has begun. This chapter attempts to describe the main factors behind the evolution of output in Hungary since 1990, and examines Hungary's future growth prospects with specific focus on the role that structural and macroeconomic policies can play in enhancing those prospects.

B. Growth During 1990–96

2. Following more than two decades of gradual reform, Hungary stepped up the pace of transition in 1990. Output began to decline that year, before falling sharply in 1991. The pace of decline moderated in 1992 and 1993 (the year when output reached its lowest level). Between 1989 and 1993, GDP declined by a cumulative 18½ percent. Consistent with typical cyclical behavior during downturns, the bulk of this decline was due to a sharp drop in fixed investment (Figure 1). In 1993, the output decline reflected a marked deterioration in the external accounts as exports collapsed while import growth remained robust.

3. Thereafter, positive—though modest—output growth was restored, initially on the strength of investment and, following the implementation of the 1995 austerity program (see EBS/96/18, 2/5/96) on the contribution of the external sector, which more than offset a steep decline in private consumption. Activity subsequently accelerated sharply, with growth in the fourth quarter of 1996 rising to 3 percent year-on-year, fueled by a combination of strong investment and continued expansion in the external sector. By end-1996, GDP had increased 6 percent from its trough in 1993, but was still well below its level at the beginning of the transition.[2]

4. This output growth pattern can be contrasted with those in other countries in the region. Annual GDP indices for Hungary, Poland, the Czech Republic, Slovakia, and Slovenia in "stabilization time" (i.e., with the year in which stabilization was initiated in each

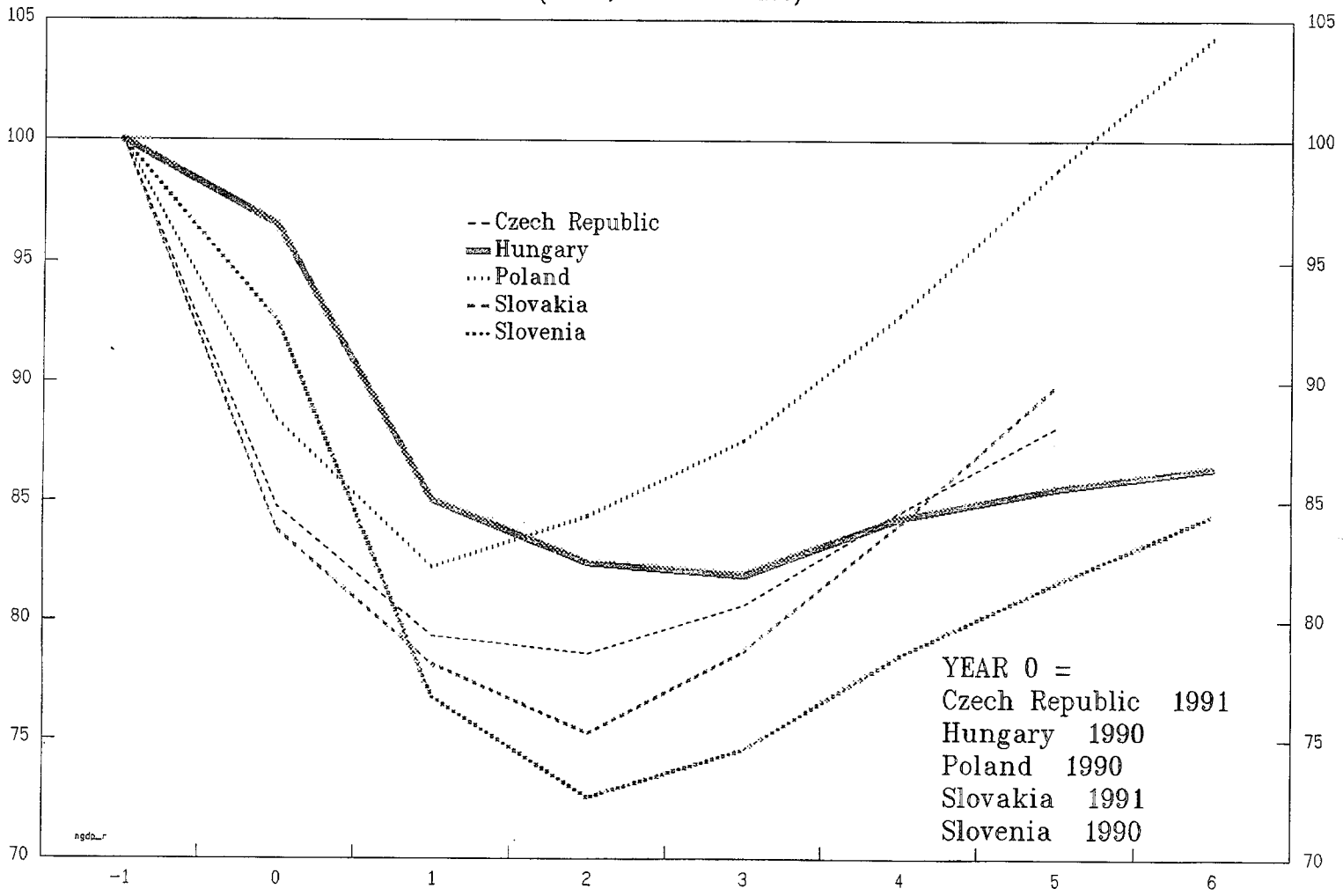
---

[1]Prepared by Rachel van Elkan.

[2]As in other transition economies, however, measurement problems confound an attempt to compare output levels in the pre- and post-reform periods (Berg (1993)).

Figure 1. Real Output in Advanced Transition Countries

(Index; Year -1 = 100)



Source: WEO, April 1997.

country denoted as 0), are depicted in Figure 2. For Hungary, year 0 is 1990, when broad-based price liberalization (including the freeing of food prices and adjustments in energy prices) took place, financial policies were significantly tightened, and decisive structural reform efforts began.[3] The figure reveals that, in each of the advanced transition countries, output declined steeply in the first and second year following the initiation of reform, but the process of recovery three years out was well established for most of the countries in the chart. By contrast, Hungary endured four consecutive years of negative output growth during the transition. Moreover, the pace of recovery was also slower in Hungary: Specifically, by 1996, GDP had increased between 12 and 24 percent from its minimum level for the other countries in the chart, while in Hungary, output had recovered by only 6 percent.[4] To sum up, Hungary's depression since 1990 was longer and its subsequent recovery flatter than in other advanced transition economies.

5. Two factors may explain this performance: The postponement of macroeconomic stabilization to the mid-1990s; and the slowing of structural reform during 1993 to mid-1995. The postponement of macroeconomic stabilization is apparent from a few macroeconomic indicators. As shown in Figure 3, Hungary's progress in reducing *inflation* has been relatively modest, especially compared with other countries, and this factor itself may reflect a lack of resolve in tightening financial policies (van Elkan (1996)).[5] Hungary's current account deficit stood at 9 percent of GDP in 1993–94, compared to a surplus of 1 percent of GDP in 1990–92. Likewise, the deficit of the consolidated government stood above 7 percent of GDP in 1992–94, compared to a surplus of 1 percent of GDP in 1990 and a deficit of 3½ percent of GDP in 1991.

6. To what extent did the delay in macroeconomic stabilization hamper growth performance? A tentative answer to this question may be found in the empirical literature linking growth to inflation and fiscal performance. A number of empirical studies conclude that growth is adversely affected by inflation. Bruno and Easterly (1995) find this negative relationship is apparent when inflation exceeds 40 percent. However, Sarel (1996) argues that growth is adversely affected by inflation rates as low as the high single digits, with a doubling of inflation from such levels lowering growth by almost 2 percentage points. This evidence

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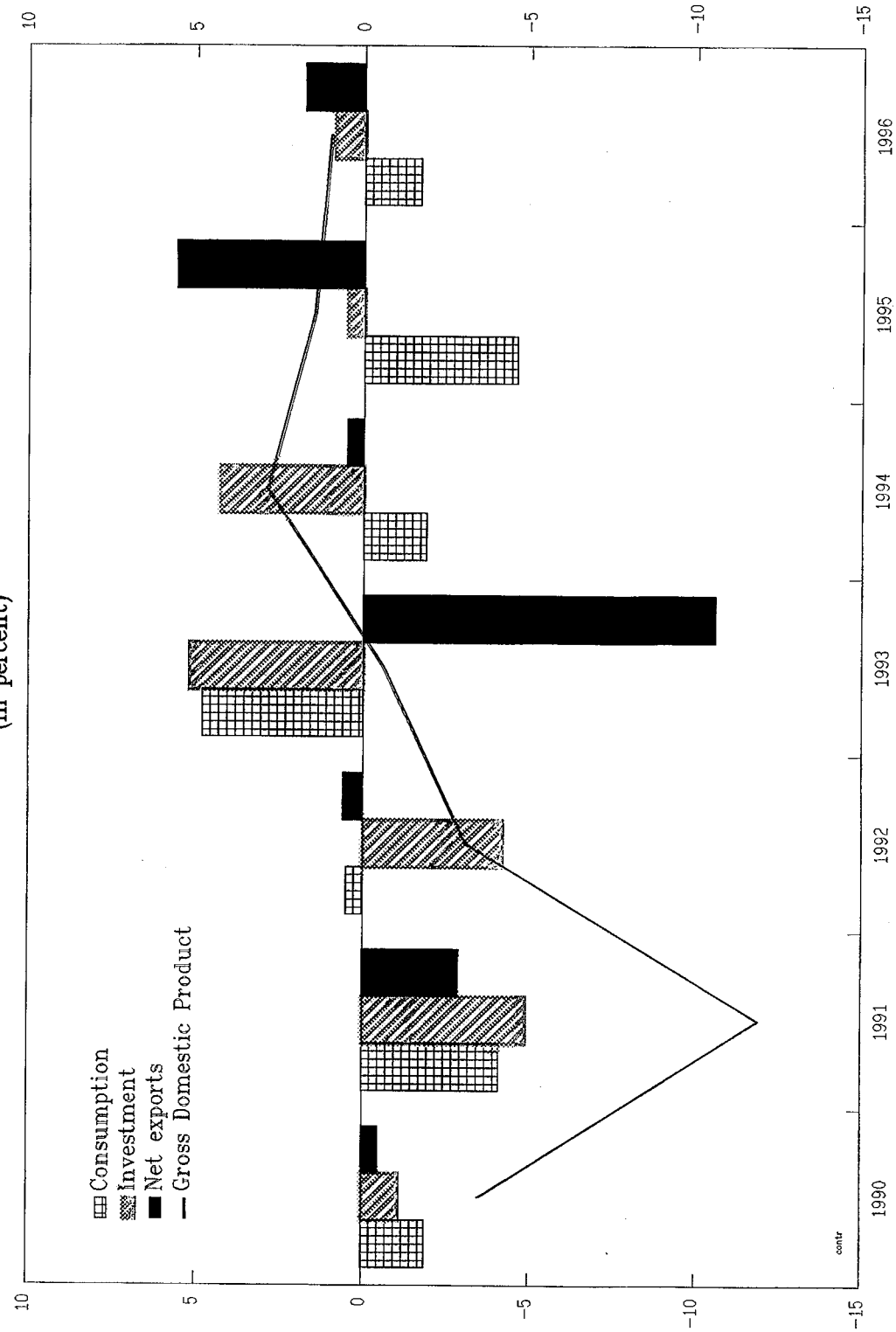
[3]Measured by the annual change in their index of liberalization, de Melo et. al.(1996) find that 1990 was indeed the year of most intense reform in Hungary. For the other economies, time 0 was as follows: Poland (1990); Czech Republic (1991); Slovakia (1991); and Slovenia (1990).

[4]Despite the less severe nature of Hungary's recession, by 1996 its cumulative output loss was only slightly less than the average of the other advanced transition countries. Moreover, owing to faster growth on average in the other economies, the sign of this difference is expected to be reversed in 1997.

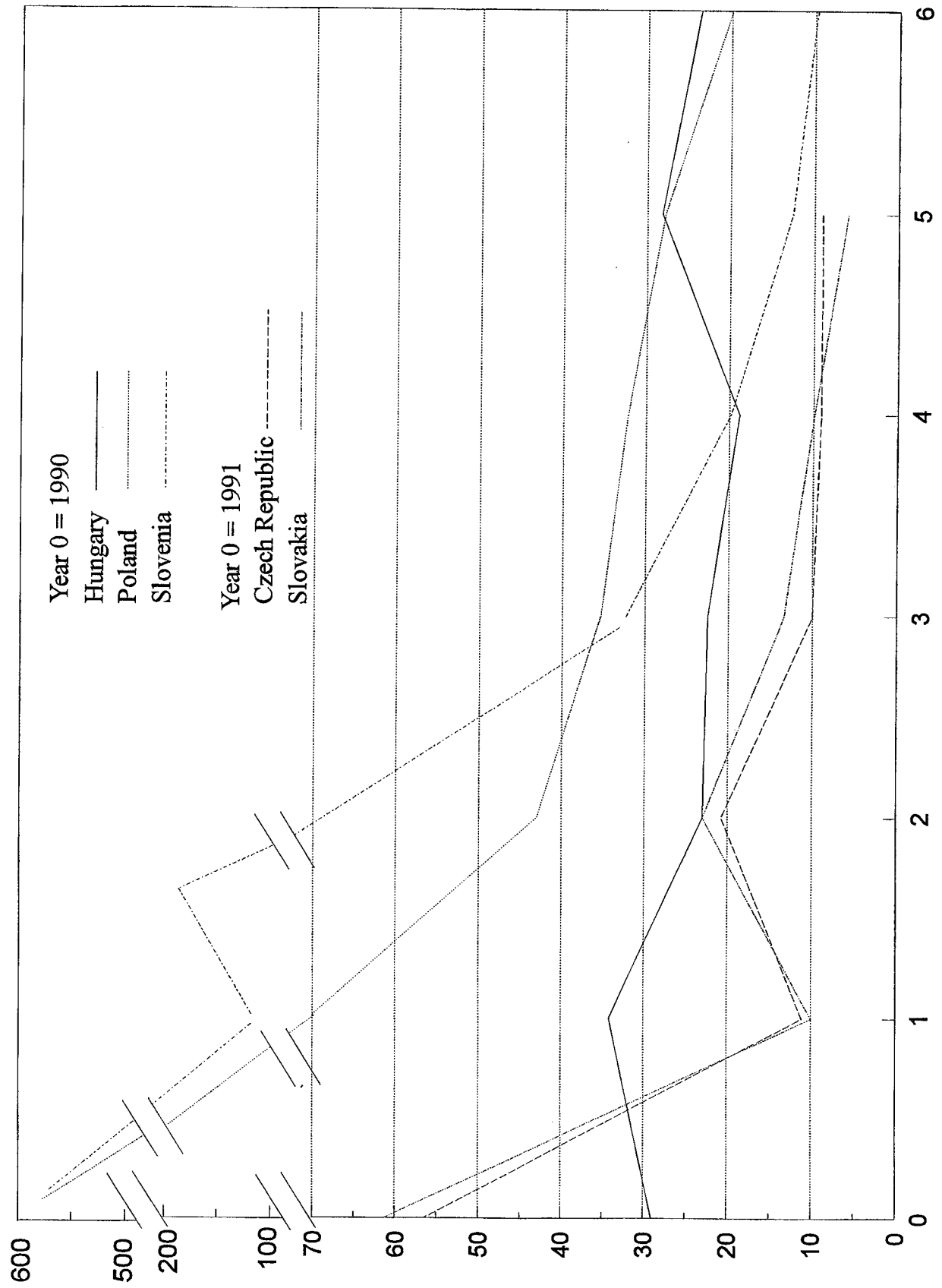
[5]Of course, Hungary was spared very high inflation at the outset of reform as a result of significant progress made with price liberalization over the previous two decades.

Figure 2. Hungary: Contributions to Growth
(in percent)



Source: WEO, April 1997.

Figure 3. Inflation in Advanced Transition Countries



Source: WEO, 1997

would suggest that Hungary's failure to achieve a sizable and sustained reduction in inflation since 1990 significantly impeded its growth performance. If one takes the average inflation rate of the advanced central and eastern European countries in 1996 and Sarel's estimates as a base case, slow progress with inflation stabilization could have reduced Hungary's current growth rate by nearly 2 percentage points.[6]

7. As to the effect of fiscal imbalances on growth, according to Fischer et. al. (1996b), transition countries which imposed more restrictive financial policies, in the form of a pegged exchange rate and a tight fiscal stance, grew faster during 1992–95.[7] Using their estimates, the relative deterioration in Hungary's fiscal position could explain about ¾ percentage points of the growth shortfall relative to the other advanced transition countries in 1996.[8]

8. In addition to the slow progress on the macroeconomic front, Hungary's growth performance may also have been affected by a slowing of structural reform in the period from 1993 to mid-1995. By 1993 Hungary had already made significant progress in establishing a market-based economy, and was assessed by the EBRD to be among the most advanced of the transition countries in this area.[9] Among the notable achievements were: more than 90 percent of prices, weighted by their share in the consumption basket, had been freed of administrative controls; licensing and quota restrictions on trade had been virtually eliminated; small-scale privatization was almost complete; and the private sector already accounted for 50 percent of the economy. However, Hungary's reform process slowed markedly from 1993 to mid-1995, when little headway was made in ensuring the long-term viability of the social security system, dealing with large, loss-making enterprises, restructuring the financial system, or privatization. Moreover, despite efforts at fiscal retrenchment, the size of the public sector did not decline between 1990 and 1995, with the share of consolidated government

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[6]This estimate is calculated as the product of Sarel's coefficient on the logarithm of inflation (-0.0248) and the difference in the logarithm of inflation in Hungary in 1996 (24 percent) and the logarithm of average inflation in 1996 in Poland, the Czech Republic, Slovakia and Slovenia (11 percent).

[7]Looking at the experience of 25 countries from eastern Europe, the Baltics, and the Commonwealth of Independent States, Fischer et. al. (1996a) conclude that growth turns positive two years after the initiation of a stabilization program, and rises to 5 percent within four years.

[8]In 1996, Hungary's government balance (excluding privatization receipts) was 3½ percent of GDP, compared with an average of 1½ percent of GDP among the other advanced transition countries.

[9]De Melo et. al. (1996) confirm Hungary's ranking as among the top reformers in 1993.

expenditure remaining at about 50 percent of GDP in 1995.[10] A consequence of the still large size of the government sector is the high level of distortionary taxes required to finance it. In particular, the tax wedge on labor income created by contributions to social security remains among the highest in the world, with negative implications for labor market participation and output growth.

9. The importance of maintaining the momentum of structural reform is borne out by several studies. Sachs (1996), for example, finds that for a group of 25 countries from eastern Europe, the Baltics, and the Commonwealth of Independent States, reform (measured in terms broad-based indices of liberalization) is positively correlated with GDP growth during 1989–95, and, therefore, that greater progress in the structural area leads to a smaller cumulative output loss and/or a faster recovery in activity.[11] In addition, de Melo et. al. (1996) find that more than half the variation in growth across transition countries is related to differences in economic liberalization, with the latter's importance depending on both the *duration* as well as the *intensity* of reform. Based on the index and econometric results presented in de Melo, Denizer and Gelb (DDG) (1996), Hungary's annual growth rate would have been ¼ percentage point higher had it achieved the same degree of liberalization as the Czech Republic in 1993 and 1994.[12] The importance of sustaining the pace of reform is supported by Selowsky and Martin (1996), who find that reform requires three years to achieve its full effect on growth. On this basis, Hungary's slowdown in reform during 1993–94 is likely to have retarded output growth until 1996.

10. Third, Hungary's growth performance may also be related to specific elements in the design of its program. A case in point relates to the establishment of the Bankruptcy Law in January 1992 which, by automatically activating bankruptcy or liquidation procedures in cases in which obligations were overdue by as little 90 days,[13] forced into bankruptcy a number of

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[10]Total government spending in 1995 remained unchanged from its 1990-GDP share because subsidy reductions were offset by increases in spending on social security and debt servicing.

[11]This is consistent with Hernandez-Cata (1997) who finds that, although the *initial* contraction of aggregate output is much steeper for a strong reformer than for a slow reformer, the subsequent recovery occurs earlier and is more rapid. On balance, he finds that the cumulative loss is lower for the strong reformer.

[12]According to DDG's indices of liberalization, the Czech Republic was the most advanced reformer in 1993–94, with a weighted index of 90 in each year, whereas Hungary, Poland, Slovakia, and Slovenia had a weighted average index of 84, 84, 83, and 82, respectively.

[13]The automatic 90-day trigger was repealed at end-1992.

economically viable firms that were affected solely by temporary liquidity problems.[14] Moreover, for those firms impacted by the Law, bankruptcy proceedings were excessively protracted, with resolutions requiring two years on average. It is estimated that about one third of Hungary's industrial enterprises were affected by the Law in 1992–93, with particularly adverse effects on output in the export sector. This is not to say, however, that Hungary's output performance would have been stronger had the Law not been in place. On the contrary, the Law was a key instrument in reforming the supply-side of the economy. However, had some elements of the Law been designed more carefully, the resulting output loss would have been more contained.

C. Growth in the Medium Term

11. This section employs an aggregate production function approach to assess the implications for Hungary's medium-term growth rate—say over the next four years—of recent investments in physical and human capital and improvements in productive efficiency, given initial factor endowments and progress to date with structural reform. It argues that, while slow progress with stabilization and a loss of momentum in structural reform may have held down growth thus far, success in attracting foreign direct investment, together with human capital improvements, augur rather well for Hungary's future growth prospects, as long as policy shortcomings identified in the previous section (such as the still high inflation rate) are rectified.

Physical capital

12. As in other transition economies, Hungary's stock of physical capital at the beginning of transition was built up from a series of investments guided by motives other than profit maximization. Since these investments were largely irreversible, the stock of "effective" capital under market conditions was less than the initial stock of capital. An estimate of the effective size of the capital stock—and hence of the degree of inefficiency of past investment—can be made by determining the amount of capital required to generate Hungary's current level of output under market conditions, controlling for other factors including human capital and labor endowments.[15] Assuming that misallocated investments cannot be diverted to productive uses, Borensztein and Montiel (1991) find that three quarters of Hungary's investment under central planning (equal, on average, to 29 percent of GDP in 1960–85) was unproductive.

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[14]In addition during this period, many large state-owned enterprises were able to evade the Law either because of their close links to state banks which continued to extend credit, or through special debt-resolution channels which entailed a large element of debt forgiveness.

[15]This methodology attributes all the inefficiency to capital investment and assumes that all existing capital is fully employed. Therefore, the resulting estimate may overstate the degree of wasteful investment.

13. The initial size of Hungary's capital stock affects its future growth prospects via the productivity of investment, with the low level of Hungary's effective capital stock implying a relatively high marginal product. This suggests, paradoxically, that the prospects for growth from new investment are more favorable than if efficiency under planning had been greater, and that a relatively modest investment rate could sustain relatively high rates of growth. Indeed, assuming an investment rate of 22 percent of GDP—well below the average for the period 1960–85 and below the current rate of 25 percent of GDP—Borensztein and Montiel's cross-country growth regressions suggest that Hungary could achieve growth rates of 5-6 percent in the future (assuming that human capital and population growth rates are the same as in 1960–85), similar to rates achieved at present by the other advanced transition economies. While such regressions are suggestive, it is nevertheless worth examining whether other approaches give similar results.

14. Foreign direct investment is frequently argued to be a good predictor of an economy's future growth performance, especially given FDI's role as a vehicle for the international transfer of new technologies and management practices, and the empirical evidence on the complementarities between FDI and human capital and between FDI and domestic investment (Borensztein et. al. (1995)). Hungary has indeed been a leader in the region in attracting a large volume of FDI, with cumulative FDI during 1991–96 of US$12.4 billion, almost three times as much as the next largest recipient (Russia), and accounting for nearly two fifths of all regional FDI.[16] [17] The magnitude of FDI is even more apparent when scaled against the size of

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[16]Hungary's position in attracting regional FDI flows reflects, inter alia, its relatively advanced stage of implementation of market reforms and price stabilization; its geographic proximity to major trading partners; the quality of its labor force; the size and income of its domestic market; and tax incentives to foreign investors. The importance of reform for attracting FDI is supported by a recent EBRD survey of investors (EBRD (1995)) which finds that countries which are comparatively advanced with reform and stabilization have attracted a relatively large share of regional FDI. On the basis of nine indicators, Hungary was rated by the EBRD (EBRD (1995, 1996)) as being the most advanced reformer among the transition economies. Selowsky and Martin (1996) draw similar conclusions about the relationship between reform and FDI, based on the DDG index of liberalization. Also supporting the link between reform and FDI is the fact that FDI to Hungary fell sharply in the mid-1990s, coinciding with the period of stalled reform, and rebounded strongly with the acceleration of reform since mid-1995.

[17]The *quality* of Hungary's FDI, as measured by the per capita income level of the source country, was also relatively high, with Germany, the United States and Austria contributing about 60 percent of total FDI during 1993–94.

the economy, with the ratio of FDI to GDP averaging 5 percent during 1991–96, compared to an average of less 1¼ percent in the other economies of the region.[18]

15. Cross-country evidence suggests an economically and statistically significant relationship between the FDI/GDP ratio and growth performance, with Borensztein et. al. (1995) finding that a 1 percentage point increase in the former raises growth by 0.85 percentage points.[19] If one assumes (conservatively) that the ratio of FDI to GDP in Hungary stabilizes at 1½ percent of GDP during 1997–99 as the privatization process winds down, Hungary's FDI ratio during the 1990s would amount to about 3 percent of GDP. Using Borensztein et. al.'s regression results, one would conclude that Hungary's medium-term growth rate is likely to be boosted by about 2½ percentage points on account of the increase in FDI alone.

Labor

16. The demographic profile of Hungary's population suggests that the size of the labor force will increase only marginally (0.3 percent per annum) during 1997–2000. However, the effective labor supply will be boosted during this period by improvements in educational attainment. As shown in the text table below, secondary school enrollment increased markedly between 1970 and 1992, while enrollment in tertiary education also rose. Moreover, the illiteracy rate also declined (albeit from a very low level). Increased participation in formal education will serve to improve Hungary's growth potential by raising the average skill level of workers, since the human capital of workers entering the labor force will exceed that of those they replace through retirement.

	1970	1980	1992
Enrollment			
(percent of age group)			
Secondary	63	70	81
Tertiary	13	...	15½
Illiteracy rate			
(percentage of population age 15 and above)	2	1	...

[18]Albania, Belarus, Croatia, Czech Republic, Estonia, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, and Ukraine.

[19]Borensztein et. al.'s estimates are based on time-averaged data over ten year blocks. Given the lags that are likely to be present, it is sensible to assume that Hungary's future prospects will be influenced not only by future FDI, but also by the relatively high rates of FDI in the past. This is the underlying assumption in the exercise below.

Based on the regression results of Levine and Renelt (1992), the increase in the labor force and in secondary school enrollment from its 1980-rate should raise Hungary's medium-term potential growth rate by about ¼ percentage point.

Factor productivity

17. A major objective of reforms undertaken during the transition is to improve total factor productivity (TFP). Structural reform can affect TFP through two channels. First, existing resources may be reallocated to more productive uses. Policies which further this objective are those which create incentives for more efficient resource allocation (e.g., subsidy reductions, smaller government), facilitate resource mobility (e.g., greater efficiency in financial intermediation), and enhance competition in the domestic economy (e.g., elimination of trade barriers, establishment of the commercial and legal institutions of a market economy). Second, TFP can be boosted by the upgrading of technologies. Greater openness to trade and investment provides a conduit for the international transfer of advanced production techniques and technical knowledge, thereby enabling transition countries to close the technology gap with industrial countries.

18. Evidence from developing countries suggests that improvements in TFP have been an important factor in sustaining economic growth. Between 1971 and 1993, increases in TFP accounted for nearly half (1½ percentage points) of per capita growth among developing countries. Moreover, among successfully-adjusting developing countries that have sustained reform, TFP's contribution to per capita growth increased to 2½ percentage points (WEO, October 1993). Individual country studies confirm the importance of reform for growth in total factor productivity. For example, in the case of Chile, Lefort and Solimano (1994) find that the contribution of TFP to output growth increased strongly in the period following the implementation of structural reforms, with the rate of growth of TFP rising from about ½ percent per year before reform to 1¼ percent thereafter.[20] In the case of Korea, Lee (1996) finds that distortionary tax/tariff incentives reduce TFP growth.

19. The effects of structural reforms on TFP have been examined in a number of studies. With respect to trade reform, Fischer (1993) finds that tariff protection weighted by the volume of trade reduces the efficiency of resource allocation. During the transition, Hungary undertook a substantial liberalization of its trading environment, reducing average tariffs and import surcharges from 7¾ percent in 1990 to 6 percent in 1996, and to a projected 3 percent in 1998. Partly in response, the degree of openness (measured by the trade ratio) has increased from 38 percent of GDP in 1990 to 70 percent of GDP in 1996. Moreover, the orientation of trade has also shifted, with 65 percent of trade now taking place with EU countries. Based on

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[20]They find that the most important factors in explaining the increase in TFP growth were greater external openness (measured by reductions in import protection) and the increase in financial deepening (proxied by the real level of interest-bearing deposits in the banking system).

the econometric results of Fischer (1993), greater openness and reduced protection during 1990–99 is likely to boost future TFP growth by ¼ percentage point.

20. In summary, Hungary's medium-term growth potential could be boosted by 3 percentage points from the combined effects of capital and labor accumulation and improvements in TFP.

Obstacles to growth

21. Output in Hungary expanded by a modest 1 percent in 1996, largely—as argued in Section B—due to slow progress with macroeconomic stabilization. Nevertheless, as discussed above in this section, several factors suggest that Hungary is now poised to see its growth rate pick up significantly, especially on account of its superior performance in attracting FDI. This said, however, future prospects will continue to be circumscribed if progress is not made in durably reducing inflation towards single digit levels.

22. To get some notion of the benefits to medium-term growth prospects from lower inflation, the empirical results from Section B may be brought to bear. In their medium-term macroeconomic forecast, the authorities target a gradual decline in inflation to 8 percent by 2000. Based on the empirical estimates reported above and this target, the planned disinflation could raise potential growth by 1½ percentage points.[21] The analysis in the previous three subsections suggested, meanwhile, that factor accumulation (FDI, effective labor) and improvements in TFP flowing from greater openness could, together, boost Hungary's growth rate by 3 percentage points. All told, therefore, decisive improvements on the stabilization front in line with the authorities' targets would be consistent with a medium-term sustainable growth rate of 5½ percent.

D. Conclusions

23. This chapter has analyzed Hungary's growth performance during 1990–96 and its future prospects. The shortfall in growth relative to the other advanced transition economies was attributed to relatively slow progress with macroeconomic stabilization, stalled structural reform between 1993 and mid-1995, and specific features in the design of Hungary's reform program. In the next few years, growth prospects will be boosted by factor accumulation (especially FDI) and the effects of structural reform on the efficiency of production. This being said, some impediments to growth remain, notably the persistence of relatively high (by regional standards) inflation. Removal of these obstacles, together with continued inflows of FDI and progress with structural reform, could boost Hungary's growth rate from 1 percent in 1996 to 5–6 percent in the next few years.

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[21]Calculated on the basis of the average inflation rate during 1997–2000.

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II. Debt Dynamics in Hungary[22]

A. Introduction

24. The gross debt of the consolidated government[23] rose from some 66 percent of GDP in 1990 to nearly 90 percent of GDP in 1993, before declining gradually to 85 percent of GDP in 1995.[24] There has been a sharp decline in the debt-to-GDP ratio since 1995: 11 percentage points in 1996 alone (Figure 4, top panel). By the end of the century, the authorities intend to reduce this ratio to well below the 60 percent level specified in the Maastricht treaty as a condition for participating in the European Monetary Union. Indeed, on current policies, gross government debt is already projected to decline to some 64 percent of GDP by end-1997.

25. One factor behind the rise in the debt ratio in the early 1990s was undoubtedly the deteriorating fiscal position of the government: the consolidated balance turned from a surplus of some 1 percent of GDP in 1990 to a deficit of nearly 8 percent of GDP in 1993 (Figure 4, top panel). The primary balance also deteriorated by some 10 percentage points during this period (from a surplus of nearly 7 percent of GDP in 1990 to a deficit of 3 percent of GDP in 1993).

26. However, when analyzing government debt dynamics in Hungary, one has to take into consideration a number of special factors in addition to the government's fiscal position. For example, during 1992–94 period the government issued substantial amounts of capitalization bonds, adding to the debt burden.[25] On the other hand, since 1994 the government has benefitted from considerable privatization revenues which have mainly been used to reduce government debt.

27. Another important factor affecting debt dynamics in Hungary is the interest rate charged on the debt. A small component of the domestic debt, related to central bank credit to government prior to 1992, carries a below-market interest rate. More importantly, until this year, a very large part of the debt stock consisted of zero-interest bearing liabilities to the NBH arising from the devaluation losses associated with the foreign debt, contracted in the

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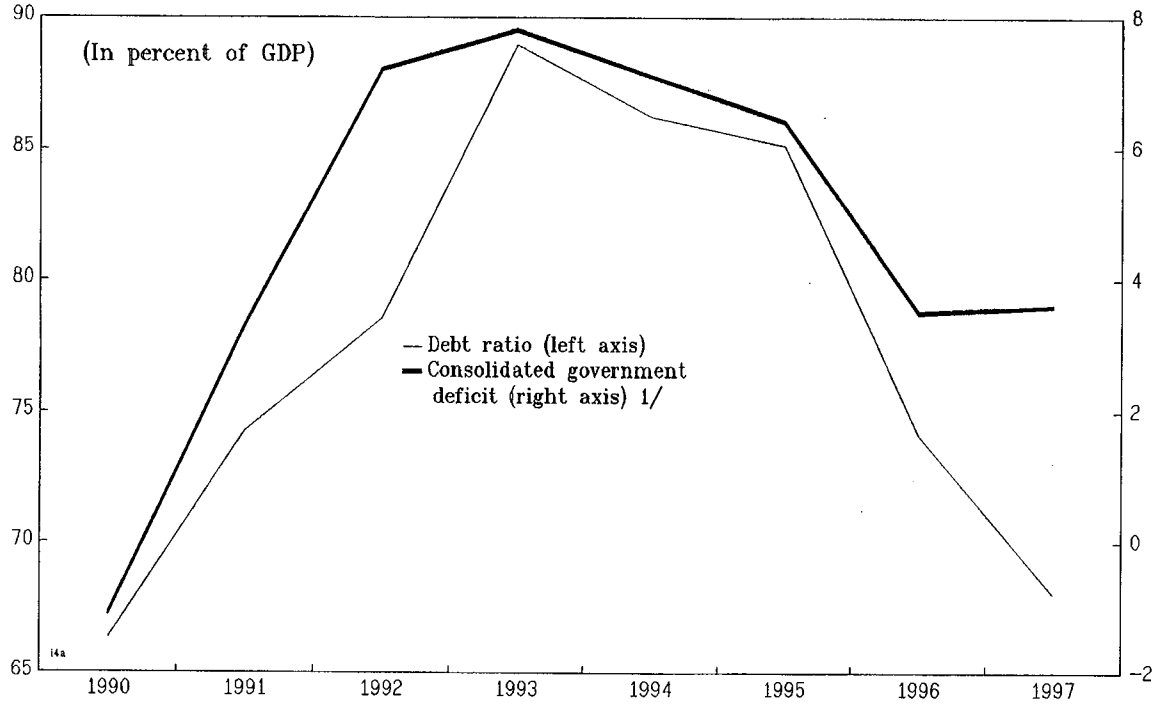
[22]Prepared by Reza Moghadam.

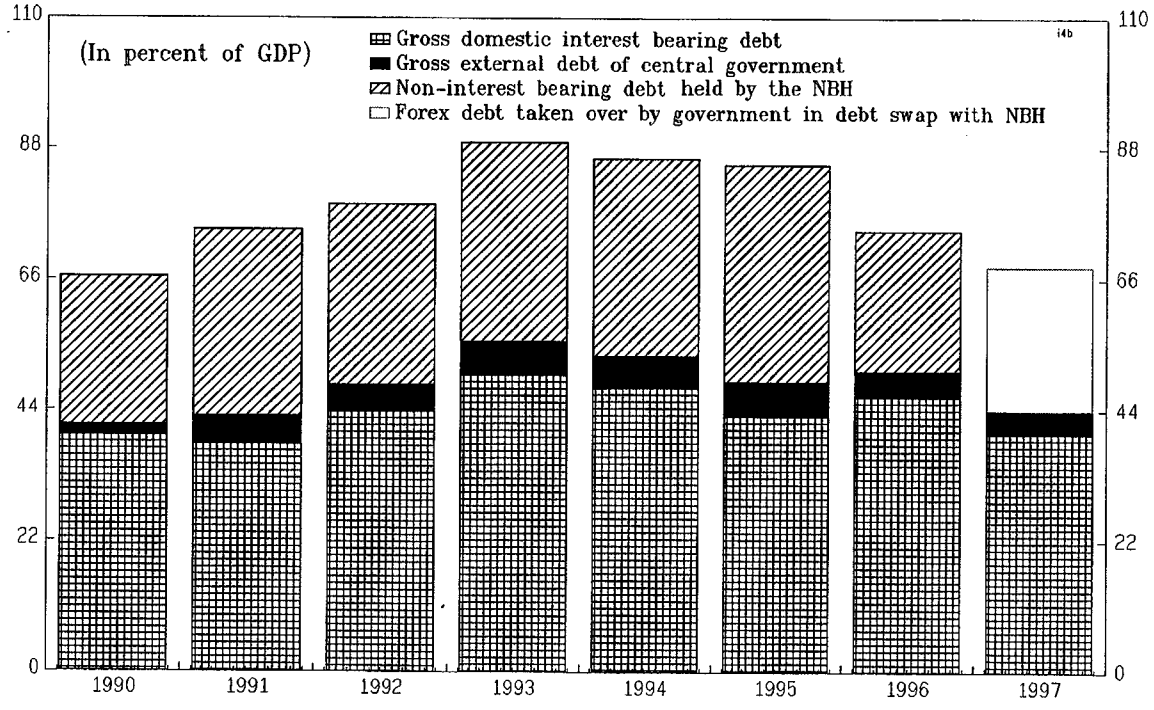
[23]Including the noninterest bearing liabilities vis-à-vis the National Bank of Hungary (NBH) for valuation losses. These liabilities are roughly the same magnitude as the net foreign debt position of the central bank.

[24]Consolidated government excludes the local governments. References to government in this section refer only to the consolidated government.

[25]These were mainly for recapitalization of state banks and to cover losses from earlier housing loans.

Figure 4. Hungary: Government Debt





Sources: Ministry of Finance and staff estimates.

1/ Excluding the cost of cleaning up the balance sheet of the NBH in 1997.

past by the central bank on behalf of the government (Figure 4, bottom panel). This portion of the debt did not bear any interest. On January 1, 1997, through a "securitization" operation, the government swapped the stock of the noninterest bearing valuation losses with foreign exchange denominated liabilities to the central bank.[26] In fact, the operation was designed in a manner which ensured that the new stock of the NBH foreign exchange claims on the government was identical, in size and maturity, to the net foreign exchange position of the central bank. This chapter analyzes the above factors and quantifies their contribution to determining debt dynamics in Hungary. It then proceeds to draw conclusions regarding the conditions that need to be met in order to prevent an increase in the debt-to-GDP ratio.[27]

B. Determinants of Debt Dynamics in Hungary

28. The change in debt can be expressed in the following form:

$$\Delta D = (I-P) + A \qquad (1)$$

where **I** is interest payments; **P** is the primary surplus; and **A** is other items besides the budget deficit that affect indebtedness, e.g., privatization receipts, devaluation losses, issuance of bonds for recapitalizing banks.

29. Table 1 provides the breakdown of the change in debt since 1992 according to (1). It also identifies the major components of **A**. The table confirms that the fiscal deficit has had a significant impact on debt, accounting for about half of the increase in debt during 1992–97 (see last column of Table 1). However, other items have also played an important role in explaining the movements in debt. For example, the issuance of consolidation bonds in 1992 and 1993 accounts for about one-third of the increase in debt during that period. Another critical element in explaining the increase in debt is the devaluation of the exchange rate: the contribution of this element has been of the same order of magnitude as the deficit.

30. Privatization receipts have had a significant role in limiting the increase in debt. For 1992–97 as a whole, the rise in debt would have been some 14 percent higher in the absence of privatization. Finally, in some years, the change in government deposits has also been an important component of **A**. In 1994, for instance, government deposits were drawn down substantially while in 1996 there was a significant build up of these deposits.

31. Equation (1) is useful in helping to identify the key determinants of the change in nominal debt; however, to facilitate an analysis of debt dynamics and the sustainability of

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[26]See EBS/97/61 (4/4/97), and Chapter IV of the 1996 Selected Issues (SM/96/207, 8/7/96).

[27]A debt ratio that is not increasing is a condition for the solvency of public finances, i.e., for the government to meet its intertemporal budget constraint.

Table 1. Hungary: Decomposition of the Change in Debt, 1992-97

	1992	1993	1994	1995	1996	1997	1992-97
				In billions of forint			
Change in debt (I+II)	455.1	842.3	604.2	981.9	198.9	526.8	3609.2
I. Consolidated deficit (1-2-3)	213.0	277.0	311.2	357.2	212.4	388.0	1758.8
1. Total interest payments	162.7	158.6	289.3	500.0	566.3	741.9	2418.8
2. Primary surplus exl interest revenue	-60.8	-121.7	-27.7	120.2	325.0	251.1	486.1
3. Interest revenue	10.5	3.3	5.8	22.6	28.9	102.8	173.9
II. Other items (1+...+6)	242.1	565.3	293.0	624.7	-13.5	138.8	1850.4
1. Consolidation bonds and other debt generating operatio	129.7	288.7	64.8	57.9	25.5	0.0	566.5
Consolidation bonds	129.7	288.7	50.8	6.3	9.0	0.0	484.4
Other	0.0	0.0	14.1	51.6	16.5	0.0	82.1
2. Impact of devaluation	126.1	361.9	351.0	738.6	137.8	276.4	1991.8
3. Privatization receipts	-12.0	-22.2	-60.6	-153.6	-214.4	-50.0	-512.7
4. Change in the treasury account	...	27.0	-63.3	-8.5	55.4	-83.9	-73.2
5. Other debt reducing operations 1/	0.0	-75.0	0.0	0.0	0.0	0.0	-75.0
6. Other	-1.7	-15.0	1.1	-9.8	-17.9	-3.6	-47.0
				Contribution to change in debt, percent			
Change in debt (I+II)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
I. Consolidated deficit (1-2-3)	46.8	32.9	51.5	36.4	106.8	73.6	48.7
1. Total interest payments	35.8	18.8	47.9	50.9	284.8	140.8	67.0
2. Primary surplus exl interest revenue	-13.4	-14.4	-4.6	12.2	163.4	47.7	13.5
3. Interest revenue	2.3	0.4	1.0	2.3	14.5	19.5	4.8
II. Other items (1+...+6)	53.2	67.1	48.5	63.6	-6.8	26.4	51.3
1. Consolidation bonds and other debt generating operatio	28.5	34.3	10.7	5.9	12.8	0.0	15.7
Consolidation bonds	28.5	34.3	8.4	0.6	4.5	0.0	13.4
Other	0.0	0.0	2.3	5.3	0.0	0.0	2.3
2. Impact of devaluation	27.7	43.0	58.1	75.2	69.3	52.5	55.2
3. Privatization receipts	-2.6	-2.6	-10.0	-15.6	-107.8	-9.5	-14.2
4. Change in the treasury account	...	3.2	-10.5	-0.9	27.9	-15.9	-2.0
5. Other debt reducing operations 1/	0.0	-8.9	0.0	0.0	0.0	0.0	-2.1
6. Other	-0.4	-1.8	0.2	-1.0	-9.0	-0.7	-1.3

Source: Data provided by the authorities and staff calculations.

1/ Import of military equipment using claims against Russia

debt, it is useful to rewrite (1) in terms of ratios to GDP. Dividing both sides of (1) by **Y**, the nominal GDP, and defining:

$I = i D_{-1}$; and (2a)

$Y=(1+g)Y_{-1}$ (2b)

where **i** is the nominal interest rate and **g** is the growth rate of nominal GDP, we obtain:

$D/Y - D_{-1}/(1+g)Y_{-1} = i D_{-1}/(1+g)Y_{-1} - P/Y + A/Y$ (3)

(3) can be rewritten as:

$\Delta d = -p + (i-g)d_{-1}/(1+g) + a$ (4)

where d=D/Y, p=P/Y, and a=A/Y.

32. Table 2 provides the decomposition of **Δd**, the change in the debt-GDP ratio, according to equation (4). The primary surplus was in fact negative during 1992–94, contributing to the rise in the debt ratio. However, the fiscal adjustment process since 1995 has meant that the magnitude of the primary surplus has been one of the key factors explaining the decline in the debt ratio over the last three years. In fact, the size of the primary balance explains about half of the 20 percentage point drop in the debt-GDP ratio since 1994 (see the last column of Table 2).

33. The other component of (4) which has had a significant impact on the decline in the debt ratio since 1994 has been **a**. This component had a positive impact in 1992 and 1993, mainly because of the issuance of capitalization bonds; however, since 1994 **a** has been negative, thanks mainly to privatization receipts.

34. To calculate the contribution of the second term in (4), i.e. $\mathbf{(i-g)d_{-1}/(1+g)}$, we have to calculate the effective interest rate on debt, **i**. To do this, we have added the devaluation losses to the actual domestic interest payments in equation (2a). Nonetheless, **i-g** turns out to be negative in a number of years, reflecting mainly the fact that the foreign exchange liabilities vis-à-vis the NBH did not bear any interest.[28] Only in 1993 and 1995, when the forint depreciated sharply, does the contribution of $\mathbf{(i-g)d_{-1}/(1+g)}$ become positive.[29] This term is also positive in 1997, albeit very small in magnitude, reflecting the debt swap operation between the NBH and the government which replaced the zero-interest bearing debt with

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[28]Also, as mentioned above, part of the domestic debt carries a below-market interest rate.

[29]Interest payments on consolidation bonds also increased sharply in 1995.

Table 2. Hungary: Decomposition of the Change in Debt-GDP Ratio, 1992-97
(Percentage points, unless indicated)

	1992	1993	1994	1995	1996	1997	1994-97
Change in **d** (I+II+III)	4.3	10.4	-2.8	-0.8	-11.0	-6.0	-20.7
I.1 Primary surplus, **p** (excluding interest revenue)	2.1	3.4	0.6	-2.2	-4.9	-3.1	-9.5
I.2 Interest revenue	-0.4	-0.1	-0.1	-0.4	-0.4	-1.3	-2.3
II. **(i-g)/(1+g)*d-1**	-1.4	1.3	-1.9	3.8	-3.5	0.1	-1.5
III. **a**	3.9	5.7	-1.3	-2.0	-2.3	-1.7	-7.4
Consolidation bonds and other debt generating operations	4.4	8.1	1.5	1.0	0.4	0.0	2.9
-Privatization revenue	-0.4	-0.6	-1.4	-2.8	-3.2	-0.6	-8.0
Changes in Treasury account deposits	...	0.8	-1.5	-0.2	0.8	-1.0	-1.8
Debt reducing operations 1/	0.0	-2.1	0.0	0.0	0.0	0.0	0.0
Other	-0.1	-0.4	0.0	-0.2	-0.3	0.0	-0.5
Memorandum items:							
Effective interest rate, **i** (percent)	15.6	22.6	20.3	33.0	14.9	20.6	...
Growth rate of nominal GDP, **g** (percent)	17.8	20.6	23.0	27.4	19.7	20.5	...

Source: Data provided by the authorities and staff calculations.

1/ Import of military equipment using claims against Russia

foreign exchange liabilities vis-à-vis the central bank. However, since part of the domestic debt still bears a below-market interest rate and the full impact of the securitization operation on interest payments will not be felt on the budget until 1998, the contribution of $\mathbf{(i-g)d_{-1}/(1+g)}$ is small in 1997.

35. Of course, when looking at the solvency of the public sector and the long-term sustainability of the debt ratio one has to assume that **i-g** would be positive.[30] Indeed, the proportion of below-market interest bearing debt in Hungary is rapidly declining and market interest rates, at which Treasury bills and government bonds are issued, are currently comfortably positive in real terms. Similarly, in the medium-term, one cannot expect any contribution from **a**.[31] Therefore, any analysis of future debt dynamics and sustainability would have to focus on the first two right-hand terms in (4), namely, **p** and $\mathbf{(i-g)d_{-1}/(1+g)}$.

C. Debt Sustainability

36. Equation (4) implies that for the debt-to-GDP ratio to stabilize the primary surplus has to be larger than $\mathbf{(i-g)d_{-1}/(1+g)}$, assuming no contribution from **a**. Although the debt-to-GDP ratio in Hungary began to decline in 1994, this was achieved by using privatization receipts and running down government deposits (Tables 1 and 2). The government was running a primary deficit and **i-g** was negative, not a sustainable situation in the long-run. In fact, in 1994, before the economic adjustment process began, Hungary was probably in a debt trap. This is illustrated by column 1 in Table 3.

37. Using the actual debt stock and nominal GDP growth, the actual depreciation rate, and a notional foreign interest rate together with a domestic interest rate close to those prevailing in the market in 1994, column (1) indicates that the government would have needed to run a primary surplus of at least 3½ percent of GDP in order to stabilize the debt ratio in 1994. In fact, the 1994 budget entailed a primary deficit of about ½ percent of GDP.

38. A similar calculation for 1997 implies a required primary surplus of only just over one percent of GDP, against an actual primary surplus (excluding interest revenue) of some 3 percent of GDP.

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[30]If **i-g** is negative then the government debt can grow faster than the real resource base of the economy. More formally, if **i-g** is negative then the economy would be "dynamically inefficient", i.e., the return to capital in each period would be less than the amount of resources devoted to capital formation (see IMF Working Paper WP/97/31 by Willem Buiter).

[31]The government, however, has recently amended the privatization law in order to facilitate the sale of the remaining minority shareholding in a number of enterprises. The new wave of privatization is expected to yield revenues amounting to some 3 percent of GDP over the next few years.

Table 3. Hungary: Analysis of Debt Sustainability, 1994 and 1997
(Percent, unless indicated otherwise)

	1994	1997
Debt stock (billion forints)	3800	5500
Domestic	2100	3200
Foreign	1700	2300
Debt/GDP	86	68
Domestic interest rate	28	22
Foreign interst rate	8	8
Depreciation	20	13
Market interest rate, **i**	28	22
Nominal GDP growth rate, **g**	23	20
(i-g)	5.0	2.0
Required primary surplus **(i-g)d-1/(1+g)**	3.5	1.1
Actual primary surplus, **p** 1/	-0.6	3.1

Source: Data provided by the authorities and staff calculations.

1/ Excludes interest revenues. With interest revenues and excluding some mis-classified items, the primary surplus would be -0.5 percent of GDP in 1994 and 4.1 percent of GDP in 1997.

39. One other issue, however, has to be taken into account in this analysis: seignorage. In theory, seignorage would reduce the primary balance needed for the debt-to-GDP ratio to decline. Estimates based on the forint-denominated component of reserve money, prevailing. market interest rates, and interest rates on the required reserves, put the magnitude of seignorage at some 3½ percent of GDP in 1994 and at some 2½ percent of GDP in 1996.[32] Seignorage is likely to decline further in 1997, and in the medium-term it is unlikely to exceed ½–1 percent of GDP. If one was to include these estimates of seignorage in Table 3, the basic results remain unchanged. According to Table 3, Hungary would have needed a primary surplus of 3½ percent of GDP in 1994 to stabilize its debt ratio; even if we subtract ½–1 percentage points as the medium-term value of seignorage, the required primary surplus would have still been much higher than the actual primary deficit of ½ percent of GDP. Therefore, the situation was not sustainable even taking into account seignorage.[33] In 1997, on the other hand, the actual primary surplus is higher than that required for debt stabilization, so the magnitude of seignorage is immaterial in terms of debt sustainability.

D. Conclusion

40. The analysis of the debt dynamics presented here indicates that:

(i) the debt-to-GDP ratio was not on a sustainable trajectory in 1994;

(ii) the fiscal consolidation undertaken since 1995 has played a key role in reducing the debt ratio in Hungary;

(iii) nonetheless, a sizable decline in the debt ratio over the last three years can be attributed to other items, in particular, privatization; and

(iv) the primary surplus in 1997 is adequate to ensure a downward trend in the debt ratio. The authorities' medium-term strategy envisages a drop of some 1¼ percent of GDP in the primary surplus in 1998 and a further decline of 1 percent of GDP in the following four years. Despite this decline, the magnitude of the primary surplus should be sufficient to keep the debt-to-GDP on a downward trajectory, even ignoring seignorage and the privatization revenues which are likely to materialize in the next few years. Indeed, as the debt-to-GDP ratio drops, the primary surplus needed to ensure its continued decline becomes smaller than the value calculated here for 1997.

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[32]The decline in seignorage can be attributed to lower inflation, the drop in interest rates, and lower demand for base money.

[33]This result remains unchanged even if one were to deduct the entire amount of seignorage in 1994, i.e., 3½ percentage points, from the required primary surplus.

III. Structural Pension Reform in Hungary[34]

A. Introduction

41. This chapter updates the analysis contained in a background paper to the 1996 Article IV consultation, which described the Hungarian pension system, the new retirement age regulations, and the pension reform—as outlined in the draft laws of July 1996 (SM/96/207). The first section reviews some aspects of the approved reform that differ from those of the reform proposal discussed in SM/96/207. The second section updates the fiscal impact of the reform, also discussed in SM/96/207.

B. An Update on the Hungarian Pension Reform

42. The overall structure of the reformed pension system is in line with that described in SM/96/207. The pension system will comprise both a reformed mandatory PAYG public pension system (heretofore, modernized PAYG) and a new three-pillar pension system.[35] The latter will include a mandatory PAYG pillar, a mandatory pension fund, and a voluntary pension fund. Appendix I summarizes the main regulations of both the reformed and the new PAYG schemes regarding eligibility conditions, benefit formula, indexation, contribution rates, and tax treatment, and compares the new regulations with those of the current PAYG system.

43. This section focuses on the principal reform parameters that are referred to in the principal report: the indexation mechanism, the noncontributory pension periods, and the penalties for early retirement. Other important, albeit more technical, changes (for example, the taxation regime and benefit formula) are discussed in the next section, insofar as they are related to the financial projections.

44. Overall, the new regulations are an improvement on the existing ones. Pension benefits are currently indexed to the change in net average wages in the previous year. This system will be gradually replaced by a combination of price and wage indexation, the so-called Swiss indexation (50 percent wages and 50 percent CPI). This indexation mechanism will result into a low rate of growth for pension expenditures with respect to the old indexation scheme,

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[34]Prepared by Edgardo Ruggiero.

[35]Workers under the age of 47 can choose to stay in the reformed PAYG or to switch to the new multipillar system. All workers above 47 years have to remain in the modernized PAYG, while all new entrants are automatically enrolled in the three-pillar system. At the time of writing SM/96/207, the switch was compulsory for all workers under 40 years.

under the reasonable assumption that in the long run, real wages will rise.[36] Not much improvement can be reported with regard to noncontributory pension periods. The only new restrictions will apply to university education and the period of child care support. University years attended after January 1998 will not be counted toward retirement, while the period of child care support will continue to be counted, provided that the insured worker pays the required employee contributions. In fact, more liberal regulations have been introduced in this area. The credit for the periods of maternity and child care benefits have been replaced by a credit of two years for each child (three if disabled), with no limit to the accumulation of credit years, as long as the mother has at least 10 years of contribution history. Overall, the new regulations on early retirement, both with and without penalty, are more restrictive than the transitional regulations approved in July 1996. Eligibility for early retirement with no penalty is conditional on having reached age 59 and at least 40 years of contributions. This is an improvement with respect to the previous regulations, as the minimum age (57 for women and 60 for men) and years of contribution (38) for early retirement with no penalty were, on average, lower. In addition, eligibility conditions for early retirement with penalty tend to be stricter in the new system, although penalty rates are essentially the same (see Box 1).

C. Simulation of the Fiscal Impact of the Multipillar Reform

45. The simulation of the reform is presented in two steps. First, the impact of the various measures designed to improve the balance of the PAYG system is compared with the no-reform scenario and progressively assessed (Figures 5–7). Second, the effect of the introduction of the second pillar is examined.[37]

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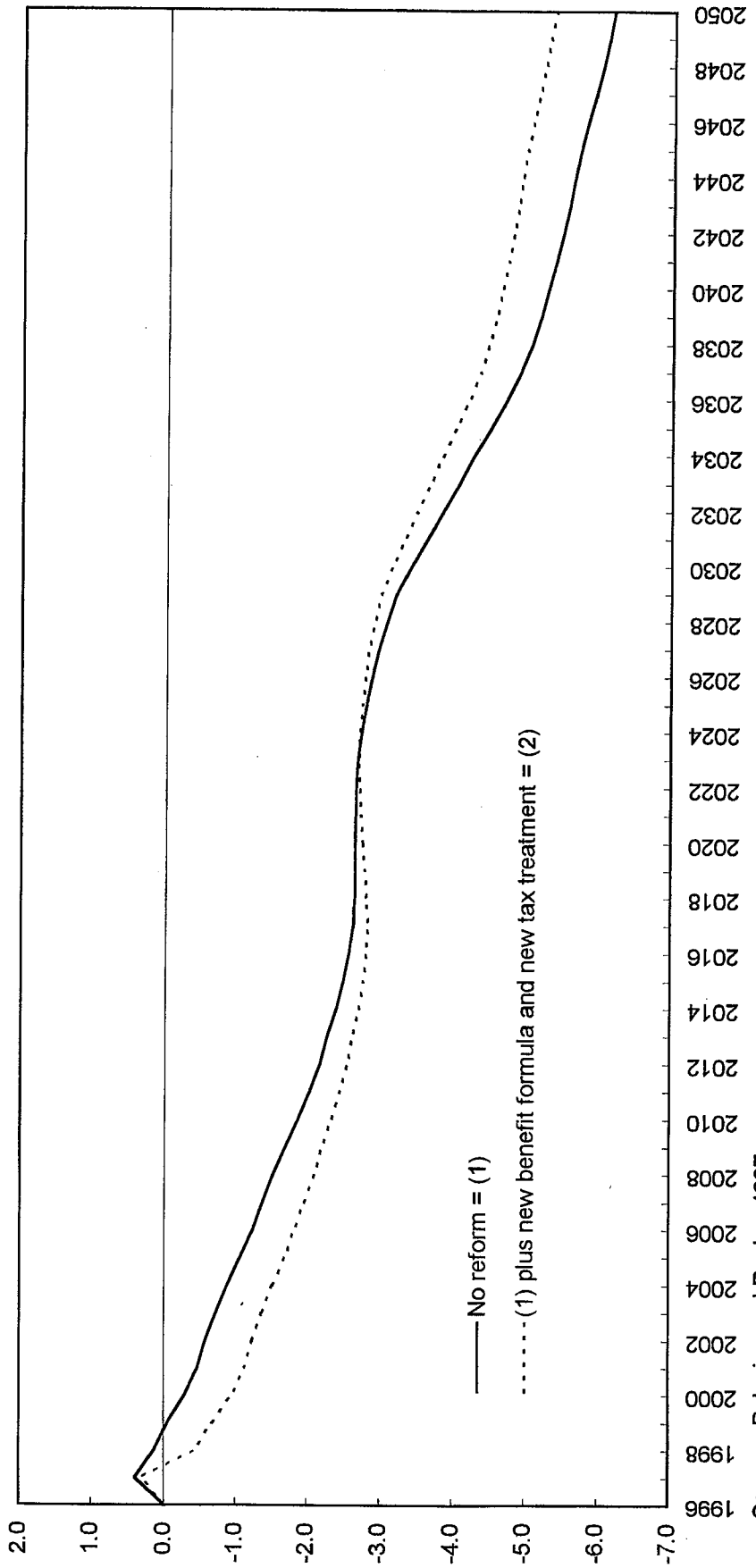
[36]During the transition period, various combinations of prospective prices and wages will be used, with a top-up in 1998–99, in case inflation is higher than expected. From 2001 to 2012, a Swiss indexation based on expected net wages and CPI will be used. The steady state Swiss indexation will be in force in 2013 when actual gross wages and CPI will be used (Appendix I).

[37]This section is based on preliminary estimates in Palacios, Robert, and Roberto Rocha, 1997, "The Hungarian Pension System in Transition," draft, (July), World Bank.

Figure 5. Hungary: PAYG Deficits After
New Pension Formula and New Tax Treatment, 1996-2050

(In percent of GDP)

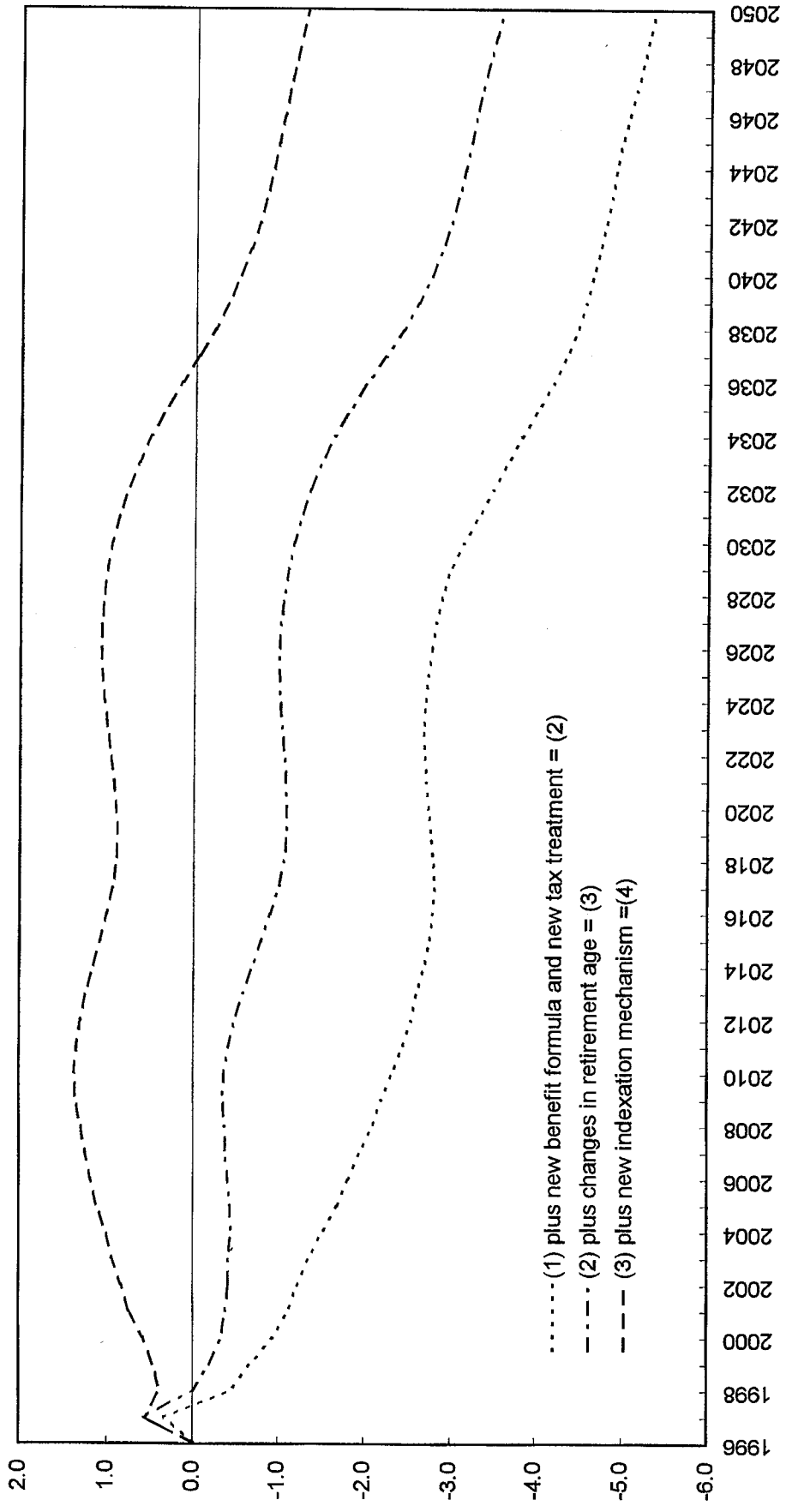


Source: Palacios and Rocha, 1997.

1/ Changes in the pension benefit include: (1) shift from net to gross wage base; (2) phasing-out of the regressivity factor; and (3) changes in accrual rates. The new tax treatment includes: (1) exemption of employee contributions from the income tax; and (2) taxing of benefits.

Figure 6. Hungary: PAYG Deficits with New Pension Formula, New Tax Treatment and with Changes in Retirement Age and Indexation, 1996-2050

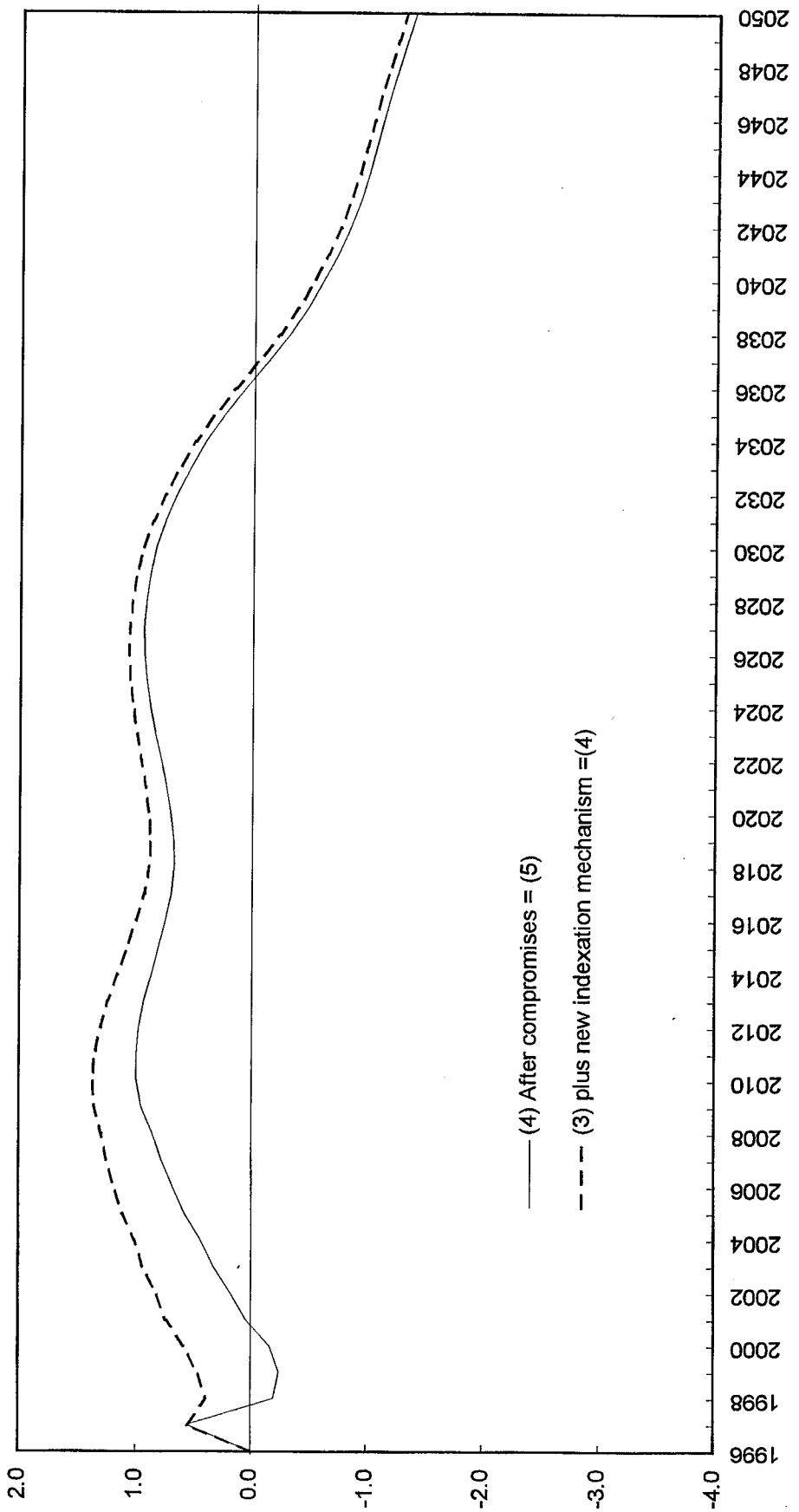
(In percent of GDP)



Source: Palacios and Rocha, 1997.

Figure 7. Hungary: PAYG Deficits with All the Reforms
Before and After Compromises, 1996-2050

(In percent of GDP)



Source: Palacios and Rocha, 1997.

46. The impact of the changes in the pension formula and the related changes in tax regimes are shown in Figure 5.[38] These include: (i) the shift from a net to a gross wage base in the benefit formula; (ii) the phasing out of the regressivity factor in the benefit formula;[39] (iii) changes in the accrual rates designed to compensate for the elimination of the regressivity and the shift to a gross wage-based formula; (iv) the exemption of employee contributions from the base of the income tax; and (v) the taxation of pension benefits.

Box 1—Regulations on Early Retirement with Penalty

In the previous system, early retirement (with penalty) could be claimed with a contribution history as much as 5 years shorter than the years of contribution needed to qualify without penalty (38 years). In the new system, early retirement (with penalty) can be claimed with a contribution history as much as 3 years shorter than the years of contribution needed to qualify without penalty (40 years).* The mechanism for determining penalty rates for early retirement is the same for both systems. Penalty rates are a function of the shortfall in the number of contribution years required to qualify for early retirement with full pension (38 in the previous system and 40 in the new). If only one year is missing, then the monthly penalty is 0.1 percent per month. If two years are missing, then the penalty rate is 0.2 percent per month, and so on. Therefore, the maximum penalty in the new system is lower (0.3 percent per month) than in the previous regulation (0.5 percent per month).

*Therefore, in the previous system, the minimum years of contribution for early retirement (with penalty) were 33 (38–5). In the new system, the minimum years of contribution for early retirement (with penalty) are 37 (40–3).

[38]The simulations in Figures 5 and 6 are based on the original reform package of December 1996–January 1997 prepared by the Working Group on Pension Reform. The simulations from Figure 7 onward reflect the government's proposal to Parliament of May 1997, see ¶49. The latter approved the law with some modifications. These are not taken into account in the projections. The main modifications during parliamentary discussion were the lengthening of the transition period for the new benefit formula and tax treatment from 1998 to 2013 and the concession of a PIT credit for employee contributions to the modernized PAYG, and to the I and II pillars. It will be decided within the 1998 budget law what percentage of contribution will be granted as PIT credit. These modifications would result in a lower deficit during the transition. In terms of Figure 5, line 2 would then define the maximum deficit implied by the new tax regulations.

[39]The regressivity factor is the schedular percentage of wage that is taken into account into the formula for calculation of the pension level. The factor is called regressive because, in the current formula, the percentage falls as the wage brackets increase (see Appendix I, point 3).

47. The exemption of the employee contribution from the income tax would produce an immediate loss in revenue and a commensurate increase in the central government deficit.[40] This is shown by the difference between line 1 and line 2 in the early years. The combination of the other factors (moving to gross wage base, applying new linear accrual rates, and taxing benefits) would start producing lower net entry pensions and smaller deficits after 2009—when these changes start having an effect. These expenditure savings and higher tax revenue will balance the losses due to the initial reduction in tax revenue around the year 2025, and result in lower deficits after that.

48. Figure 6 reproduces line 2 and introduces both the increase in the retirement age (line 3) and the Working Group's original proposal for moving to a combined wage/price indexation in 1998 (line 4). The retirement age increase is expected to have an important impact on deficits because of the improvement that occurs in the system dependency ratio relative to the no-reform case. Taking into account the new indexation method, the balance of the PAYG moves into a surplus. This is shown by line 4, which takes into account the combined impact of both reforms. Note that the surplus peaks in 2009, when the first demographic shock hits the pension system. The surplus disappears by 2037, when a second demographic shock hits the pension system, increasing the system dependency ratio further.

49. Line 4 in Figure 6 can be interpreted as the surplus that would have been originated by the original reform package prepared by the Working Group. However, the bill submitted to parliament included several compromises that increased the system's expenditures and reduced the projected surplus. Figure 7 shows the effect of the two most costly compromises, namely, the improved conditions for widows'/widowers' pensions (see Appendix II) and the delay to 2001 of the indexation change. The impact of those two measures amounts to more than 0.5 percent of GDP during the first years of the transition.

50. This scenario is the starting point for assessing the introduction of the second pillar. This requires an assessment of the impact of the opt-out on the PAYG balance. As shown in Figure 8, the opt-out implies immediate deficits. The loss of revenues during each of the first five years of the reform is approximately 1.1 percent of GDP, taking into account that the switching process would take place gradually throughout 1998.[41] The PAYG deficit would tend to increase in the years immediately following the establishment of the second pillar, as the revenue loss caused by the gradual expansion of coverage in the new system would increase. However, the measures designed to adjust the PAYG would more than offset the

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[40]The loss in tax revenue is included in the projections because the model attempts to assess the reform package's actual cost to the public sector.

[41]The switching decision, and its impact on the transitional deficit, is discussed in Appendix III.

revenue losses caused by the opt out, resulting in a decline in the deficit until the onset of the first demographic shock in 2009.

51. This deficit would start to increase again after 2009, peaking in 2020, and falling significantly after that year, which is when the first cohort in the new system retires (i.e., those aged 39 in 1998). Note also that the difference between the PAYG balances with and without the opt-out increases until 2020 and narrows thereafter. By 2043, the PAYG deficit with the opt-out is actually smaller than the PAYG deficit without the opt-out. These results are driven by two factors. First, the replacement ratio in the first pillar of the new system is about two-thirds of the replacement ratio in the reformed PAYG. Thus, the imbalance between replacement ratios and contributions created by the opt-out starts to taper off in 2020. Second, the reform involves a certain reduction in the accrued rights of workers who opt for the new system. As a result, the "compensatory pensions" given to those who have switched to the new system for the years of contribution under the old system are lower than what they would have received under the old benefit formula.

52. A comparison between line 6 (Figure 8) and line 1 (Figure 5) shows the impact of all the reform measures, including the establishment of the multipillar system. Although the opt-out leads to a worsening of the deficit of around 1.5 percent of GDP in 1998, the full reform scenario closes the gap with the no-reform scenario already in 2004. From then on, the positive difference between the full and the no reform scenarios increases gradually, reaching 2 percent in 2018, and some 5 percent by the end of the projection period.

53. Although the opt-out would generate deficits in the PAYG, these would be accompanied by an increase in flows to private pension fund accounts.[42] The increase in total savings generated within the pension system is obtained by combining the public and private pension savings flows, as shown in Figure 9.[43]

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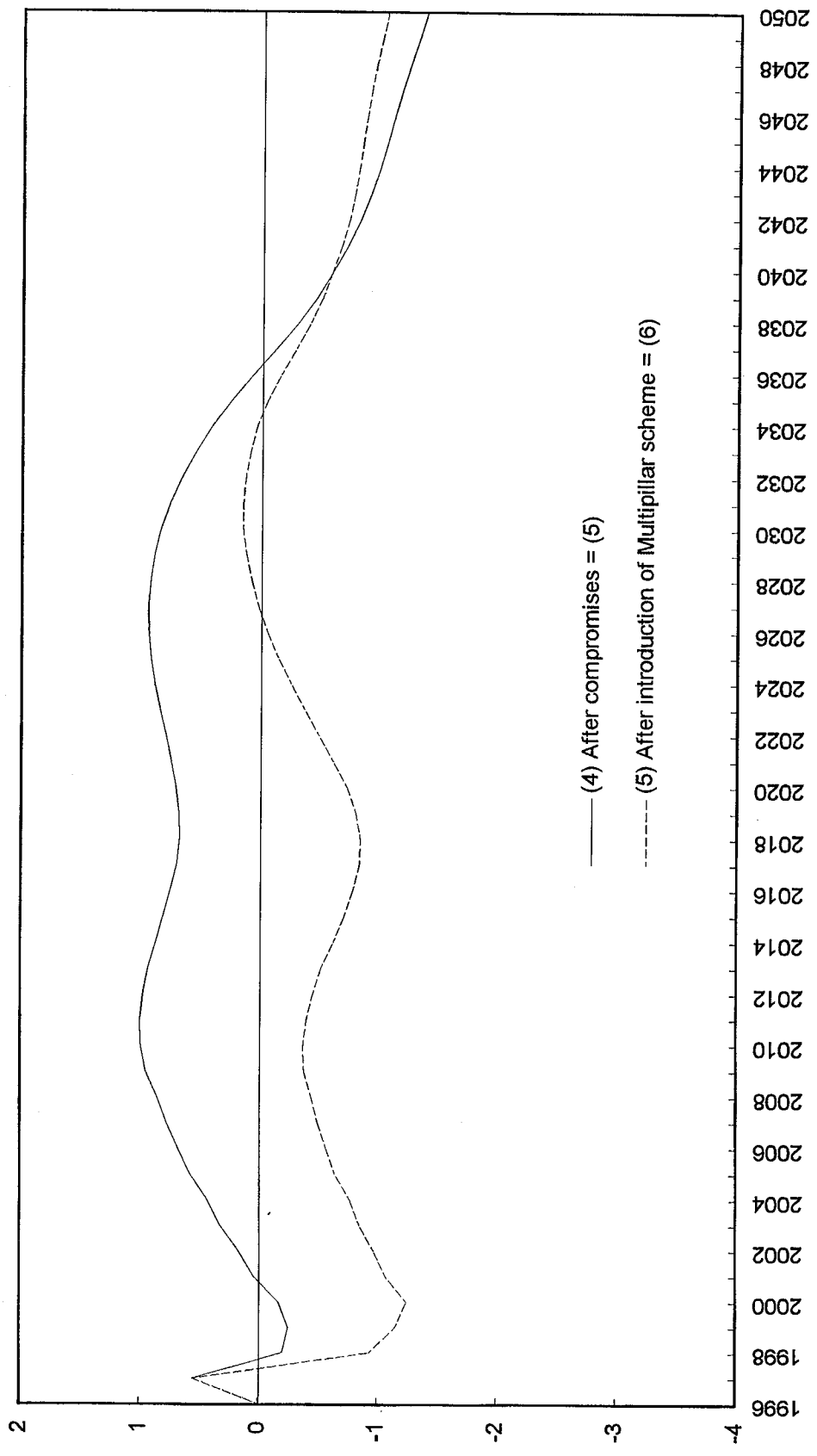
[42]The accumulated pool of long-term savings would grow very rapidly during the first twenty years of the system, given that few participants would become eligible for second pillar pensions and the balances would be compounding over time. After 2019, however, the rate of growth of the second pillar would be tempered by the gradual outflow of annuity payments. Nevertheless, the accumulation of assets reaches 50 percent of GDP by 2030, a figure comparable to Chile and the United States today and somewhat lower than the United Kingdom and Switzerland. The new private pension system is likely to play an important role in developing financial markets and facilitating investment finance, with positive effects on growth. These effects are not considered in the simulations presented in this chapter.

[43]The real rate of return on the second pillar account is assumed to be 1.5 percent above real wage growth in the long run, an assumption consistent with the performance of private pension funds with balanced portfolios in OECD countries (Davis, E.P., 1995, *Pension Funds, Retirement-Income Security, and Capital Markets—An International Perspective* (Oxford:

(continued...)

Figure 8. Hungary: Deficits Before and After Introduction of Multipillar Systems, 1996-2050

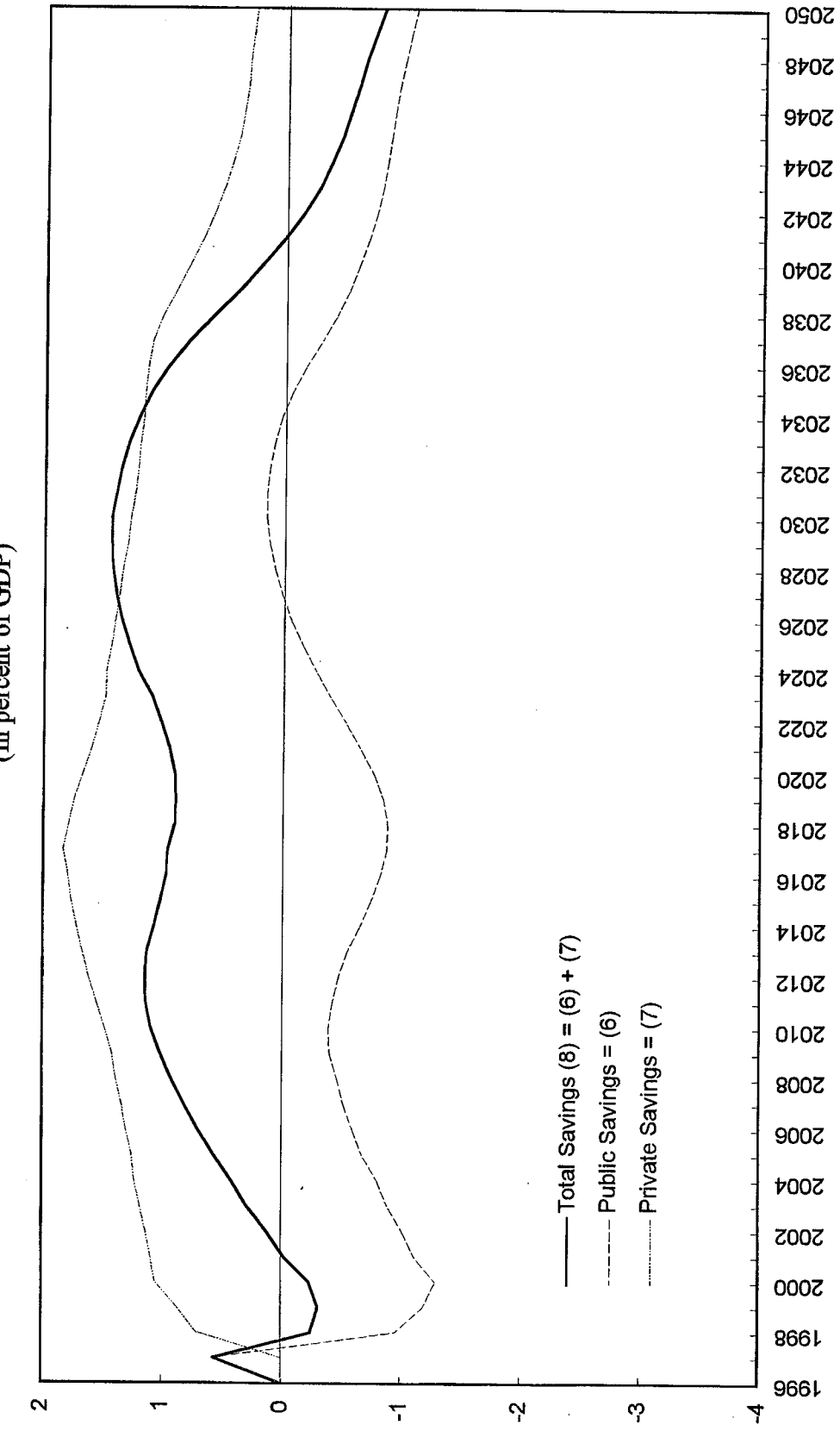
(In percent of GDP)



Source: Palacios and Rocha, 1997.

Figure 9. Hungary: Pension System in the Multipillar Reform, 1996-2050

(In percent of GDP)



Source: Palacios and Rocha, 1997.

Hungary: Main Parameters of the New PAYG System

OLD-AGE PENSION	Before	Transition	Steady State
1 Structure			
	Mandatory PAYG scheme.	None. New system takes effect in January 1998.	Reform of the existing Mandatory PAYG scheme + Introduction of a three-pillar pension system: (i) A mandatory PAYG scheme. (ii) A mandatory fully funded pension fund (iii) A voluntary pension insurance plan.
2 Eligibility			
* Statutory Retirement Age (SRA)			
Male	60 years	Gradually raised to 62 by 2001 (See SM/96/207)	62 years
Female	55 years	Gradually raised to 62 by 2009 (See SM/96/207)	62 years
* Early Retirement with NO penalty	Not allowed apart from: Hazardous occupations : up to 5 years earlier than SRA Unemployed : up to 3 years earlier Employed in firm in financial difficulty: up to 5 years earlier	No change in regulations on special occupations.	No change in regulations on special occupations.
		Early retirement with no penalty is allowed provided new conditions on minimum years of contributions are met. See SM/96/207 for schedule of phased implementation. **End of Transition Period** Women 2009 Men 2001	Eligibility for early retirement with full pension: as early as 59 years, but with minimum 40 years of service.
* Noncontributory pension periods counted toward retirement.			
Unemployment	Regarded as service time	None	Regarded as service time only if the required contribution is paid by both the unemployed and the Unemployment Fund.
University years	Regarded as service time	None	Only years of full-time study prior to January 1, 1998 are considered as service time.
Period of maternity and child care benefits	Regarded as service time	None	It has been made more liberal. Two years for each child (3 years if disabled). No limit to credit years, provided mother has at least 10 years of contribution.
Period of child care support.	Regarded as service time	None	Regarded as service time only if the required contribution is paid.
Child care benefits	Regarded as service time	None	Regarded as service time
Period spent as a clergyman	Regarded as service time	None	Regarded as service time
Military service	Regarded as service time	None	Regarded as service time
Sick leave	Regarded as service time	None	Regarded as service time
Prison time	Regarded as service time	None	Regarded as service time, provided the person is cleared of the charges or the criminal proceeding is terminated.

Hungary: Main Parameters of the New PAYG System (continued)

OLD-AGE PENSION	**Before**	**Transition**	**Steady State**
3 **Benefit Formula**		**End of transition period:** **December 31, 2012**	
* Covered earnings	**Net Earnings:** Earnings net of 6 per cent payroll tax	**Net earnings:** Earnings net of personal income tax	**Gross earnings:** Earnings including the personal income tax.
* Years included in earnings history	All years starting from 1988	All years starting from 1988	All years starting from 1998
* Indexing of earnings history	Indexed to changes in **net national average wage** up until two years before retirement.	Indexed to **net average national wage** up until three years before retirement.	Indexed to the increase in the **gross personal earnings** in each year up until three years before retirement.
* Regressivity factor	Average monthly Earnings bracket / Replacement Factor - 16000: 100% 16001 - 18000: 90% 18001 - 30000: 80% 30001 - 40000: 70% 40001 - 50000: 60% 55001 - 60000: 50% 60001 - 70000: 40% 70001 - 80000: 30% 80001 - Over: 10%	Average monthly Earnings bracket / Replacement Factor - 35000: 100% 35001 - 40000: 90% 40001 - 45000: 80% 45001 - 50000: 70% 50001 - 55000: 60% 55001 - 60000: 50% 60001 - 70000: 40% 70001 - 80000: 30% 80001 - Over: 10% For 1998 only. From 1999, the brackets will be increased with the growth of the annual average national net wage (Three quarters of preceding year and fourth quarter of the year prior to that).	Brackets will be increased with the growth of the annual average national net wage (Three quarters of preceding year and fourth quarter of the year prior to that).
* Benefit accrual rate	**Non linear:** Years / Accrual Rate Up to 10th year 1/: 33% At 15 years: 43% At 20 years: 53 Up to 25th year: Plus 2% per year Up to 32th year: Plus 1% per year Thereafter: Plus 0.5% per year	**Non linear:** Years / Accrual Rate Up to 10th year 1/: 33% At 15 years: 43% At 20 years: 53 At 25 years: 63% At 40 years: 80% Thereafter: Plus 1.5% per year	**Linear:** **Accrual Rate** Years / Modernized / New First Pillar Up to 20th year 1/: 33% / 24.4% At 25 years: 41.25% / 30.5% At 30 years: 49.5% / 36.6% At 40 years: 66% / 48.8% Thereafter: Plus 1.65% per year / Plus 1.22% per year
* Reduction factor for early retirement	None. Because retirement before statutory age is not permitted.	See SM/96/207 for penalty rate schedule.	0.1% per month with 39 years of service period 0.2% per month with 38 years of service period 0.3% per month with 37 years of service period
* Minimum/ Maximum benefits	Yes/Yes	Yes/Yes	None / Yes 2/

Hungary: Main Parameters of the New PAYG System (concluded)

OLD-AGE PENSION	Before	Transition	Steady State
4 Indexation of benefits		End of transition period: December 31, 2012	
	Change in net average wages in the previous year	1998 Expected Nominal Net Wage Growth in 97 minus 2.5% 3/ 1999 Planned CPI 99 + Exp. Real Net Wage Growth in 98 3/ 2000 30% planned CPI 2000 + 70% Exp. Nom NetWage Growth 2000 2001- 2012 50% planned CPI + 50% Exp. Nom Net Wage Growth	Swiss Indexation: 50% CPI + 50% Nominal Gross wage growth (Both based on first three quarters previous year and last quarter of two years before)
5 Contribution		End of transition period: December 31, 1999	
* Base Employer	No ceiling. Minimum contribution equal to one minimum wage.	No change.	No change.
Employee	Ceiling of 99,000 forints per month	Twice gross wage, as of 1998.	No change.
* Rates (Pension only)	Employee 6%	Year Employee 1998 1999 In mixed system PAYG (I Pillar) 1% 1% Pension Fund (II Pillar) 6% 7% In Modernized PAYG 7% 8%	Year Employee 2000 In mixed system PAYG (I Pillar) 1% Pension Fund (II Pillar) 8% In Modernized PAYG 9%
	Employer 24.5%	Employer PAYG 24% 23%	Employer PAYG 22%
6 Tax treatment			
* Pensioners	Pension is not taxed but is taken into consideration for determinir income tax bracket.	Current legislation in effect until December 31, 2012.	Pension benefit is taxed.
* Contributors	For employers the contribution increases their total wage cost. For employees the contribution paid is taxable.	Current legislation in effect until December 31, 2012. Starting in 1998, a PIT credit will be given to employees. The percentage of contribution to be granted as credit will be decided at the time of the budget.	Contributions are not taxable.

1/ Minimum years of contribution for eligibility to old age pension.
2/ Shortfalls with respect to social minimum will be addressed by the social assistance system through income tested allowance.
3/ Benefits are adjusted in November for divergence between expected and actual wages and CPIs.

Hungary: Changes in Widows' and Widowers' Pensions

	Before Reform	New Regulations
1 **Eligibility**		
For a temporary pension: (This is paid for 1 year, if surviving spouse does not qualify for permanent pension.)	If the deceased person was a pensioner or he/she had accumulated the minimum required service period for an old-age or disability pension.	No change, apart from: the disbursement can last up to 3 years if the widow is supporting a child younger than 18 months, handicapped, or permanently sick.
For permanent pension	Paid to a widow if she: has reached 55 years, or is incapable of working, or is supporting at least two children. Paid to a widower if he: is incapable of working and his wife had supported him for at least 1 year prior to her death.	Paid to a widow/er if she/he: (i) is above the relevant retirement age for old age pension; or is disabled; or is supporting at least two children; or (ii) if any of the eligibility requirements above are met within ten years from the time of the spouse's death. For widow/er pensions granted before Jan 1, 1997, the relevant retirement age is 55 for women and 60 for men. Entitlement of partners, divorcees, and separated couples is subject to additional conditions.
Revival of widow/er 's pension:		Revival is allowed provided: (i) eligibility ended for reasons other than a new marriage, and (ii) any of the eligibility requirements for permanent pension are met within 10 years from: * the termination of widow/er pension, if person becomes a widow/er after February 28,1993; or * March 1, 1993, if person became widow/er before this date and if the pension was interrupted for no more than fifteen years.
2. **Benefit Level**		
Temporary	50% of the pension (or accumulated rights) at time of death.	No change. Until December 31, 2008, a minimum temporary pension is guaranteed, provided widow/er is above the relevant retirement age or is disabled.
Permanent	50% of the pension (or accumulated rights) at time of death.	20% of the pension (or accumulated rights) at time of death.
In combination with own pension	Survivor with own pension may choose whichever pension is most favorable. A low own pension may be supplemented from the widow/s pension up to a ceiling.	Combination is allowed if the entitlement was acquired before Jan. 1, 1998. The widow/er can choose either: (i) own right pension plus old-regime widow/er's pension up to a ceiling, or (ii) own right pension plus new-regime widow/er's pension

THE OPT-OUT OR SWITCHING DECISION

1. The original draft reform discussed in SM/96/207 considered introducing a mandatory cut off age of 40 years. A voluntary opt-out was eventually proposed to Parliament, as the new arrangement would entail a lower transitional deficit and a lower implicit pension debt. The impact of the opt-out decision on the transitional deficit and pension debt is explained below.

A. General Switching Analysis

2. International experience has shown that age is a very important variable in switching decisions. The age factor seems to be more important than other ones, including assumptions regarding the rate of return and administrative costs of the fully funded system:

- younger workers tend to gain from switching from a defined benefit (DB) to a defined contribution (DC) scheme, because: (i) the present value of the marginal benefit of a unit contribution in a DB scheme is much smaller for a younger worker; and (ii) a unit contribution in a DC scheme will yield a much higher return, due to compounding, for a younger worker than for an older worker.

- the incentive to switch will increase the greater the expected net rate of return is on the investment fund when compared with the growth of the wage bill, and the lower the perceived administrative costs are for a fully funded scheme.

3. Other factors at work in determining how many people will actually switch include: (i) the credibility level of the existing PAYG scheme; (ii) the overselling of new schemes (UK); and (iii) the guarantees on the DC scheme.

B. Opt-Out in Hungary

4. A model was developed by the Hungarian authorities to simulate the replacement rates (first pension payment as a percentage of last salary) of the modernized PAYG, the new first pillar, and the second pillar, as a function of a worker's age in 1998. This model will be available to workers to make their opt-out decision.[44] Figure 5 shows the results of this model for an average Hungarian worker. Under a reasonably conservative set of assumptions,[45] the

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[44]A worker will have to specify his/her starting/ending wage as percent of average wage, the rate of return of the second pillar, and his/her expected age at retirement. Other variables that are given in the model are the administrative costs of the second pillar, the taxation regulations, mortality tables, and so on.

[45]Among these are administrative costs of 15 percent of contributions, an interest rate used for

(continued...)

reform variables chosen by the government would lead only younger workers to switch. The compound interest rate effect in the second pillar makes the mixed system a progressively less attractive proposition the higher a worker's age is in 1998. This way, a high early transition deficit may be avoided.

5. The top line shows the projected replacement rate in the modernized PAYG. It decreases for younger workers to reflect the shift to the gross wage based formula and the extension of the assessment period to a lifetime wage history (Appendix I). The same factors affect the replacement rate in the new first pillar (bottom of stacked figure). The second pillar's replacement rate decreases with the age of the worker (top of stacked figure). The replacement rate in the multipillar system is equal to the sum of the stacked figures. In this scenario, the multipillar system becomes attractive for workers in their low 30s.[46]

6. The calculation of the replacement rate for the new first pillar is based on the new linear accrual rate of 1.22 percent per year multiplied by the average gross wage and subject to PIT (Appendix I). In terms of net wage, this roughly corresponds to an accrual rate of 1 percent per year. This applies also for workers who are already working in 1998, despite the fact that the accrual rate in the PAYG scheme to which they were already contributing was higher, at approximately 1.8 percent. The offer of lower statutory retirement rates for the new first pillar was made possible by the attractiveness of the second pillar and by the voluntary nature of the switching decision. A compulsory switch would have demanded the promise of higher statutory replacement rates.

7. The use of a voluntary opt-out arrangement allows savings on the order of 40 percent of the accrued rights of workers under age 40, a significant reduction in the implicit pension debt. These savings would be higher if more workers decided to switch. This would happen if workers were more optimistic with regard to the expected rate of return of the second pillar.

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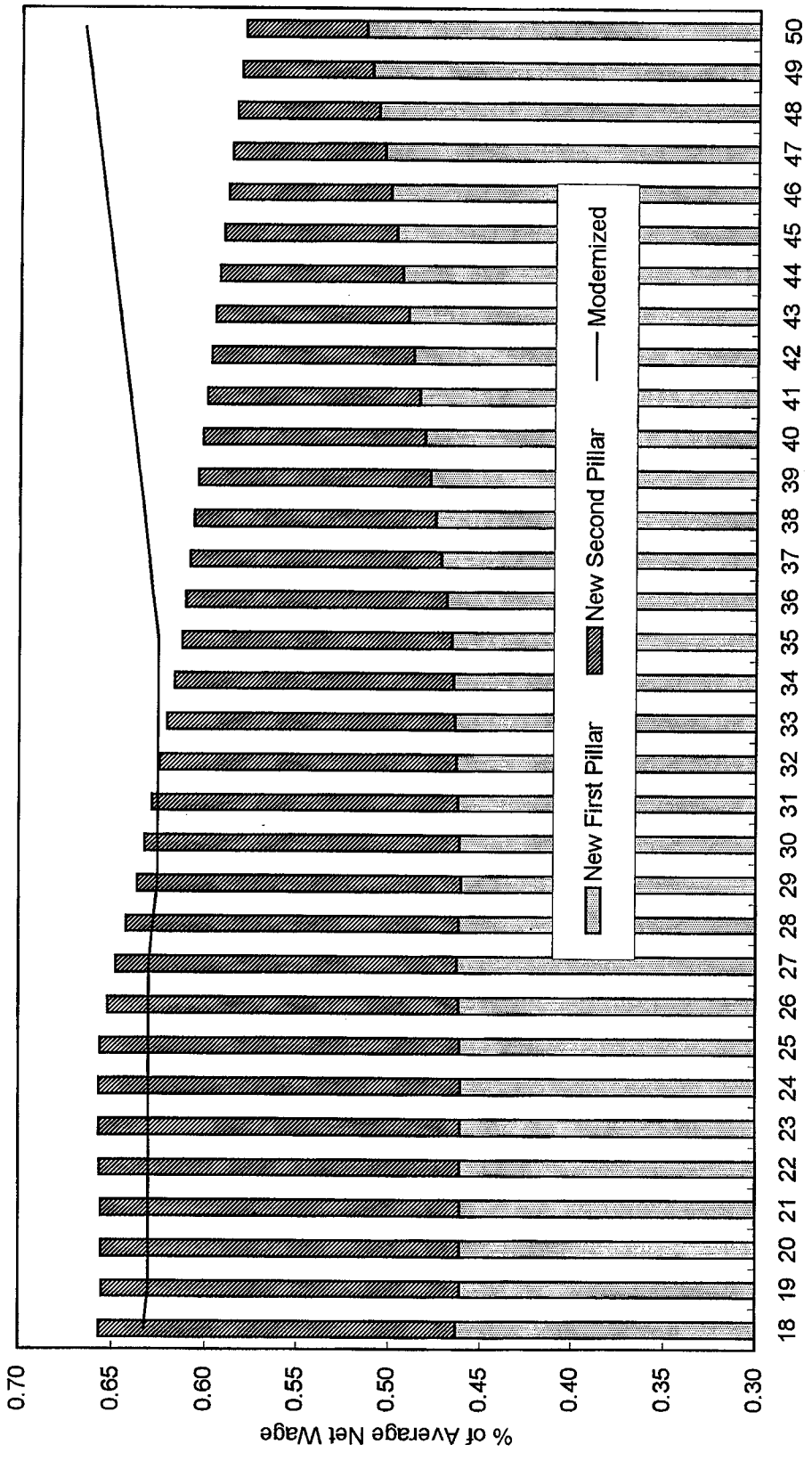
[45](...continued)
annuity calculation equivalent to wage growth, a real second pillar return equivalent to wage growth plus 1.5 percent, and an age at retirement of 61 years.

[46]The simulations in Figure 9 are based on the conservative assumption that all workers below 40 opt-to switch, notwithstanding the 3–4 percentage point advantage, in terms of replacement rate, that the modified PAYG seems to offer with respect to the multipillar scheme for workers below 40 (Figure 10). A number of factors may induce workers to switch, notwithstanding the apparent financial advantage of remaining in the modified PAYG: (i) low credibility level of the modified PAYG; (ii) perception that administrative costs in the II pillar will be lower; (iii) high guarantees offered in the multipillar scheme; and (iv) overselling.

In terms of Figure 10, if the workers' perceived real rate of return on the second pillar increases by 0.5 percent, the switching age would increase to some 37 years. If the workers perceived the real rate of return to be zero, the switching age would be about 27.[47]

[47]In this model, a real rate of return of zero is equivalent to a nominal rate of return equal to nominal wage growth

Figure 10. Hungary: Switching Decision for Average Hungarian Worker by Age in 1998



Source: Palacios and Rocha, 1997.

IV. Health Care Reform in Hungary[48]

A. Introduction

54. The purpose of this chapter is to review the progress in the structural reform of the public health care sector, which began during the 1990s, and led to substantial structural changes. Lately, however, the pace of reform has lost momentum, as the recent legislation in this area represents only a limited improvement.

55. The first section of this chapter describes the main features of the Hungarian health care system, including the changes introduced in the early 1990s. The second section describes the reforms implemented during the last two years.

B. The Public Health Care Sector

Institutional characteristics

56. The Hungarian health care system is mainly public and insurance-based. Employers and employees pay health insurance contributions to the Health Insurance Fund (HIF) and, starting in 1997, everyone, including the adult nonworking population, also pays a flat per capita fee to be eligible for health services. The public purchaser of health care services is the HIF, which also subsidizes a portion of the retail price of pharmaceuticals and medical supplies and disburses several sickness-related payments, including sick pay.[49] In addition, the central government, mainly through the Ministry of Social Welfare and various Central Budgetary Institutions (CBIs) (for investments, teaching and county hospitals, education, and research), and the local governments (mainly for investment purposes, as they own the local hospitals) perform a variety of health-related functions.[50]

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[48]Prepared by Edgardo Ruggiero.

[49]The expenditures of the HIF also include under-retirement-age disability pensions and other health-related outlays. Issues related to disability pensions were discussed in SM/96/207.

[50]Since the late 1960s, the official state health care system has been intertwined with a semi-legal sector based on gratuity payments, effectively establishing a dual structure within the public health care system. Based mainly on specialty and on access to technology and infrastructures, this system closely reflects power structures within the medical profession and has effectively determined income structures within the health system The phenomenon of gratuity payments has been a significant factor contributing to the patients' dissatisfaction with health services (Losonczi, 1986). Much of the resistance to reform in the sector can be traced to efforts to protect privileges gained under this "dual structure" (Ho and Orosz, 1994). The fact that patients already pay gratuities is also one of the main reasons advanced by those

(continued...)

57. The terms and conditions of purchase of health services by the HIF are spelled out in service contracts that, every year, are signed by the HIF, the hospitals, and the Medical Chambers (physicians' associations)—though local governments (LGs) and trade unions also participate in the negotiations. The remuneration mechanisms differ for each category of provider and by type of service provided (see Appendix I). For example, while hospitals are essentially remunerated on the basis of output indicators,[51] the family doctors (or general practitioners, henceforth, GPs) are remunerated on a capitation basis.

58. Public expenditure for health care varied between 6.5 percent and 7.4 percent of GDP from 1991 to 1994, and then declined to 6.3 percent of GDP in 1996 (Table 4). In addition, household expenditure on pharmaceuticals steadily increased during the 1990s in parallel with their price and import liberalization and the reduction of subsidy rates (see below). Total private expenditures on pharmaceuticals increased by 0.4 percent of GDP to 1.1 percent between 1993 and 1996.[52] Public expenditure on health is not large for Hungary's level of economic development—as measured by the level of GDP per capita—in comparison both with the OECD countries (Figure 11) and with the central European countries (Figure 12).

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[50](...continued)
opposing the introduction of co-payments.

[51]Hospital services are purchased by the HIF on the basis of payments per case, fees for service, and per diem, if the service provided is general admittance for acute care, for special treatments, and for long-term care, respectively (Appendix I). Payments per case set fees prospectively according to diagnosed medical conditions and standardized medical costs. The system used in Hungary is the Diagnostic Related Groups approach (DRGs)—which is also the most commonly used remuneration system for hospital services in the OECD countries. Fees for service pay the health service supplier according to the individual services provided. Per diem payments provide hospitals with a flat daily rate per occupied bed.

[52]Among these, co-payments on drugs increased by 0.2 percent of GDP to 0.6 percent of GDP over the same period.

Table 4. Hungary: Health Expenditures, 1991–96

(In billions of forint)

		1991	1992	1993	1994	1995	1996
1	HIF total	221.4	265.5	333.1	397.8	443.4	509.0
	Of which:						
2	Health services	93.4	115.5	133.0	172.1	192.7	228.8
3	Pharmaceutical subsidies 1/	39.4	43.0	54.2	69.6	81.6	97.6
	drugs only	...	39.4	49.5	61.6	70.0	84.2
4	Pregnancy and childbirth benefits	6.0	7.5	7.2	8.3	8.9	8.3
5	Sick pay	27.4	28.2	35.3	40.8	39.8	33.0
6	Disability pensions	32.2	38.6	45.0	57.8	68.1	79.3
7	Other social transfers\	17.8	21.8	23.6	1.1	1.4	1.4
8	Administrative + Other expenditures	5.2	10.9	7.8	15.1	13.7	23.4
9	Transfers to PIF	0.0	0.0	27.0	32.9	37.1	37.2
	In percent of GDP (1)	8.9	9.0	9.4	9.1	8.0	7.6
	Health expenditures in percent of GDP (2+3) 2/	5.4	5.6	5.4	5.8	5.1	5.2
10	Central plus local governments	26.8	47.0	52.2	72.2	71.9	79.1
11	Ministry of Welfare	4.3	19.6	22.6	31.1	35.6	46.8
12	Other ministries	7.4	9.7	10.1	14.5	13.1	13.0
13	Investments by CB and LGs 3/	15.1	17.6	19.5	26.6	23.3	19.2
	In percent of GDP (10)	1.1	1.6	1.5	1.7	1.3	1.2
I	Total health expenditures of general government (2+3+10) 2/	162.8	212.2	243.8	323.6	355.0	422.5
	In percent of GDP	6.5	7.2	6.9	7.4	6.4	6.3
II	Total private expenditure on drugs	7.7	11.6	24.0	32.0	51.0	71.0
	In percent of GDP	0.3	0.4	0.7	0.7	0.9	1.1
	Of which:						
	Co-payments on prescriptions	7.7	11.6	15.2	20.5	30.4	37.5
	In percent of GDP	0.3	0.4	0.4	0.5	0.5	0.6
III	Total health expenditure (I+II)	170.6	223.9	267.8	355.6	406.0	493.5
	In percent of GDP	6.8	7.6	7.5	8.1	7.3	7.4
	Memorandum items						
	HIF + CB + LGs+Private outlays (1+10+II)	256.0	324.1	409.2	502.1	566.3	659.1
	In percent of GDP	10.2	11.0	11.5	11.5	10.2	9.9
	GDP	2,498.3	2,942.7	3,548.3	4,364.8	5,561.9	6660.0

Sources: CSO; 1993; Health Insurance Fund data; and staff estimates; 1991–92 private expenditures on drugs are from Ho and Orosz, 1994.

1/ Includes medical supplies

2/ Includes proportional allocation of administrative and other expenditures (line 8); and HIF's outlays for hospital debt in 1996 (about 0.1 percent of GDP).

3/ Excludes local government support for current costs and gratuity payments.

Table 4. Hungary: Health Expenditures in Hungary, 1991–96 (concluded)

(In percent of GDP)

		1991	1992	1993	1994	1995	1996
1	HIF total	8.9	9.0	9.4	9.1	8.0	7.6
	Of which:						
2	Health services	3.7	3.9	3.7	3.9	3.5	3.4
3	Pharmaceutical subsidies 1/	1.6	1.5	1.5	1.6	1.5	1.5
	Drugs only	...	...	1.4	1.4	1.3	1.3
4	Pregnancy and childbirth benefits	0.2	0.3	0.2	0.2	0.2	0.1
5	Sick pay	1.1	1.0	1.0	0.9	0.7	0.5
6	Disability pensions	1.3	1.3	1.3	1.3	1.2	1.2
7	Other social transfers	0.7	0.7	0.7	0.0	0.0	0.0
8	Administrative + other expenditures	0.2	0.4	0.2	0.3	0.2	0.4
9	Transfers to PIF	0.0	0.0	0.8	0.8	0.7	0.6
	Health expenditures (2+3) 2/	5.4	5.6	5.4	5.8	5.1	5.2
10	Central plus local governments	1.1	1.6	1.5	1.7	1.3	1.2
11	Ministry of Welfare	0.2	0.7	0.6	0.7	0.6	0.7
12	Other ministries	0.4	0.5	0.4	0.5	0.4	0.3
13	Investments by CB and Lgs 3/	0.6	0.6	0.5	0.6	0.4	0.3
I	Total health expenditures of general government (2+3+10) 2/	6.5	7.2	6.9	7.4	6.4	6.3
II	Private expenditure on drugs	0.3	0.4	0.7	0.7	0.9	1.1
	Co-payments on Prescription	0.3	0.4	0.4	0.5	0.5	0.6
III	Total health expenditure (I+II) 3/	6.8	7.6	7.5	8.1	7.3	7.4
	Memorandum items						
	HIF + CB + LGs+ Private outlays (1+10+II)	10.2	11.0	11.5	11.5	10.2	9.9
	GDP	2,498.3	2,942.7	3,548.3	4,364.8	5,561.9	6660,0

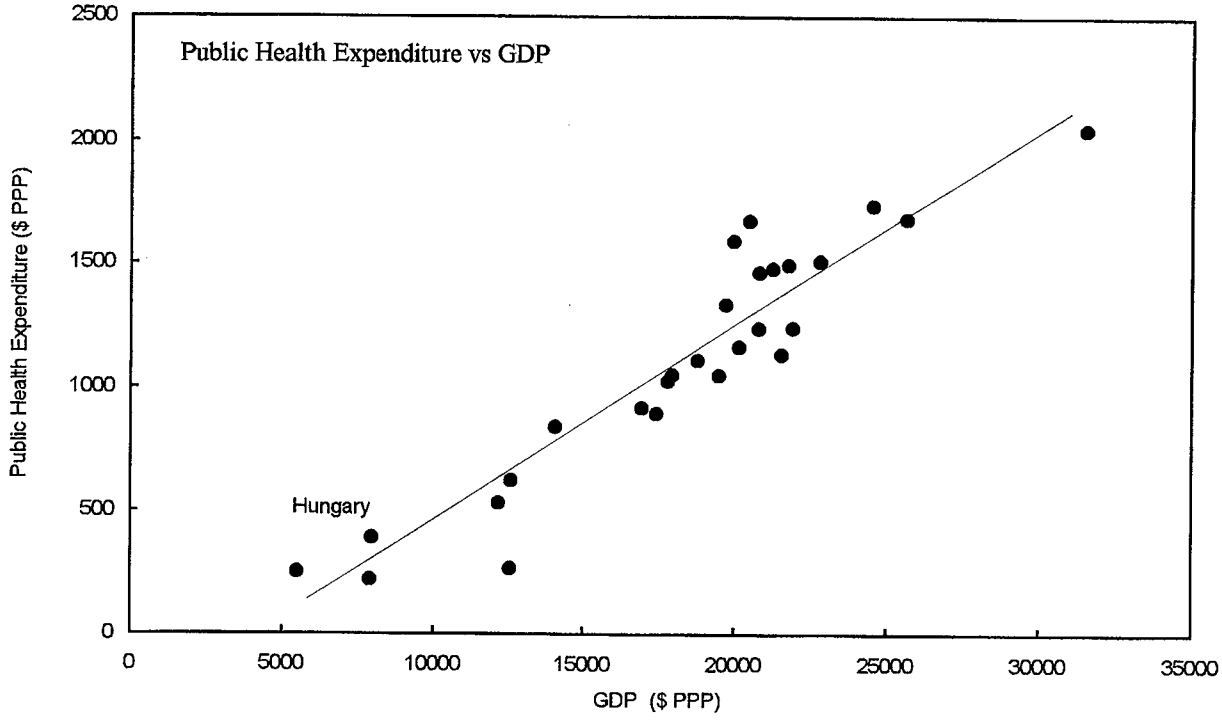
Sources: CSO; 1993; Health Insurance Fund data; and staff estimates; 1991–92 private expenditures on drugs are from Ho and Orosz, 1994.

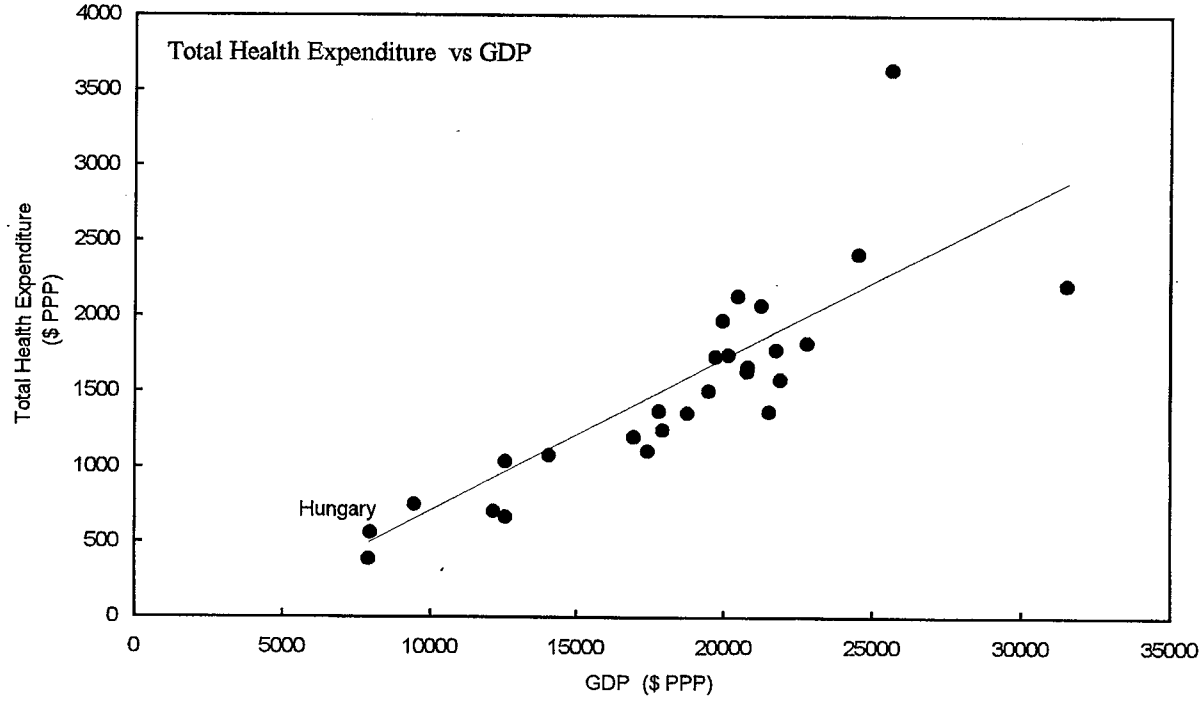
1/ Includes medical supplies.

2/ Includes proportional allocation of administrative and other expenditure (line 8); and HIF's outlays for hospital debt in 1996 (about 0.1 percent of GDP).

3/ Excludes local government support for current costs and gratuity payments.

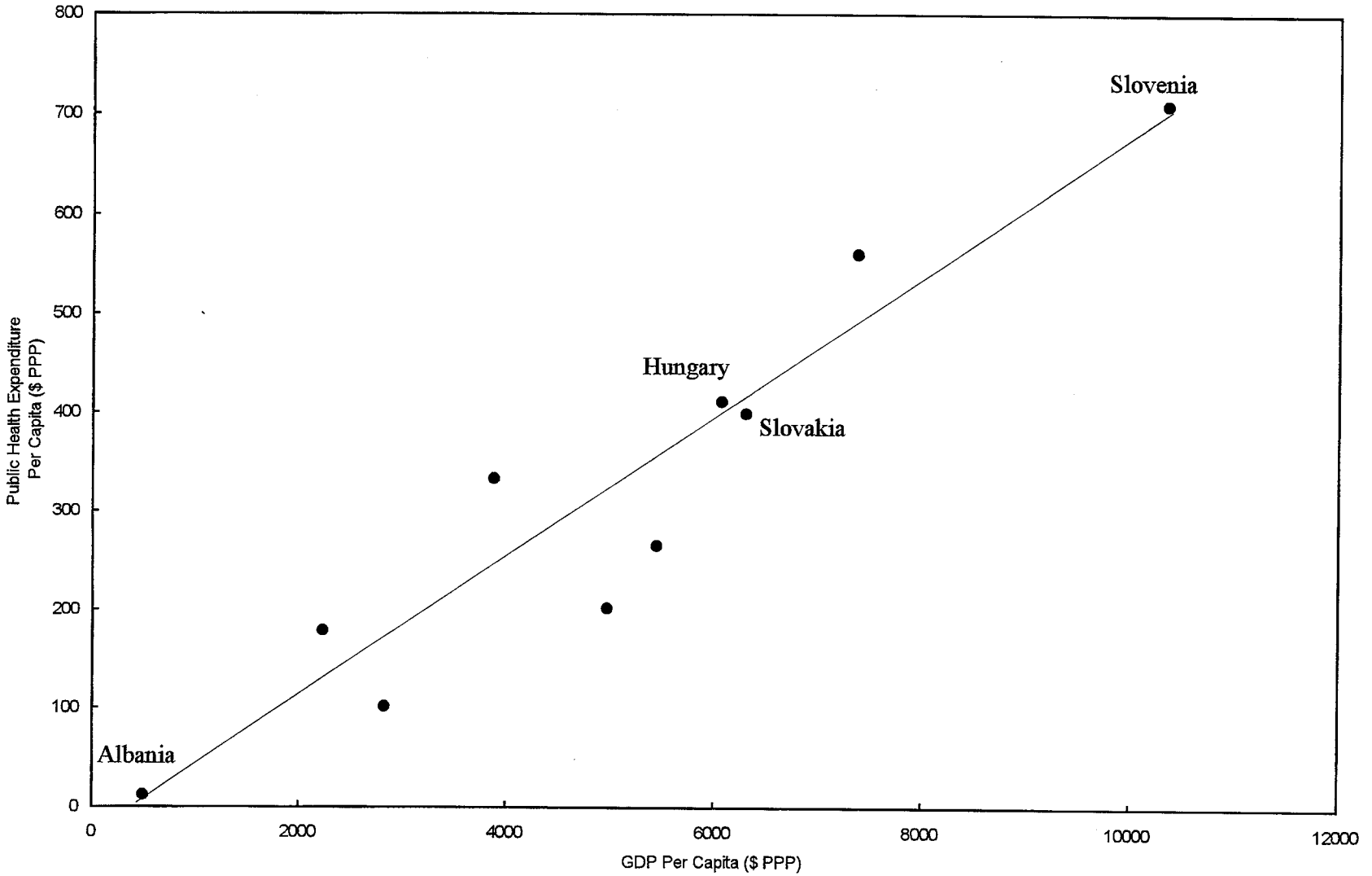
Figure 11. Hungary: Health Expenditures vs GDP in OECD Countries, 1995
(Per capita)





Sources: OECD, 1997.

Figure 12. Hungary: Public Health Expenditure Per Capita vs GDP Per Capita
Selected Central European Countries, 1994 1/



Sources: Goldstein and others, 1996; WEO, 1997; and staff estimates.

1/ Countries: Hungary, Albania, Bulgaria, Croatia, Czech Republic (1993), FYR Macedonia (1993), Lithuania, Poland (1993), Romania, Slovakia, Slovenia.

Similarly, total (public plus private) expenditure on health in Hungary is not large in comparison with those of other OECD countries (Figure 11).[53] [54]

Main reforms in the early 1990s

59. Under the socialist system, health care was granted free of charge to every citizen, and was financed from the general revenue of the state and local councils. In the late 1980s, the government openly acknowledged the growing health crisis and the inefficiencies of the health care system (Makara, 1994). In the first half of the 1990s, important and radical measures were taken to reform the institutional, financing, and ownership arrangements (Appendix II). During this relatively short period, Hungary moved from a centrally planned public health care system, financed through general budgetary revenue, to a delegated and decentralized system, financed through a combination of social insurance payments (to cover the outlays of the HIF), general budgetary revenue (for the outlays of the State and LGs), and patients' outlays for drugs. The main thrusts of the reforms are discussed below.

60. As a first step toward establishing an effective system of primary care, the government attempted to raise the profile of public health and primary services with the creation of the Public Health Service (PHS) in 1991 and of the Family Physician Service in 1992. The PHS assumed responsibility for local public health stations formerly under control of the LGs, with the objective of implementing national public health policies, supervising health professionals, and controlling quality in the delivery of health services. In 1992, physicians were allowed to become private GPs on the basis of contracts signed with both the LG and the HIF. Patients were also allowed to choose their own GP—with the objective of improving quality of care through competition. In order to reduce demand for expensive specialist and hospital services, all non-emergency cases (with the exception of gynecological cases) required written referral from the GP. The government hoped that the referral system would allow GPs to perform their gate-keeping function. In fact, this has not happened, as GPs were willing to prescribe medicines, tests, and specialist visits for the requesting patient.

61. The pharmaceutical market was progressively liberalized. In 1989, the government discontinued budgetary producer subsidies on drugs. Subsidies were paid by the Social Security Fund directly to the pharmacists and were set as a percentage of retail price—depending on the social and medical value of the drug. In 1991, the government

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[53]Total expenditure on health is not available on a comparable basis for central European countries. The figures on health expenditure used by the OECD (1997) and by Goldstein and others (1996) are not exactly comparable with those reported in Table 4. This is due to differences in definition, sources of data, and time of reporting.

[54]Private expenditure on health should also include gratuity payments to health professionals. However, no official estimate of their amount exists. Ho and Orosz (1994) estimate that gratuity payments amounted to around 0.6 percent of GDP in 1993.

replaced controls on the retail price of drugs with negotiated profit margins and lifted restrictions on medicine imports. Overnight, a free pharmaceutical market was created, and patients gained access to more, and better quality, drugs. Nevertheless, public health expenditure on pharmaceuticals declined by 0.1 percent of GDP to 1.3 percent from 1993 to 1996 (Table 4). This was achieved through continuous revisions of the subsidization rates and of the number of medicines in each subsidy group. As a result, between 1991 and 1996, the average of co-payment on prescription drugs increased by 10 percentage points, to 29 percent, and households' outlays on prescription drugs doubled, to 0.6 percent of GDP (Table 5).[55]

62. The government also introduced performance-based remuneration, in an effort to increase efficiency by linking payments to performance. Before these changes, health providers were remunerated on the basis of salaries (doctors) or of historic costs (inpatient and outpatient services).[56] The new methods for paying health providers were broadly based on the following principles: capitation-based pay for family physician services; historic cost plus fee for service for outpatient specialist care; Diagnostic Related Groups for short-term inpatient care; fee for service for special treatments during short-term inpatient care; and per diem for long-term care (Appendix I). These methods of payment are fraught with potential complications, however, and unless carefully designed and implemented, could undermine the objective of enhancing efficiency that they were originally established to accomplish (see below).

63. In 1992, the HIF was established as an autonomous purchaser of health services. The existence of a single purchaser is not in itself a prerequisite for efficient health service delivery, although it may offer some important advantages that could result in more efficient/less expensive service delivery (Oxley and MacFarlane, 1995).[57] For these advantages to materialize, the purchaser should be able to assess the relative merits and cost effectiveness of different treatment strategies, and to selectively buy health services from potential suppliers.

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[55]Co-payments on prescription drugs increased to 33 percent during the first four months of 1997.

[56]As recently as 1993, outpatient and inpatient institutions were financed through global budgets set on an historical basis (the previous year's budget was increased by a certain percent). General doctors and specialists were salaried until December 1991 and June 1993, respectively.

[57]Scale considerations may make the purchaser better able to pay for the information needed to set up appropriate contracts and monitor them. Enhanced informational and monitoring capabilities may put the single purchaser into a stronger position to limit unnecessary care and enforce better quality of care. The single payer can take a broader view of health care, including an integrated strategy covering preventive and curative care. Finally, a monopsonist can put pressure on providers through contestability and yardstick competition.

Table 5. Hungary: Cost Sharing of Prescription Drugs, 1992-97

	1992	1993	1994	1995	1996	1997 1/
			(In billions of forint)			
HIF	40.2	49.5	61.6	70.0	84.2	34.6
Central government	...	...	2.5	5.5	6.8	2.8
Patients	9.3	15.2	20.5	30.4	37.5	18.3
Total	49.5	64.7	84.6	105.9	128.5	55.7
			(In percent)			
HIF	81.2	76.5	72.8	66.1	65.5	62.1
Central government	...	...	3.0	5.2	5.3	5.0
Patients	18.8	23.5	24.2	28.7	29.2	32.9
Total	100.0	100.0	100.0	100.0	100.0	100.0
			(As percent of GDP)			
HIF	1.4	1.4	1.4	1.3	1.3	0.4
Central government	...	...	0.1	0.1	0.1	0.0
Patients	0.3	0.4	0.5	0.5	0.6	0.2
			(In billions of forint)			
Memorandum item:						
Gross Domestic Product	2,942.7	3,548.3	4,368.3	5,561.9	6,660.0	8,025.0

Source: HIF.

1/ January to April only.

At the same time, the purchaser should be accountable to consumers (through parliament) for the quantity and quality of services provided. These conditions do not materialize in Hungary (see below).

64. During the early 1990s, policymakers were able to first contain public health expenditures and then to reduce them (¶58). As part of the financing reforms of the early 1990s, the government established spending caps for three main outlays of the HIF: family physician services, outpatient care, and hospital care. These cost control mechanisms have managed to keep a cap on expenditures even as performance-based remuneration was introduced and the structure of ownership changed (Table 4). The expenditure restraints in the health sector have also resulted in a reduction of more than 20 percent in the real earnings of non-manual workers in the public health and social welfare sector between 1992 and 1996 (Figure 13). The squeeze on earnings in the health and social welfare sector has been larger than the one experienced by the public administration as a whole. In fact, the ratio between gross earnings in the health sector and the public administration decreased by about 5 percentage points, to 65 percent, between 1992 and 1996 (Figure 13).

65. Two important sources of cost escalation remain, however: high-technology services, which are remunerated on a fee-for-service basis, and pharmaceuticals.[58] These are among the main reasons that explain why, every year, the expenditures of the HIF have been higher than budgeted (Table 6)—other less important reasons are post-budget increases in wages of health sector employees and underestimates of disability pension outlays.

66. The successful capping of total public expenditures may have created some negative side effects. Among the unintended side effects are informal rationing, deterioration in quality of care, and arrears accumulation. While there is no hard evidence that either informal rationing increased or quality of care deteriorated in Hungary,[59] lower quality and longer waiting times for surgery and specialty visits are not an uncommon occurrence in health care systems with output caps (OECD, 1994). There is instead evidence of accumulation of hospital arrears to suppliers in Hungary during 1995 and 1996.[60] The health reform experiences of OECD countries suggest that constraints on overall expenditure levels alone have rarely encouraged greater efficiency and effectiveness of providers. In some cases, overall expenditure caps may have weakened the achievement of these objectives, especially if the caps have not been accompanied by micro-level reforms to improve efficiency (Oxley and

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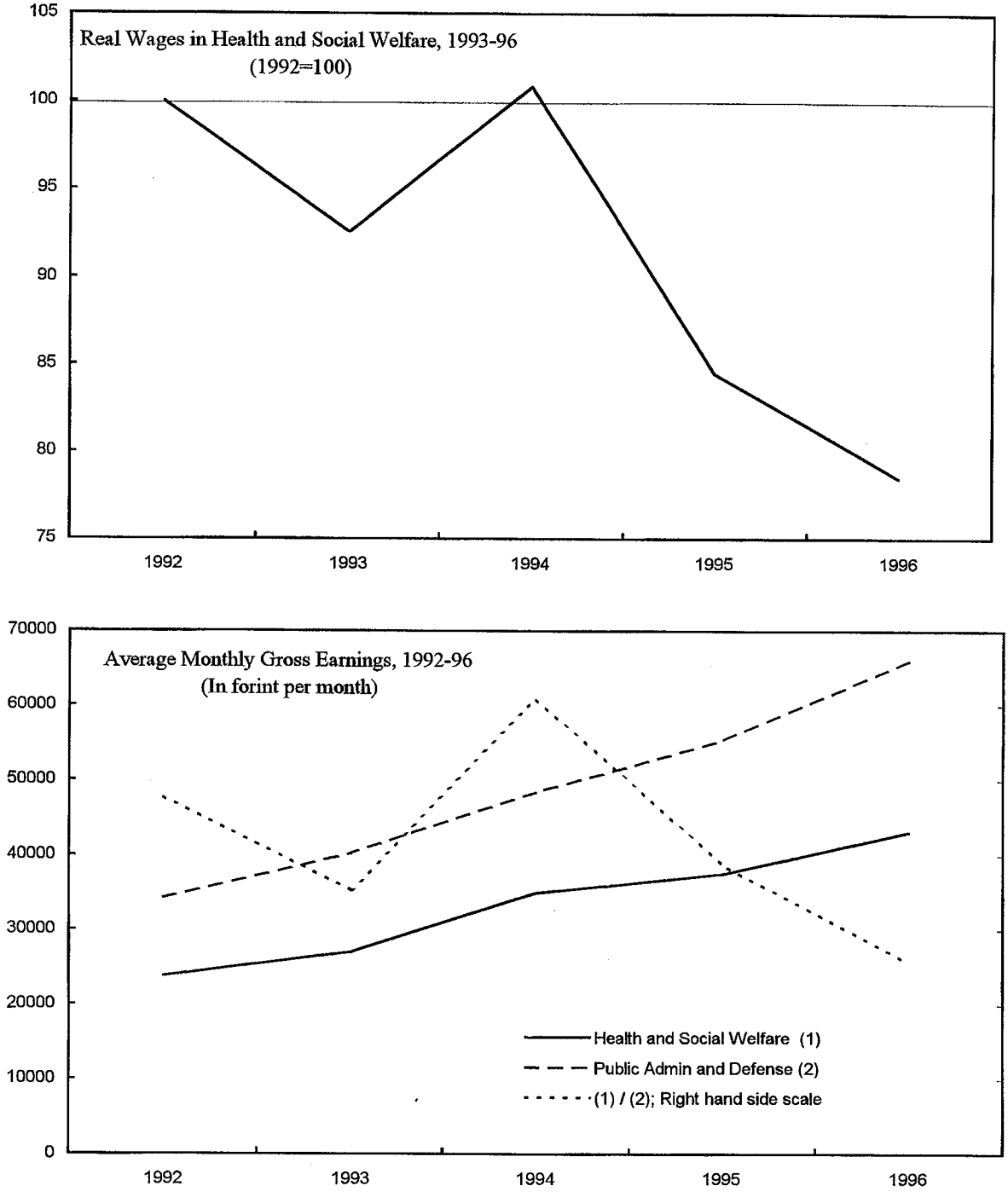
[58]A third source of cost escalation, sick pay, was brought under control in 1996 (Section C).

[59]For example, data on waiting times and length of waiting lists for surgery and specialty visits are not available.

[60]These were partially cleared at the end of 1996 through interest-free loans by the HIF to hospitals.

Figure 13. Hungary : Wages and Average Monthly Gross Earnings, 1992-96



Sources: Monthly Bulletin of Statistics, various issues; Statistical Yearbook of Hungary, 1995; and staff estimates.

Table 6. Hungary: HIF Approved Budgets and Outcomes, 1992–1996

(In billions of forints)

	1992		1993		1994		1995		1996	
	Budgeted	Actual	Budgeted	Actual	Budgeted	Actual	Budgeted	Actual	Budgeted	Actual
Total Revenue	238.6	235.8	270.5	280.3	336.4	379.7	436.0	422.9	489.5	465.5
Total Contributions	219.3	212.0	236.6	251.0	283.8	294.9	344.2	332.4	381.0	353.7
Arrears	...	...	...	...	...	...	15.9	13.3	23.0	16.0
Transfers from central budget	...	1.7	2.5	4.9	5.5	9.8	2.5	3.4	2.5	2.5
Other social security related revenues	8.1	9.1	11.6	12.6	14.1	15.8	12.8	12.7	14.4	12.6
Other Revenue	0.8	3.0	6.4	0.6	11.0	0.4	1.1	0.7	0.6	0.1
Transfer between funds	10.4	10.1	13.5	11.3	21.3	54.7	56.8	56.7	66.9	66.1
Operational revenues	...	...	...	...	0.7	4.1	2.8	3.7	1.1	2.5
Total Expenditures	238.6	257.5	287.0	306.0	336.4	397.8	436.0	445.1	491.0	509.0
In-kind provisions	141.6	156.2	174.8	186.9	225.8	241.5	270.4	275.7	304.1	326.1
Curative and preventive care	110.6	112.1	129.6	131.6	164.5	170.5	192.3	190.1	217.5	226.8
Pharmaceutical expenditures	31.0	39.4	38.0	49.5	50.7	61.6	67.7	70.0	72.0	84.2
Medical supplies subsidy	...	3.6	6.0	4.7	7.0	7.3	7.5	10.8	11.5	12.1
Travel reimbursement	...	1.1	1.2	1.1	1.6	1.4	1.4	1.8	1.4	2.1
Other	...	...	...	...	2.0	...	1.6	3.0	1.8	2.8
Cash benefits	73.4	72.9	81.3	88.6	98.9	108.0	116.3	118.2	131.1	121.5
Under retirement age disability	36.0	36.5	43.2	45.0	54.2	57.8	69.6	68.1	77.1	79.3
Maternity and child allowance	6.5	6.4	8.0	7.2	9.2	8.3	10.2	8.9	9.5	8.3
Sick pay	29.1	28.9	29.0	35.3	34.1	40.8	34.8	39.8	42.8	33.0
Other	1.9	1.1	1.1	1.1	1.5	1.1	1.7	1.4	1.7	1.4
Joint expenditure of the funds	23.3	25.0	27.1	28.8	0.8	1.0	0.7	1.1	1.5	1.1
Transfers between the funds	...	...	...	...	...	32.9	36.5	37.1	40.0	37.2
Other expenditures	0.3	3.4	3.9	1.7	3.9	4.0	0.5	0.4	0.5	7.1
Balance	0.0	-21.7	-16.5	-25.7	0.0	-18.1	0.0	-22.2	-1.6	-43.5
Percent of GDP	0.0	0.7	0.5	0.7	0.0	0.4	0.0.	0.4	0.2	0.7

Source: Health Insurance Fund.

MacFarlane, 1995). These micro-level reforms are the main object of the 1997 legislation on the health care sector in Hungary (Section C).

The challenges ahead

67. While Hungary's expenditure on health is not high by international standards, and despite the systemic changes in the health care sector during the first half of the 1990s, the efficiency of the health care system is a matter of continuous discussion in Hungary. This is sometimes triggered by the evident deterioration of the health status of the population—often referred to as "the health crisis" (Makara, 1994). The extent of this deterioration, the efficiency of the health sector, and their implications for health policy, are discussed in this section.

68. The health status of Hungary's population, as measured in terms of life expectancy at birth, is by far the lowest among the OECD countries and one of the lowest among the central European economies in transition (Figure 14).

69. This was not the case before the mid-1970s. The life expectancy of a Hungarian male is two years lower now than in 1970–75 (Figure 15), a unique occurrence among OECD countries.[61] While the life expectancy estimates for Hungarian and Austrian males moved together during the period 1955–75, a gap of six years has developed between the two since then. The life expectancy gap has widened also with respect to males of central European countries in transition (Figure 15), albeit not by as much as with respect to OECD countries. Life expectancy for women has continued to improve, but not at the same rate as in other European countries (Figure 15).

70. The main causes of death are related to lifestyle,[62] and these causes affect the lower social classes disproportionately more than the upper classes in Hungary (Jozan, 1994). Male mortality is also substantially higher in rural areas. These mortality patterns offer important pointers for designing an improved health **policy**. Lifestyle may be influenced by targeted education and information campaigns aimed at reducing smoking and alcohol consumption, and by high excises on alcoholic beverages and tobacco. The main target groups of preventive public health and primary care in Hungary would be the non-urban population and the lower income quintiles. Expecting and lactating mothers would be other obvious

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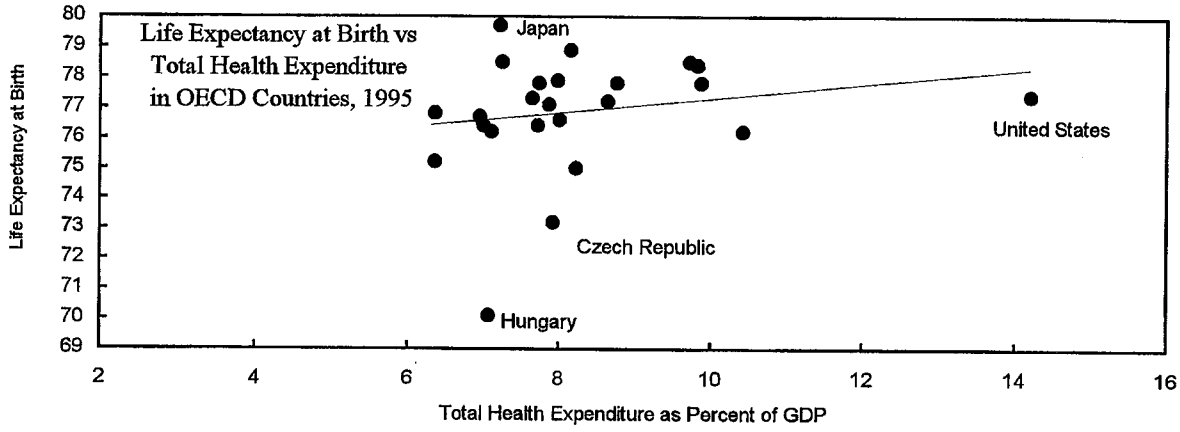
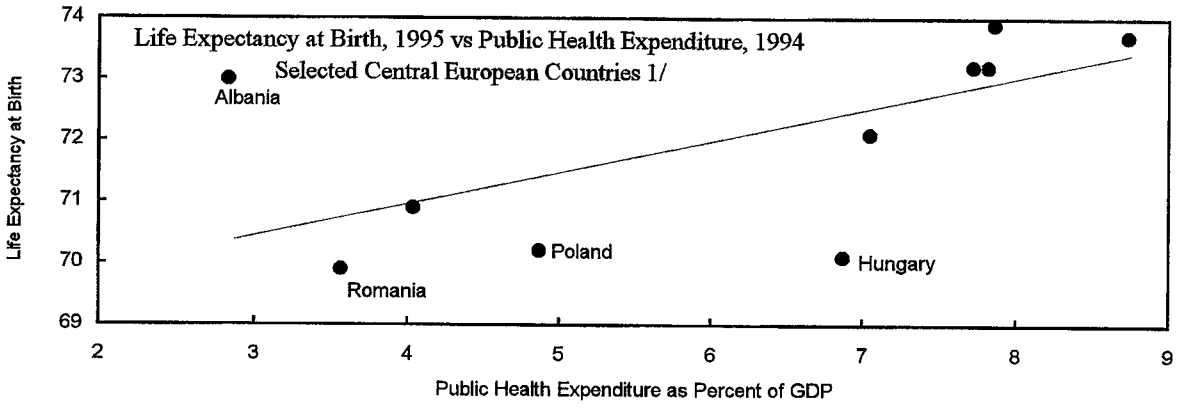
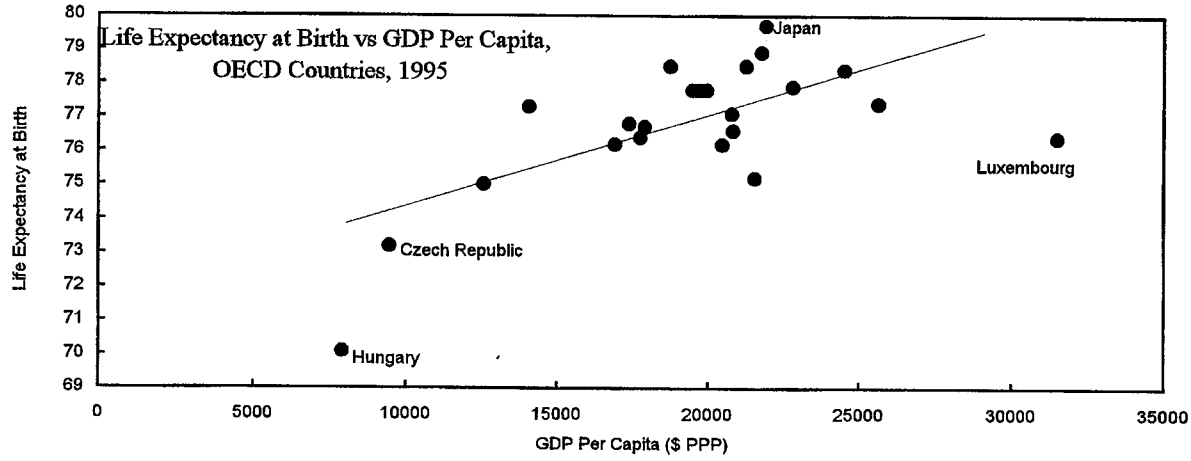
[61]In the age group 45 to 64 years, the 1995 male mortality rate surpasses the levels of 1920–21.

[62]Only 18 percent of deaths in Hungary could be avoided through better medical treatment. Although the death rate before one year of age is not particularly high, it is strongly related to low birthweight and premature birth (Jozan, 1994). Both of these factors can be corrected through targeted prenatal medical care and assistance.

Figure 14. Hungary: Life Expectancy Comparisons



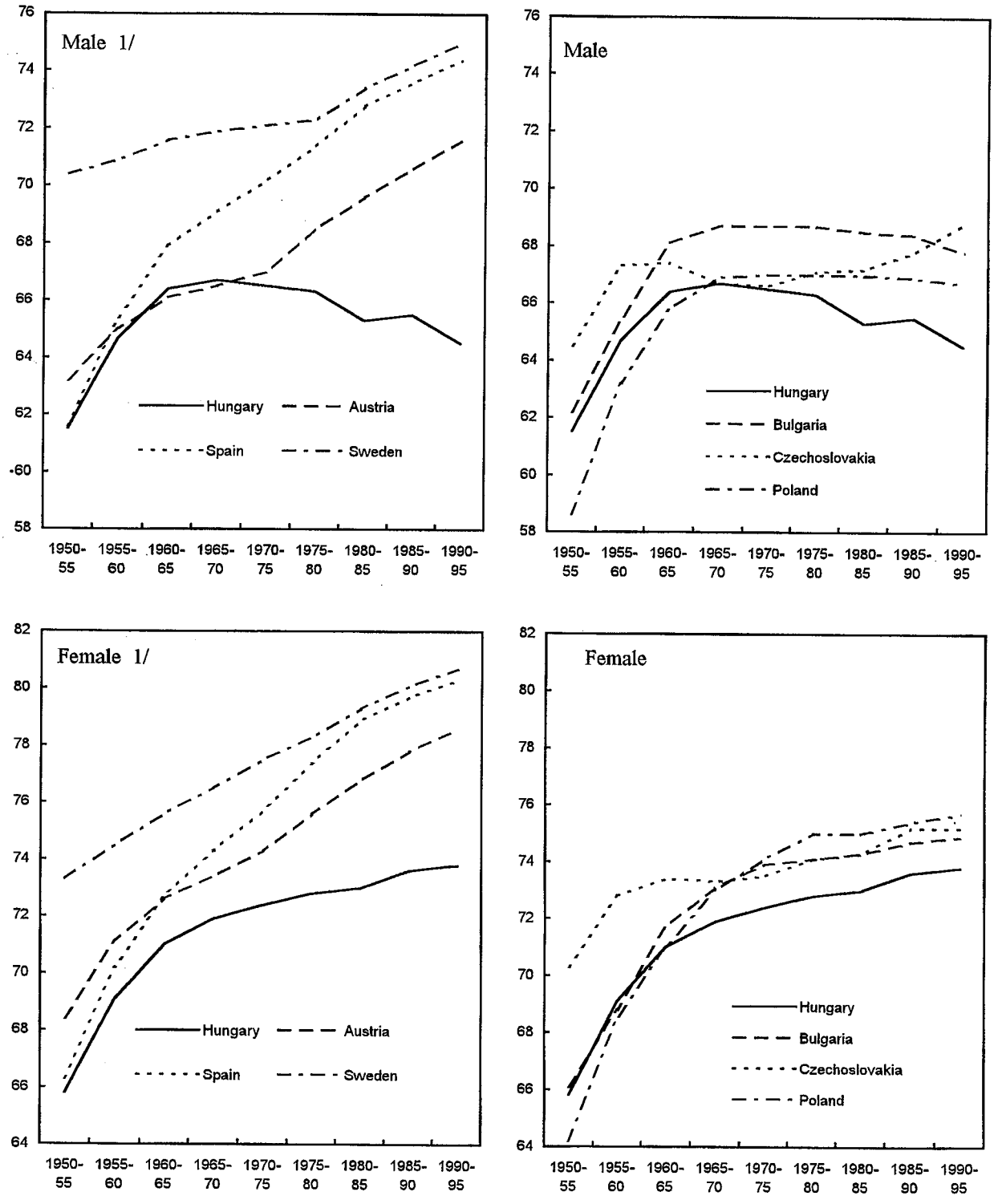




Sources: World Bank, 1997; Goldstein and Others, 1997; and OECD, 1997.

1/ Countries: Hungary, Albania, Bulgaria, Croatia , Czech Republic (1993), Poland (1993), FYR Macedonia (1993), Romania, Slovakia, Slovenia.

Figure 15. Hungary: Life Expectancy at Birth in Selected Countries, 1950-95



Sources: World Bank, 1997; United Nations, 1996.

1/ The three countries selected are representative of mortality developments of Northern Europe/ Scandinavia (Sweden), Western Europe (Austria), and the Mediterranean (Spain), Jozan (1994).

candidates for targeting through an integrated approach involving pre- and post-natal monitoring by GPs, nutrient distribution, and education for new mothers.

71. As discussed above, the poor health status of the Hungarian population cannot be entirely ascribed to the level of efficiency and effectiveness of the health care system. Low efficiency nevertheless tends to increase expenditures and/or results in inferior health outcomes and social welfare—insofar as the public is not satisfied with the level and quality of care—and/or unequal distribution of health services. The government's efforts to reform the health care sector are indeed motivated by its perceived low level of inefficiency and effectiveness—in terms of health outcomes. The remaining part of this section discusses the efficiency of the health care system.

72. The level of efficiency in health care delivery can be gauged by examining some indicators of capacity and input utilization: hospital beds, doctors, nurses, and contacts with physicians. What transpires is an inadequate organization of supply, characterized by: excessive reliance on inpatient care, and, in particular, expensive acute care—rather than chronic or rehabilitative—very low ratio of nurses to doctors, and very high utilization of specialist services.[63] What this indicates is that the Hungarian health care system is geared toward more expensive and less effective curative and specialized care, rather than preventive care and basic services.

73. The capacity of the Hungarian health sector, as measured in terms of hospital beds per 1,000 people, was 37 percent higher than the OECD average in 1995 (Figure 16), even though Hungary has lower levels of both health expenditure and GDP per capita than the average OECD country. The number of days in hospital per 1,000 people is 19 percent higher than the OECD average, indicating that recourse to hospitalization is relatively high (Figure 16). However, given the large number of available beds, the occupancy rate remains 2.5 percentage points below the OECD average of 77 percent (Figure 16). This picture is more accentuated for acute care beds. In 1995, Hungary had 52 percent more acute care beds and 50 percent more days of stay in acute beds than the average OECD country (Figure 17). There is, therefore, an imbalance between acute and chronic (long-term) care beds in Hungary. Institutions caring for the elderly are almost entirely missing, and hospital wards for rehabilitation or for treating long-term diseases are in short supply. As a consequence, many beds in acute care departments are instead used for chronic care patients (Ho and Orosz, 1994). Until 1994, Hungary had no facilities for outpatient surgery.

74. The level and combination of manpower inputs in Hungary is even more striking. Hungary has by far the highest number of specialists and practicing physicians per 10,000 people than any other OECD country (Figure 18). Moreover, it also has 32 percent fewer nurses than the average OECD country (Figure 18). This input mix suggests that nurses

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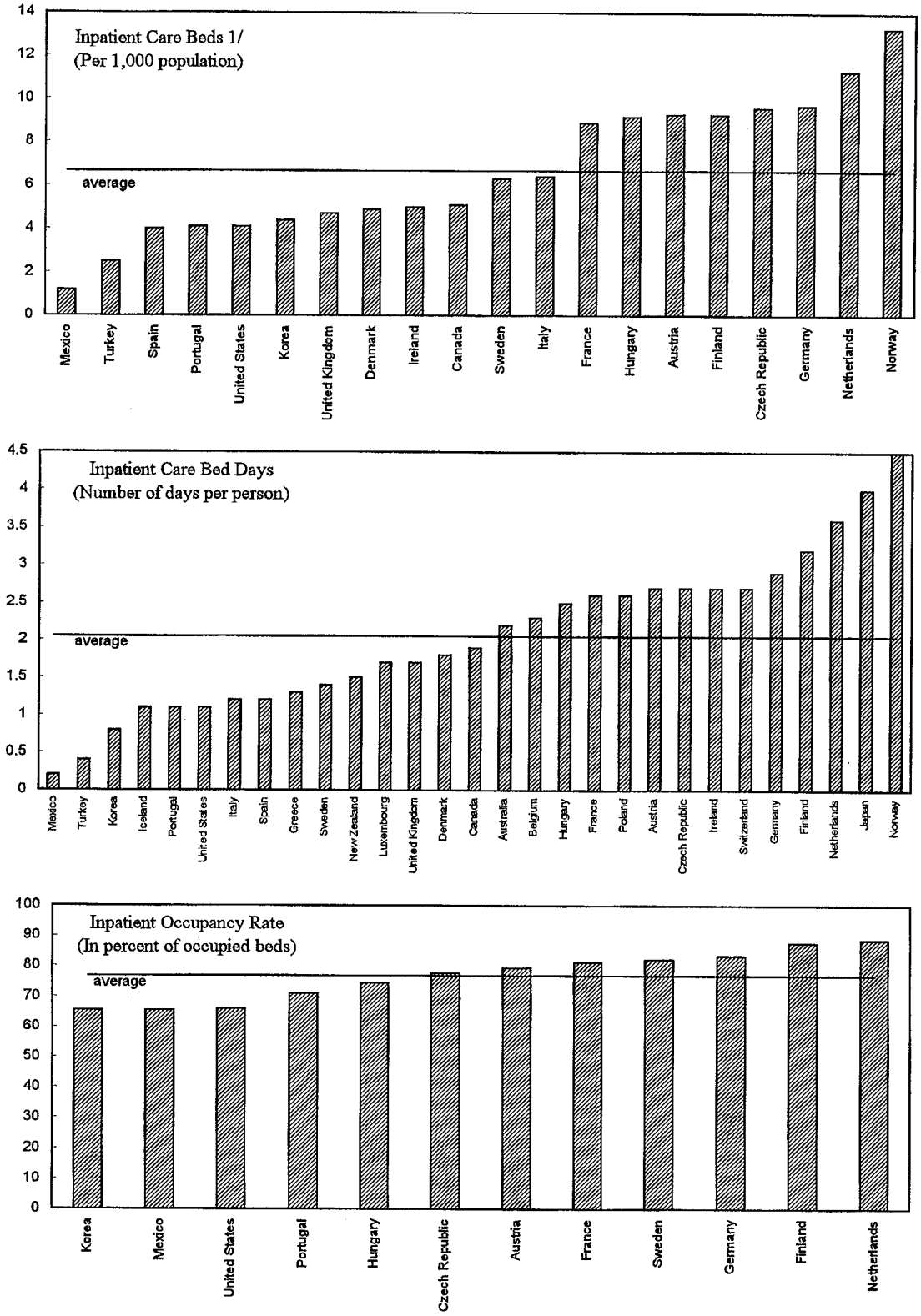
[63]This is partly the legacy of the pre-reform system, where health sector performance was measured principally in terms of the number of doctors and hospital beds in the system.

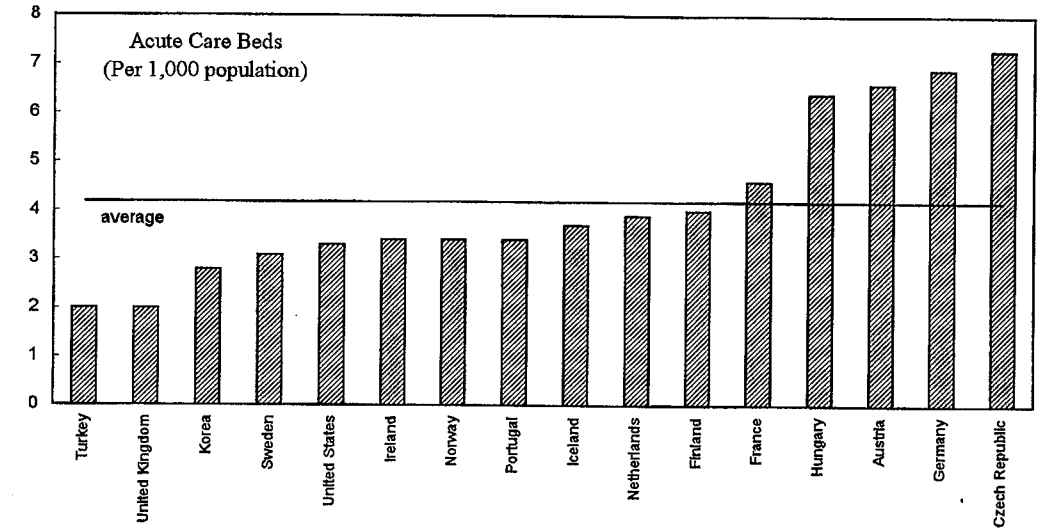
Figure 16. Hungary: Inpatients, 1995

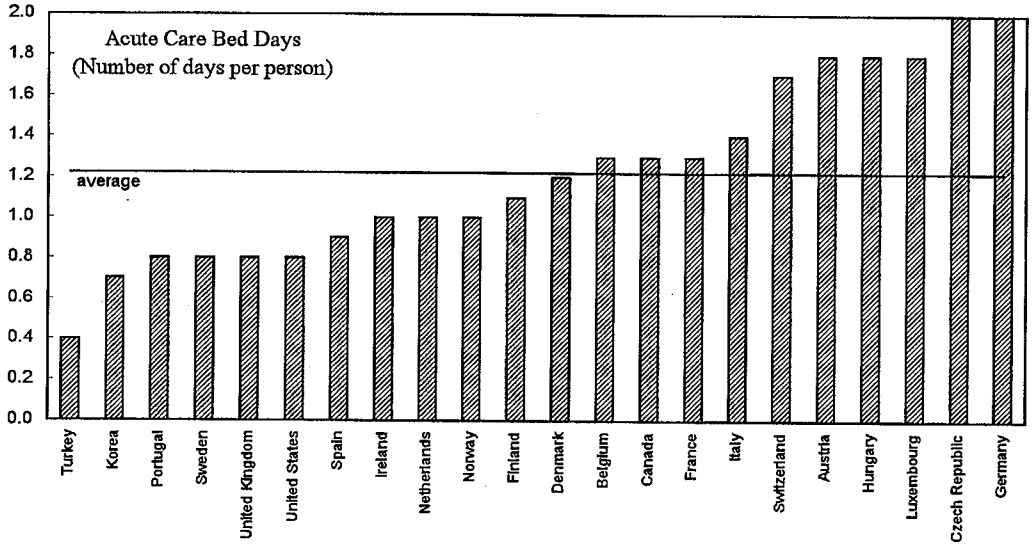


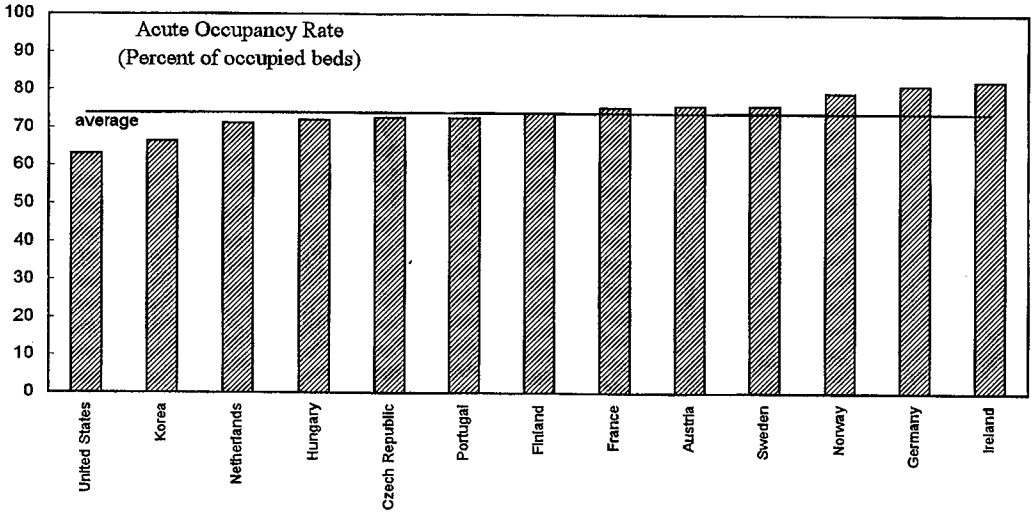
Source: OECD, 1997.

1/ The relative position of Hungary does not change despite the reduction of the number of beds in 1996. The total number of beds in 1995 is 93842 (9.3 per 1000); the number of beds in 1996 is estimated at 89491 (8.9 per 1000).

Figure 17. Hungary: Acute Care, 1995

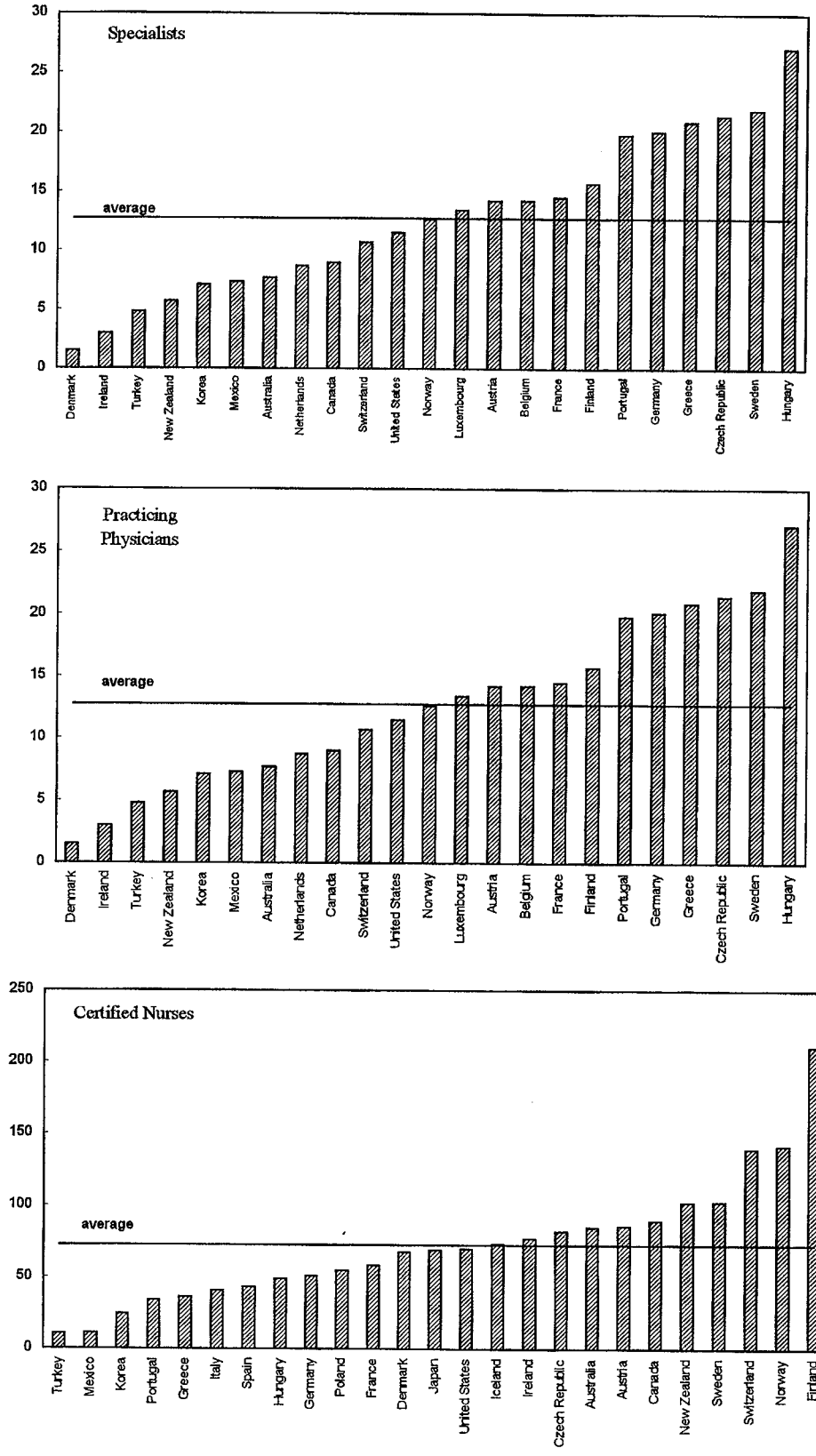






Source: OECD, 1997.

Figure 18. Hungary: Number of Medical Professionals, 1995 1/
(Per 1,000 population)



Source: OECD, 1997.

1/ Or latest available period 1990-95.

are not employed as "screeners" or "first-contact doctors" to reduce physicians' and specialists' time with patients, which is a common method to reduce costs without a loss in effectiveness.

75. Physicians function at extremely high turnover rates, notwithstanding expenditure levels that are lower than in other OECD countries. Despite the extremely high number of practicing physicians in Hungary, each physician conducts 41 percent more patient visits—including outpatient visits in hospital wards— than the average physician in the other eight OECD countries for which data are available (Figure 19). Moreover, physicians' consultations per capita are more than twice the average of the 12 OECD countries for which data are available (Figure 19). These data suggest that patients' contacts with physicians may result in a low content of effective care—for example, patients may see doctors just to get a written referral to a higher level of care, including referrals for medical tests.[64]

76. Why is the Hungarian health care system characterized by excess capacity and relatively poor indicators of performance? The roots of the problem may be traced to the inadequate incentive mechanisms facing health care providers, including their method of payment, and in the institutional setup (Ho and Orosz, 1994; Schneider and Jacobs, 1996; World Bank, 1997b).

77. Remuneration formulas have important implications for expenditure control and efficiency and, without careful design and implementation, they could undermine the objectives they were designed to achieve. For example, the DRGs, used for inpatient acute care, should facilitate data collection for a central policy agency, foster competitive contracting for treatments, and provide hospitals with incentives to increase turnover (i.e., reducing length of stay). However, the benefits that may be reaped by using the DRGs are not maximized because of the way the DRGs are used in Hungary. First, there is no competitive contacting in Hungary, as the HIF is forced to contract with each provider for levels of service supply that are set by law (Section C). Second, since there is a fixed total budget for financing hospitals in the HIF, allocations are made proportionally to individual hospitals retrospectively every month on the basis of their output share, as accounted in terms of DRGs.[65] Therefore, DRGs are used more as an accounting instrument than as instrument to reward output.

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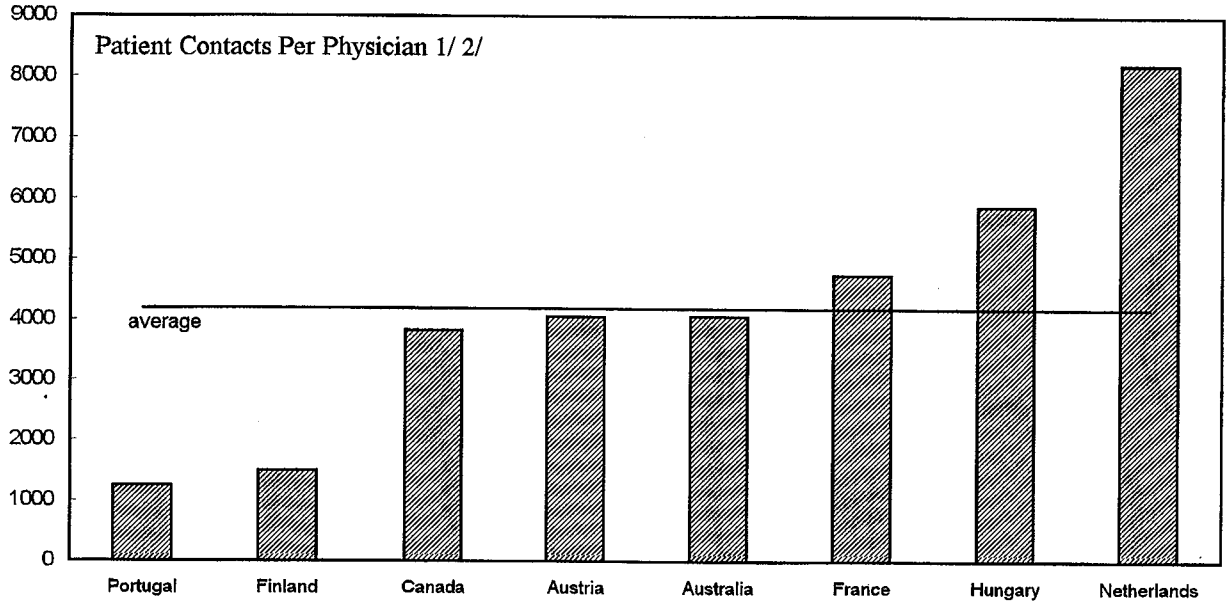
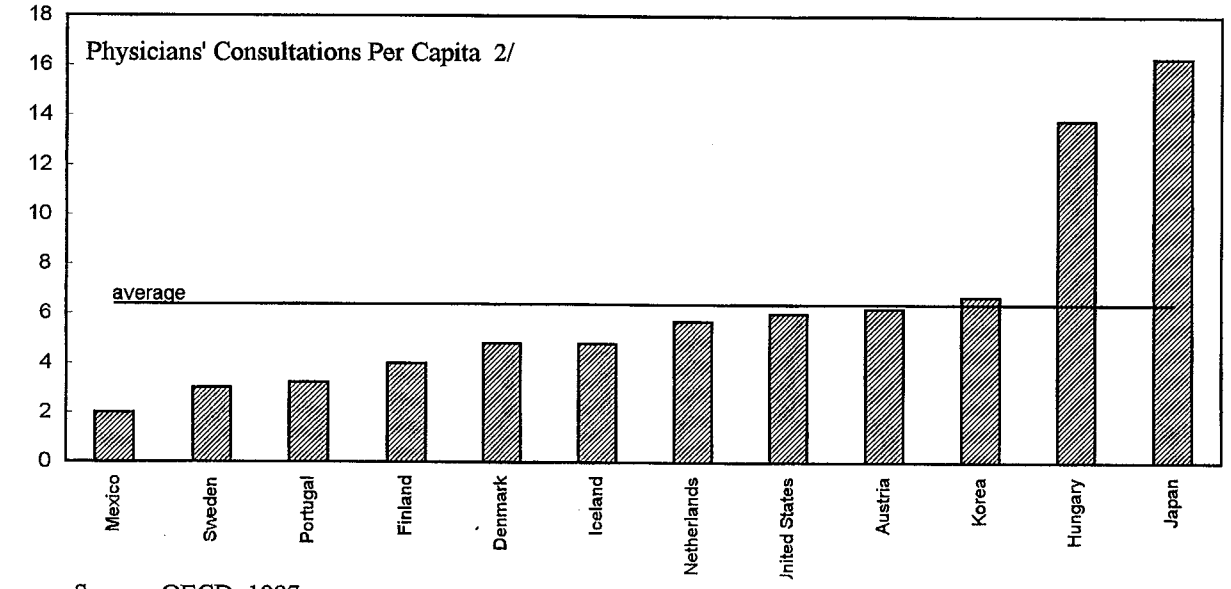
[64]It is also possible that the poor health status of the Hungarian population necessitates such high turnover rates.

[65]Chronic, or long-term, hospital care is instead remunerated on the basis of the per diem system. Although this system effectively caps hospital spending on long-term care with the monetary value of bed capacity, it also provides the supplier with an incentive to lower patient turnover and prolong the length of stay so that the more expensive early days are offset by lower-cost days later on during recuperation.

Figure 19. Hungary: Patients' Contacts with Physicians, 1994





Source: OECD, 1997.

1/ Australia (1991), France (1990) and Canada (1993).
2/ Includes outpatient treatments in hospital wards.

78. The capitation system for GPs, while allowing control over the overall level of primary health expenditure, does not provide sufficient incentives to improve the content of family medicine, since remuneration remains the same, regardless of the services provided. Moreover, capitation-based salary tends to have a negative impact on the gate-keeping function of GPs, thereby increasing outlays for secondary care. In fact, capitation fees induce GPs to register too many patients and to underservice them, select the better risks, and refer them too quickly to more expensive secondary providers—specialists and hospitals (Oxley and MacFarlane, 1995). A lesser role for GPs in primary care reduces the production efficiency of the health care system, by shifting the mix of care toward higher levels of service.

79. The institutional setup in Hungary does not provide for a clear separation of responsibilities between the purchaser of health services (ultimately the State through the HIF) and the providers of these services. This separation is widely regarded as a prerequisite to improving the quality and efficiency of care (Schneider and Jacobs, 1996), which can be pursued through negotiations between purchasers and providers and competition among providers. In the legal setup in Hungary, the State guarantees: access to health services for the population; the provision of deficit financing for the HIF;[66] and remuneration for health care providers. The municipalities (therefore, the general government) are the owners of hospitals. By law, the HIF has to purchase health services for the population. As a consequence, the State and the HIF together are ultimately responsible for financing the production of health care services by the providers.[67] Therefore, the purchaser of health care services (the HIF) is effectively also the lender of last resort of health institutions. The separation of responsibilities between health providers and service purchasers is therefore blurred.

80. The low effectiveness of the health care system has been traced back by some authors to the system's inability to adapt to changing demographic and epidemiological conditions of the population (Orosz, 1993; SZDSZ, 1993; Makara, 1994). Any health care system needs to be flexible to rearrange service delivery to meet the changing conditions of the population it serves. This will become a more important requirement in the coming decades, when the Hungarian population will age considerably (Figure 20). To adapt to these trends, health care providers would have to reduce considerably the supply of short-term beds (including maternity wards), while increasing the supply of geriatric facilities. Traditional types of home and nursing care could also be promoted by the State. The latest legislative changes have in part addressed these issues (Section C).

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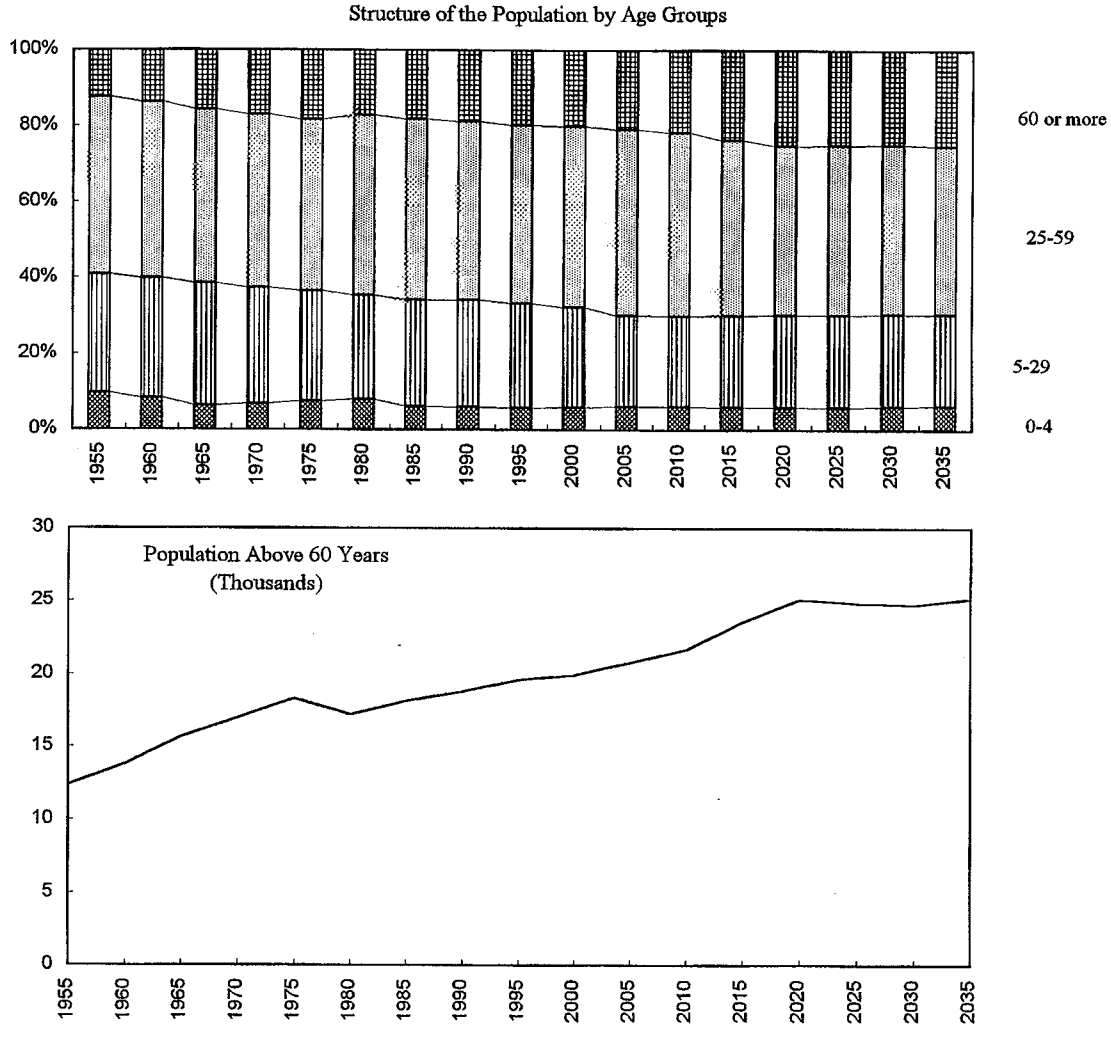
[66]Since the establishment of the Treasury in 1996, the HIF (and the Pension Fund) pay a market interest rate for financing above the approved budget deficit.

[67]These responsibilities have ultimately justified the HIF's partial financing of hospital debt at end-1996.

Figure 20. Hungary: Structure of the Population, 1955-2035



Sources: United Nations, Demographic Yearbook, various issues; World Bank Population Projections, 1995.

C. Structural Reform in the Health Sector During the Last Two Years

81. The purpose of this section is to review to what extent the legislation approved during the last two years addresses the sources of inefficiency in Hungary's health care delivery system. Reforms in health care delivery have been approved in two distinct periods in the last two years. First, the Act on Capacity Reduction was adopted in July 1996.[68] Second, in June–July 1997, Parliament approved a set of laws aiming at containing costs while improving the efficiency of health care delivery.[69] This body of legislation comprised: (i) the Act on Social Insurance Eligibility and Financing, which regulates revenue of both the HIF and the Pension Fund; (ii) the Act on Health Insurance, which defines the health benefits available under the health insurance package;[70] and (iii) amendments (referred to as Institutional Law) to the 1991 Law on the self-government of Social Insurance that redefine the procedures for selecting the representatives of trade unions and employers to the governing body of the Social Insurance Institution. Additionally, the government has presented to Parliament a draft of the Health Care Act, which would regulate the organization of the health sector. This section discusses only those aspects of these laws (Act on Capacity Reduction, the draft Health Care Act, and the Act on Health Insurance) that deal with the structural reform of the health care delivery system.

82. The Act on Capacity Reduction aims at reducing excess capacity in the hospital system, excessive and inappropriate hospitalization rates, and excessive length of stay. It

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[68]The Government also adopted measures to control some areas of overspending in the budget of the HIF (sick pay and pharmaceutical subsidies—see Appendix II for details). The thrust of these measures was to reduce demand for sick pay by increasing the employer's responsibility for its cost, and to reduce pharmaceutical subsidies by raising the effective co-payment rate of households.

[69]At the time of the 1997 budget, and as part of the broader social security reform, the social security contribution base had been considerably expanded. See Appendix II and the discussion in EBS/97/61 for details. See Appendix I to the Staff Report for a comparison of the content of these health laws and the benchmarks in the program's third review.

[70]The Act on Social Insurance Eligibility and Financing and the Act on Health Insurance modify the basic law on Health Insurance (1975). The Act on Social Insurance Eligibility and Financing regulates the social insurance revenue of both the HIF and the Pension Fund, including the insured persons, the eligible individuals, and the contribution base and rates. This Act does not introduce any changes in the definition of insured persons, eligibility conditions, and the contribution base for the HIF, with respect to those already approved with the 1997 budget. The Health Insurance Act regulates the health benefit package that is offered to the insured.

defines inpatient and outpatient capacity by county and for each specialty until 2000.[71] The Act also recognizes that bed reductions have to be determined locally, by ad hoc consensus committees, and it spells out the negotiating process between the consensus committee and the HIF. The objective of the government was to reduce the number of hospital beds by 10,000 in 1996. Beyond 1996, the planned reductions were in the range of 1,000–2,000 annually until 1999, when it was hoped that the formula would provide a ratio of 80–85 hospital beds per 10,000 inhabitants and an occupancy rate of about 80 percent.

83. As it turned out, the formula delivered a smaller reduction in capacity than was expected. Both the average number of beds used by hospitals and those contracted by the HIF were reduced by fewer than 5,000 units in 1996 (Table 7). However, the HIF expects that the reductions in 1997 and 1998 will be larger than originally expected and that the act will yield the expected downsizing by the end of the four-year period.[72]

84. The Health Care Act was intended to reshape the organization of the sector and replace the 1972 Health Act, which had been amended several times since the beginning of the economic reforms.[73] The current draft of the law is basically that of a framework law, outlining the basic principles regarding the role of the government, the rights and responsibilities of individuals, the agents/units included in the health delivery system, and the professional requirements for supplying health services (Appendix III). The draft law also underscores the importance of prevention and primary care. There is little dispute that any health care system should be informed by most of the principles in the draft. For example, the Act clarifies that the role of the State in health care provision is to ensure equal rights to health care by: (i) setting health policy, including control over economic activities with an adverse health impact; (ii) organizing and planning the health care delivery system; and (iii) defining the extent of health care provision. However, since the draft act is a framework

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[71]The Act defines the maximum number of outpatient (polyclinics) consultation hours per 10,000 inhabitants by specialty, and establishes a formula for calculating the maximum number of hospital beds per county, including the share for each specialty. The number of beds for each county is determined by the sum of two numbers. The first is an ad hoc schedule of reduction, over the period 1996–2000, of the minimum number of beds that each county should have. The second is a function of bed endowments in the previous year, demographic factors, factors indicating the level of health care and social services, and the intercounty movement of patients.

[72] The utilization of output indicators as a payment method implies that a reduction in hospital beds will not have an immediate impact on the level of expenditures, unless hospitals' output is reduced through closures of wards and hospitals.

[73]The latest amendments had been made in the early 1990s, when the structure of the health sector was undergoing deep changes (ownership of local hospitals to municipalities, private GPs, etc.—see above).

Table 7. Hungary: Hospital Beds, 1993–2000

	1993	1994	1995	1996	Projections 1997	1998	1999	2000
Statistical beds 1/	104,764	104,764						
Actual beds in use	100,438	98,453	95,988	91,514 2/				
Contracted beds	96,355	96,314	93,842	89,491	84,500	81,300	79,600	78,000
Occupancy rate	0.75	0.74	0.74	0.76	0.79	0.8	0.8	0.8

Source: HIF

1/ Statistical beds coincide with actual beds in use from 1995.
2/ Preliminary.

law, it remains quite general and does not contain any apparent structural improvement. For example, rather than "organizing and planning the health delivery system" (point ii above), the Act defines in general terms what the health delivery system is comprised of (i.e., "institutions and professionals responsible for health promotion and prevention,...regardless of ownership.") and the general principles that these institutions and professionals should follow in delivering health services (i.e., emphasis on prevention and primary care).

85. The Act on Health Insurance regulates the benefit package provided by the HIF, the modalities of provision, the contracting procedures between the HIF and the service providers, and assigns ministerial responsibilities for follow-up legislation (Appendix IV). The main objective of the Act is to increase the efficiency of the health system, mainly by diverting excess demand for secondary health care services toward preventive and primary care. The main points of the Act are summarized below.

86. First, the Act classifies health treatments into three broad categories, according to the degree of patients' participation in the cost of services: i) treatments not covered by insurance (e.g., several types of transplants, sterilization, and acupuncture); (ii) treatments provided free of charge (e.g., screening, preventive, and curative services); and (iii) specific situations when the institution delivering the service is authorized to collect co-payments.[74] Second, the Act specifies treatment guidelines that regulate access to services. These include the requirement of a written referral for most out/inpatient treatments and the physicians' obligation to refer patients to the lowest possible level of care. Third, the Act redefines the HIF's contracting procedures with, and its supervision over the health institutions and the physicians. Fourth, the Government and the Ministry of Social Welfare (MoW) are mandated to design implementing legislation spanning most aspects of the Act.[75]

87. The emphasis of the Act is on regulating utilization through access and treatment protocols and information-intensive controls. Although the Act attempts to improve efficiency in health care delivery, some of its regulations may not have the desired impact on this objective. In fact, some regulations either do not bring about the needed improvement in the incentive structure or they establish disincentives for health care suppliers to operate within a strict budget constraint. Moreover, several regulations in the Act either re-present solutions

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[74]These are mostly cases when the established referral and utilization procedures are not followed (Appendix IV).

[75]The follow-up legislation includes the revision of: (i) contracts and payment mechanisms for providers; (ii) pharmaceutical reimbursement rates; (iii) the DRG tables; (iv) the outpatients' point values; and the definition of: (i) specialist treatments accessible without written referral; (ii) regulations on what preventive and screening services will be provided; (iii) a certification mechanism to verify attendance at mandatory screening sessions; (iv) protocols, including on drug prescriptions, for the main diagnosis groups; and (v) treatments provided through waiting lists.

and arrangements that are already operating—unsuccessfully—or that need to be implemented through further legislation. These four issues are discussed below.

88. First, with regard to the incentive structure, at least two areas are germane. First, there is little incentive for health institutions to charge co-payments.[76] In a very few specific cases (for higher level services than those defined in the treatment protocols and for services demanded without written referral) health providers may, but are not required to, collect co-payments. There is no national mandate for imposing co-payments on specific treatments; rather, each medical institution may decide to charge co-payments when utilization and referral guidelines are not followed. However, if the hospital charges the patients, it will have to charge the HIF less for reimbursements and physicians will lose their gratuities—which are an important component of their income. Moreover, in the absence of any threat of bankruptcy or sanction for the hospital administrators, the latter may not be motivated to enforce controls on the propriety of referrals—on which the imposition of co-payments hinges—for the following three reasons. First, since hospitals are financed by the HIF on the basis of output indicators, co-payments may have the undesired effect of reducing available financing by lowering demand and output. Second, it may be difficult for an hospital administrator to define which level of care is appropriate for each diagnosis and, unless there are very specific national guidelines in this area, each individual institution may prefer not to impose co-payments, to avoid losing patients. Third, the new procedures for providers in financial difficulty (see below) will also discourage the use of co-payments, as these procedures soften the budget constraint on hospitals.

89. The second factor that may not yield an improved incentive structure is that the recent law fails to assign broader autonomy to the HIF to contract with providers for the level and composition of capacity it deems necessary. Although the contracting procedures between the HIF and the providers of health services have now been clarified, the HIF remains obliged to contract with each county for at least the level of capacity specified in the 1996 Act on Capacity Reduction. This act fixed the level and composition of health care capacity by county until 2000. Therefore, the HIF's ability to influence the allocation of resources for efficiency and effectiveness gains by negotiating contracts with health providers remains limited.

90. Second, with regard to disincentives for health care suppliers to operate within a strict budget constraint, the Act now mandates the HIF to lend interest-free funds to health providers in financial difficulty, provided the owner of the institution (mostly LGs, and universities and the MoW) also supplies own resources and guarantees of payment. This regulation effectively weakens the budget constraint on health institutions and sanctions the possibility for them to overcommit expenditures, while forcing the HIF to finance, rather than sanctioning, such overspending. There is limited incentive for financial accountability, or against debt accumulation.

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[76]The mention of co-payments in the law is a positive development. If introduced, they should help reduce waste in the provision of health services.

91. Third, the Act re-proposes arrangements that are already operating—unsuccessfully—but it does not change the mechanisms that make these arrangements ineffective. For example, written referrals are already required for higher-level treatments, but this requirement has not been observed. The difference in the new act is that institutions can now charge a co-payment to patients without referral and for referrals to services above the "lowest possible level of care." Although the power to charge co-payments is a clear improvement, it is unclear how each hospital and specialist will be able to decide what price to charge, or what constitutes the "lowest possible level of care" for each diagnosis. The latter is a subjective medical opinion that does not lend itself to regulation. Therefore, it may be difficult for health providers to justify charging a co-payment against a referral to higher-level treatment by the GP. Another example of an arrangement that is currently operating is that the MoW already has the task of preparing treatment protocols, and the HIF has had to monitor their observance. The MoW has finalized five prescription protocols over the last two years. However, the role of these protocols is simply one of guidance, as the HIF cannot impose prescription ethics on GPs. The experience with the existing five protocols has shown that the supervising agency (the HIF) does not have the legal entitlement or the instruments to verify whether doctors/institutions prescribe and treat according to the protocols.[77] Moreover, it is unclear why service providers would start using treatment protocols as a yardstick for charging co-payments (see discussion on incentives above).

92. Fourth, several regulations in the Act have to be implemented through further regulatory acts, which may result in further delays in the effective implementation of the Act. A shortlist of the necessary implementing regulation would include treatment protocols, a list of basic treatments to be provided free of charge, and revised remuneration mechanisms for health care providers (Appendix IV). Most of these regulations are of key importance for the effective implementation of the Act. For example, if the list of the basic free-of-charge treatments is not available, it may be more difficult to justify imposing co-payments on specific cases of mis-referral. Also, since only chest X-rays are currently mandatory, it may be difficult to reduce excess demand for higher level services or to collect many co-payments from patients who "miss the mandatory screenings"—unless more screenings become mandatory. However, this is not a simple task. The MoW or the HIF would have to prepare a list of mandatory screenings, and ready the necessary facilities and human resources. Moreover, the MoW and the HIF would have to identify what screenings should become mandatory for each higher-level treatment. All this will take time to plan and implement and, until the process is completed, it may be difficult to justify charging co-payments to patients with no screening record.

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[77]It is also debatable to what extent the HIF should have the authority to sanction over- and mis-prescription and treatment.

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PROVIDER PAYMENT MECHANISMS

Type of Service	Remuneration Method
1. Family Doctor	Fixed allowance per doctor plus weighted capitation
2. Inpatient Care: a. Acute hospital care - General rule - Special services (kidney Dialysis, CT, MRI, cardiac surgery, etc.) b. Long-term care	 DRGs 1/ Fee-for-service Per diem (with hospital-specific weights)
3. Outpatient Specialist Care	Basic fee (70 percent of former year's budget) plus capped fee-for-service (German point system)
4. Special Tasks 2/	Fixed budget (historical basis)

1/ Diagnostic Related Groups is a payment-per-case system that pays prospectively for services, on the basis of the diagnosed medical condition and its standardized treatment cost.
2/ School health, public health nurse services, dental care, special dispensaries, etc.

A CHRONOLOGY OF REFORM MEASURES IN HEALTH CARE, 1989–97

Year	Reform Measures
1988	- Creation of the Social Insurance Fund.
1989	- Private medical practice is authorized.
1990	- Switch from tax-based funding to funding through compulsory insurance. - Ownership of health facilities transferred to local governments. - Ministry of Social Affairs and Health renamed Ministry of Social Welfare. - Introduction of consensus management (a 3-member management team comprising of a medical director, an economic director, and a nursing director) in hospitals.
1991	- Establishment of National Public Health Service (responsibility for local hygiene offices transferred from LGs to Central Government as part of this Service). - Approval of Act on the Self-Government of Social Insurance.
1992	- Social Insurance Fund separated into a Pension Fund and a Health Insurance Fund (23.5 percent health contributions—19.5 for employer and 4 percent for employee). - Parliament defines eligibility conditions for health insurance. - Family Physician Service is created and capitation-based payment introduced.
1993	- Authorization of Voluntary Mutual Health Insurance. - Self-Governments of Social Insurance are set up with employer and employee representation. - Out-patient care remuneration based partly on a fee-for-service scheme, and hospital care remuneration on DRG-type scheme (July 1993). - Share of Family Physician remuneration based on capitation increased to around 80 percent of total.
1994	- The Act on the Hungarian Medical Chamber establishes ethical norms and procedures for doctors; general rules of contracts between health insurance and physicians; and the right for the Chambers to participate in the definition of health policy and legislation. - Government adopts the National Health Promotion Strategy.
1995	- New pharmaceutical regulations introduce a Basic List of essential drugs available at high HIF reimbursement rate. Reimbursement rates and the number of drugs on the Basic List are reduced twice in 1995. - Some closure of hospital beds is undertaken.

1996
- Employer contribution rate is reduced by 1.5 percent.
- Employer responsibility in sick pay is increased from 10 to 15 days, and employers are to contribute one third of sick pay expenditures of their employees.
- Reductions in reimbursement rates and changes in the drugs available in the Basic List (May).
- Adoption of Act on Hospital Capacity Reduction (July). One of its objectives is to reduce hospital beds by 10,000.
- Hospital specific weights in the DRG financing scheme are eliminated.
- Eligibility for drug card is extended.

1997
- Social security base is expanded to coincide with the Personal Income Tax base. Several non-wage remunerations and incomes are included.
- Reduction of employer contribution by 3 percent; adoption of a monthly payment of Ft 1,800 for every citizen—to be paid by the employer for the employees; increase of the monthly contribution ceiling from Ft 75,000 (as set in 1992) to Ft 99,000.
- Elimination of cross-financing between the HIF and the Pension Fund.
- All public funding for Investments in the Public Health Care Sector to be allocated through the Ministry of Welfare (no investment funds will be budgeted through the LGs and the HIF).
- Reductions in reimbursement rates and changes in the drugs available in the Basic List (January).
- Adoption of Institutional Law (June) and Health Insurance Law (July) by Parliament.

AREAS REGULATED BY THE DRAFT HEALTH CARE ACT

1. **The role of the state in health care provision is to ensure equal rights to health** by

- providing health policy, including control over economic activities with adverse health effects
- creating and enforcing legal regulations
- organizing and planning the health care delivery system
- defining the extent of health care provision

2. **The rights and responsibilities of individuals**:

- patients have the right to equal access to health services regardless of income status, gender, race, language, religion, etc.
- patients have the right to obtain adequate information of their health condition
- patients have the right to self-determination, etc.

3. **The health care delivery system** comprises of institutions and professionals, either public or private entities, who are responsible for health promotion and disease prevention, curative care, nursing, and rehabilitation. The basic principles of the operation of the delivery system are the following:

- emphasis on prevention
- strengthening primary care
- sector-neutrality

4. **Professional requirements/standards** will be defined in the Act in the following areas:

- requirements/standards for starting new practices/institutions
- personnel requirements for providing health services including education requirements and ability assessment
- physical requirements for providing services (equipment, diagnostic services)
- requirements related to quality assurance including supervision of operation of facilities.

MAIN AREAS REGULATED BY THE HEALTH INSURANCE ACT

Health benefits are grouped in 3 categories

Benefits not covered by health insurance: 36 treatments, including: liver, lung, and heart transplantations, sterilization, acupuncture, etc.

Benefits provided free of charge to insurees. These include: screening, preventive, and curative services provided that utilization of the latter follows the general and specific treatment protocols (see below).

Cases when the health institution is authorized to collect co-payment from the patient. These include:

- utilization without written referral
- utilization of services at a higher level institution than indicated on the referral slip
- utilization of services without proof of participation in screening sessions that are mandatory by ministerial decree
- majority of dental care services
- higher quality hotel services during inpatient treatment.

General treatment protocols for physicians regulate the utilization of services covered by the HIF

Written referrals are required for utilization of outpatient and inpatient care services, with the exception of emergency.

The **referring physician is obliged to refer the patient to the lowest possible level of care** where his/her condition can be treated.

Only physicians contracted by the HIF are eligible to refer patients.

Different utilization patterns are possible but the institution is then authorized to charge a co-payment.

Specification of **HIF contracting procedures with health institutions**

The HIF is mandated to contract with providers for the capacity set in the 1996 Act on Capacity Reduction. Contracts exceeding that capacity require the approval of the Minister of Welfare.

The content of the contracts with providers is specified. These have to include: services to be provided by specialty, the geographical area to be served by the provider, identification data of physicians eligible to prescribe drugs, appliances utilized by contracted institution, registration number of physicians, data provision requirements, etc.

The HIF supervises the provision of services through its network of supervising physicians and financial experts. The Act specifies the documents that are to be made available for supervision (patient records, DOG accounts/charges to HIF, etc.), and the cases when the contract with providers may be terminated.

Should providers have financial difficulty threatening the safe provision of services contracted, the HIF is mandated to provide a lump sum, interest-free advance payment (i.e., loan) provided that the owner of the institution also provides own resources and guarantee of repayment.

Physicians in institutions not financed by the HIF may submit a request for authorization to prescribe drugs and medical appliances.

Follow-up regulation to be prepared by the government and the MOW

Government

- definition/revision of provider payment mechanisms and the details of related contracts
- setting of pharmaceutical reimbursement rates
- definition of specialist treatment accessible without written referral.

Minister of Welfare

- definition of preventive and screening services to be provided
- development of certification mechanism to verify attendance at mandatory screening sessions
- design of protocols for the main diagnosis groups and drug prescriptions
- revision of DRG tables and weights
- revision of outpatient point values
- waiting list regulations and ceilings on interventions provided to limited number of patients.

V. Banking Sector Issues[78]

93. Hungary's financial system is still dominated by the banking sector, despite rapid growth in the securities and equity markets. Within the banking sector, a remarkable transformation has taken place since the establishment of the two-tier banking system in 1987. Burdened by an inheritance of nonperforming loans, and coupled with inadequate prudential regulations and lax supervision, the health of the large state-owned banks deteriorated further in the early 1990s following the output decline that accompanied the transition process. Nonetheless, numerous small (mainly foreign or jointly-owned) banks were able to compete successfully in this environment owing to their greater efficiency and the absence of a bad-loan burden, by skimming off the more profitable clients of the state-owned banks. Against this background, a costly series of state-financed operations were undertaken during 1992–94 to reduce the volume of nonperforming loans and to recapitalize the large state-owned banks. This chapter focuses on developments in the banking sector since the implementation of the consolidation and recapitalization programs, which laid the foundation for the recent extensive privatization of the banking sector.[79]

A. Structural Changes in Bank Lending and Deposits

94. Financial innovation, capital market liberalization, the heavy tax burden on banking activities (including through reserve requirements), and heightened macroeconomic uncertainty have contributed to a number of structural changes in the banking sector over the past four years, including a drop in the real level of bank credit and private savings in banks, an increased share of domestic bank credit absorbed by the enterprise sector at the expense of households, and a decline in banks' maturity transformation ratio. In 1996, the real decline in domestic banking activities was partially reversed in response to a drop in intermediation spreads and the improving financial position of the corporate sector.

95. Between 1993 and 1995, real credit provided by domestic banks (excluding credit provided by the NBH) fell by 20 percent, while real deposits and bank-issued securities held by the private sector (noncash M3) declined by 10 percent (Tables 8 and 9). During the same period, the stock of outstanding discount treasury bills increased from 12 percent of noncash M3 to more than 25 percent. Although some banking sector disintermediation would be expected from the introduction of non-bank-issued financial instruments, disintermediation was hastened by the heavy taxation of banking activities through the imposition of high reserve requirements (which peaked at 17 percent in 1995), coupled with low rates of remuneration (especially on reserves accumulated against forint-denominated deposits). As a

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[78]Prepared by Rachel van Elkan.

[79]For a more extensive discussion of earlier developments in the banking sector, see SM/95/51, March 15, 1995.

Table 8. Hungary: Bank Credit to the Nonbank Sector, 1993–97

(In billions of forint; end of period)

	1993	1994	1995	1996	May 1997
Domestic credit	1,616.6	1,816.5	2,038.5	2,473.3	2,541.3
Consolidated government (net) 1/	585.7	603.8	710.7	911.1	779.8
Enterprises	676.2	780.5	928.6	1,202.8	1,417.8
Of which:					
In foreign exchange	65.6	92.6	266.7	350.8	426.9
Households	239.7	273.8	253.8	236.2	216.7
Small enterprises	85.7	89.2	70.8	62.4	63.2
Other credit	29.3	69.2	74.6	60.8	63.8
Real bank credit (1993 = 100)	100	92.7	81.1	82.1	76.0
Government	100	85.1	78.0	83.5	64.4
Enterprises and small enterprises	100	94.2	84.4	89.1	94.0
In forint	100	92.1	67.7	70.5	73.2
In foreign exchange	100	128.4	293.5	326.5	359.3
Households	100	94.2	68.1	52.9	43.7
Sectoral allocation of bank credit (in percent)					
Government	36.2	33.2	34.9	36.8	30.7
Enterprise and small enterprises	47.1	47.9	49.0	51.2	58.3
Households	14.8	15.1	12.5	9.5	8.5
Other	1.8	3.8	3.7	2.5	2.5
Currency composition of bank credit to enterprises					
In foreign exchange (in percent)	8.6	10.6	26.7	27.7	28.8
Enterprise credit in foreign exchange (in billions of U.S. dollars)	0.7	0.8	1.9	2.1	2.3

Source: *NBH Monthly Report*, various editions; data provided by the NBH; and staff calculations.

1/ Including banks' holdings of government securities.

Table 9. Hungary: Banking Sector Liabilities, 1993–97

(In billions of forint; end of period)

	1993	1994	1995	1996	May 1997
Noncash M3	1,645.2	1,868.4	2,296.2	2,848.7	2,846.1
Deposits of nonbanks	1,387.4	1,577.3	1,911.4	2,349.9	2,371.6
Households	696.0	866.4	1,079.0	1,339.1	1,400.7
Of which:					
In foreign exchange	204.7	293.7	439.0	485.4	480.6
Enterprises	532.9	550.3	650.9	806.3	754.6
Of which:					
In foreign exchange 1/	125.0	112.1	188.7	204.4	221.8
Other	158.5	160.6	181.5	204.5	216.3
Bank -issued bonds and savings notes	257.8	291.1	384.8	498.8	474.5
Share of noncash M3 in foreign exchange (in percent)					
Households (including bank securities)	21.5	25.4	30.0	26.4	25.6
Enterprises	23.5	20.4	29.0	25.4	29.4
Memorandum items:					
Foreign exchange deposits (in billions of U.S. dollars)	3.3	3.7	4.5	4.2	3.9
Households	2.0	2.7	3.1	2.9	2.6
Enterprises	1.2	1.0	1.4	1.2	1.2
Real noncash M3 (1993 = 100)	100	93.7	89.8	92.9	83.7
Real household deposits and bank securities (1993 = 100)	100	100.1	98.7	103.4	95.1
Real enterprise deposits (1993 = 100)	100	85.2	78.5	81.2	68.5
Discount treasury bills as share of noncash M3 (in percent)	11.8	14.3	17.9	25.5	...

Sources: *NBH Monthly Report*, various editions; data provided by the NBH; and staff calculations.

1/ Enterprise foreign exchange deposits increased temporarily in December 1993 due to the privatization of MATAV. In November 1993, enterprise foreign currency deposits were FT 86.2 billion.

result of these regulations, during 1993–95 banks forewent interest of 3–3½ percentage points on their forint liabilities by holding mandatory reserves rather than Treasury bills (Figure 21). Following the decline in the burden of reserve requirements and the overall improvement in macroeconomic conditions in 1996, banks' lending and deposit-taking activities began to recover, with noncash M3 and bank credit rising in real terms by 3½ percent and 1¼ percent, respectively, with a particularly strong acceleration since the second half of 1996 of credit to enterprises (Figure 1 of the main report).[80]

96. Credit allocated by domestic banks to all sectors of the economy declined in real terms during 1993–95 (Table 8). Credit to the corporate sector, which accounted for about 50 percent of total bank credit, contracted by more than 15 percent. The decline in domestically-sourced corporate credit, which occurred in the context of capital account liberalization, was triggered by the large intermediation spreads of domestic banks (Figure 22), which made foreign financing relatively cheap. This tendency was reinforced in 1995 with the reversal of the foreign interest differential following the introduction of the crawling peg exchange regime (Figure 23), which made borrowing in foreign exchange relatively cheaper. As a result of these factors, and the strong presence of foreign companies in Hungary, the share of corporate credit sourced abroad increased from 24 percent in 1993 to 44 percent in 1995 (Figure 24 and Table 10).[81] With the decline in domestic bank intermediation spreads in 1996, domestic bank lending to enterprises recovered rapidly. Moreover, reflecting the lower cost of borrowing in foreign currencies, domestic bank lending to enterprises denominated in foreign exchange increased more rapidly than lending in forint. As a result, foreign currency credits accounted for nearly 30 percent of domestic bank-allocated corporate credit in the first five months of 1997, up from less than 10 percent in 1993.

97. As to the sectoral allocation of bank lending, the share of government credit was relatively stable at around 35 percent during 1993–96, reflecting banks' desire to reduce the riskiness of their loan portfolios by maintaining the share of lower risk public sector lending despite sharply lower real yields (Figure 25). With respect to the enterprises, an acceleration in real activity and a recovery in profitability beginning in 1995, led to increased credit demand by this sector, which was satisfied from both domestic and foreign sources. As a result, the share of corporate credit in total bank credit rose from 47 percent in 1993 to 51 percent in 1996. The share of corporate credit expanded rapidly in 1997, reaching almost 60 percent by May, and crowding out the government sector. As to households, their share of bank credit declined slowly from 15 percent to 8½ percent, reflecting limited provision of mortgage

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[80]However, this recovery in banking activity was interrupted by a run on Postabank in early March. As a result, during the first five months of 1997, real non-cash M3 declined by 6 percent.

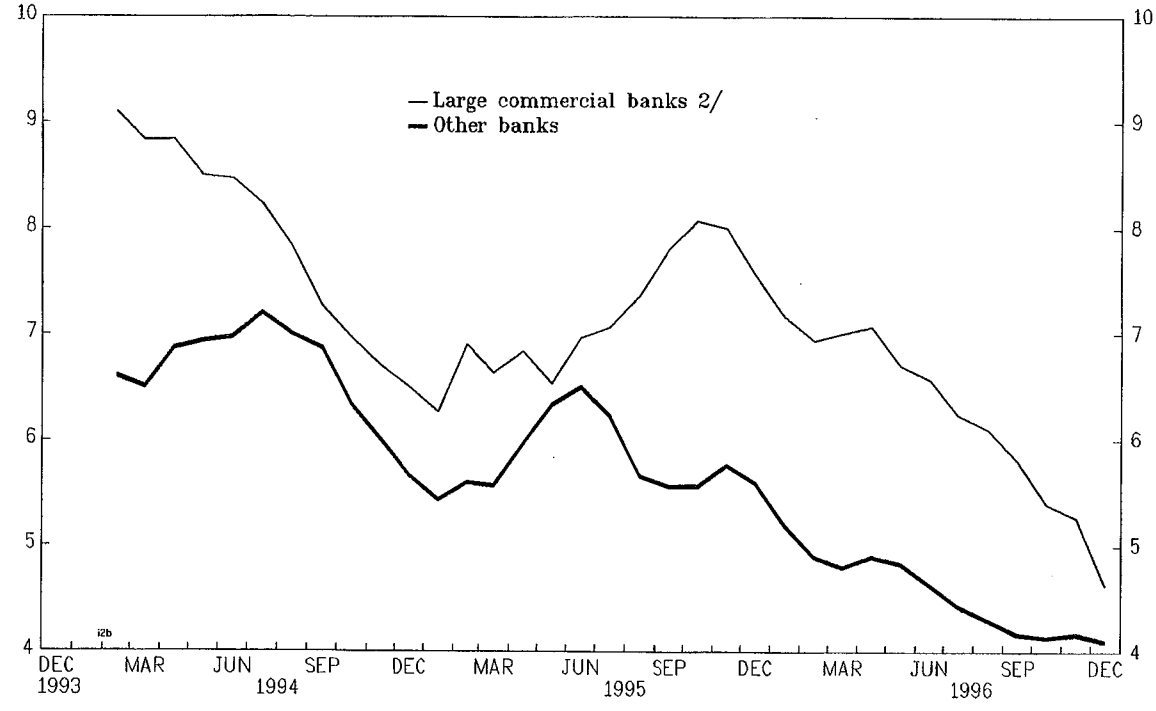
[81]At end-1996 nearly a quarter of foreign credit was due to loans from foreign parent companies to their Hungarian subsidiaries.

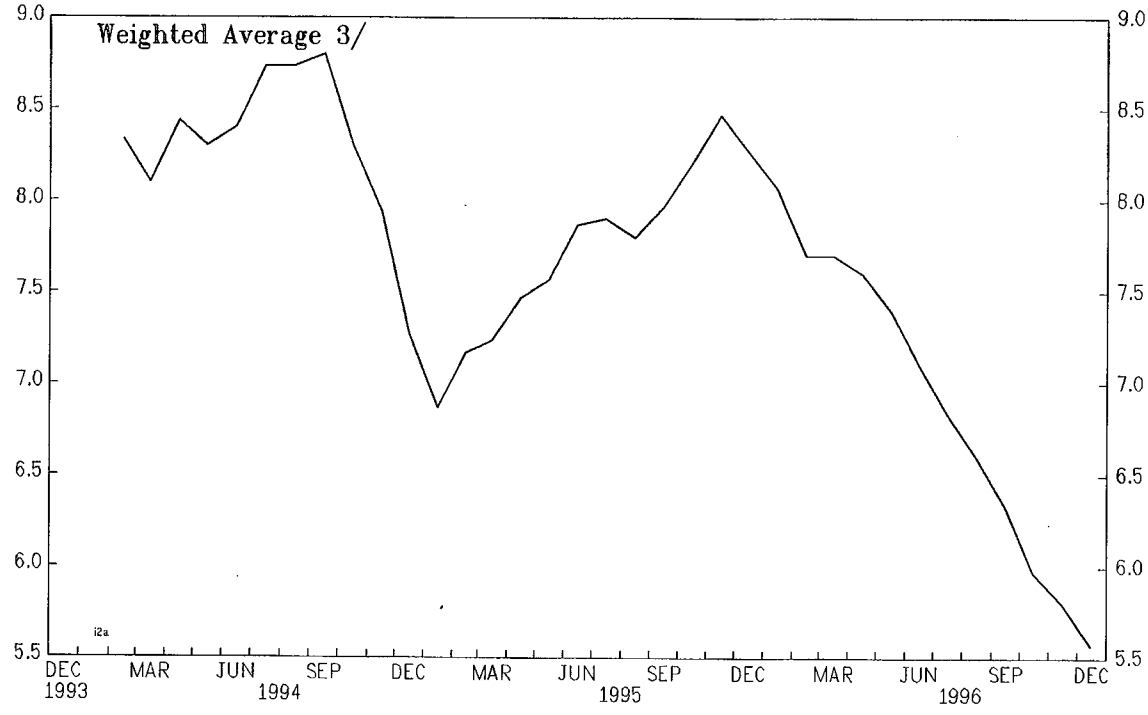
Figure 21. Hungary: Opportunity Cost of Reserve Requirements 1/

Sources: NBH monthly bulletin and staff calculations.

1/ Reserve ratio times the difference between the yield on a 3-month T-bill and the remuneration rate on mandatory reserves held against forint-denominated liabilities.

Figure 22. Hungary: Intermediation Spread 1/
(3-month moving average)

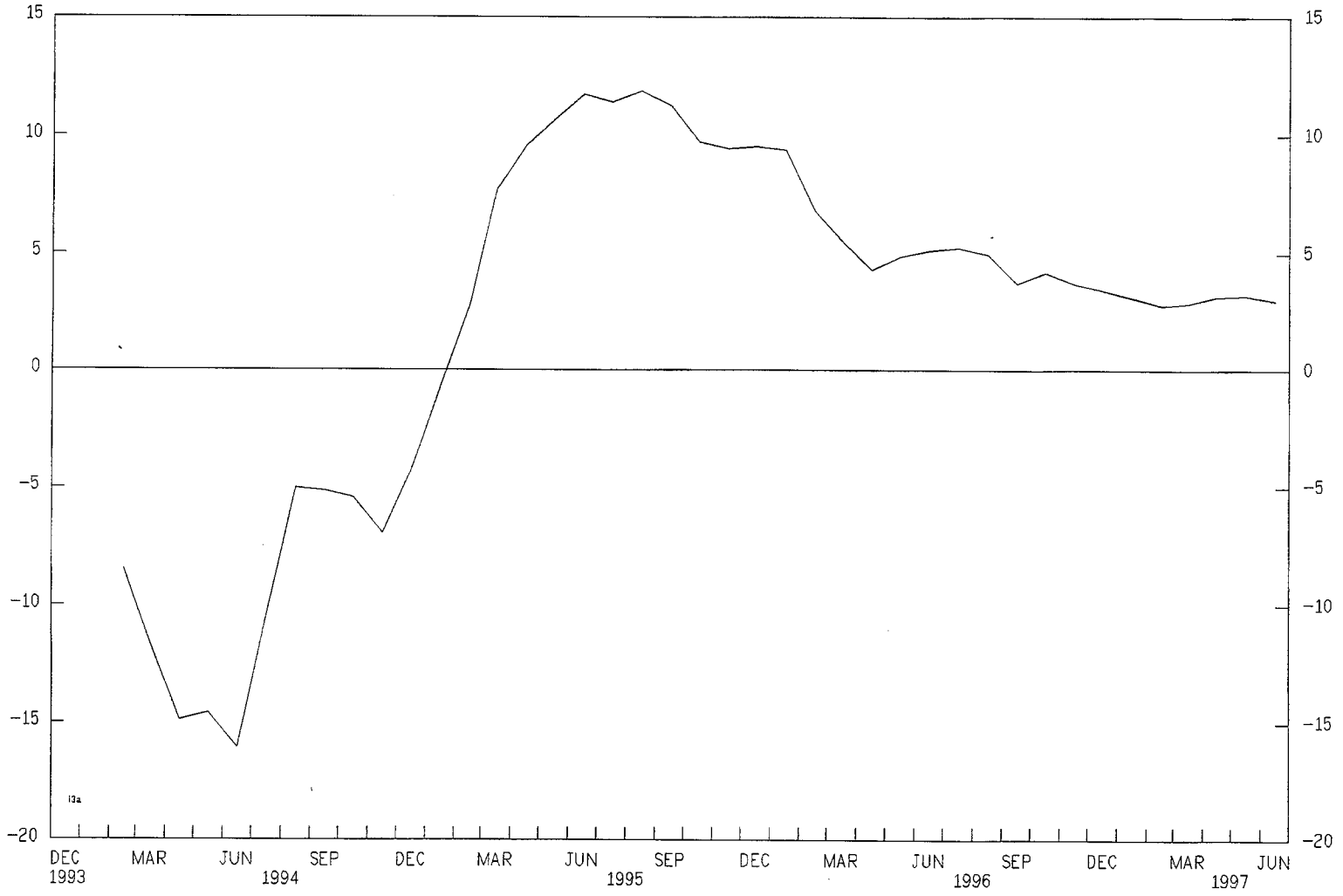




Source: NBH Monthly Bulletin.

1/ On loans and deposits of less than one year.
2/ BB, MHB, K&H, and MKB.
3/ Weighted average of all loans and deposits.

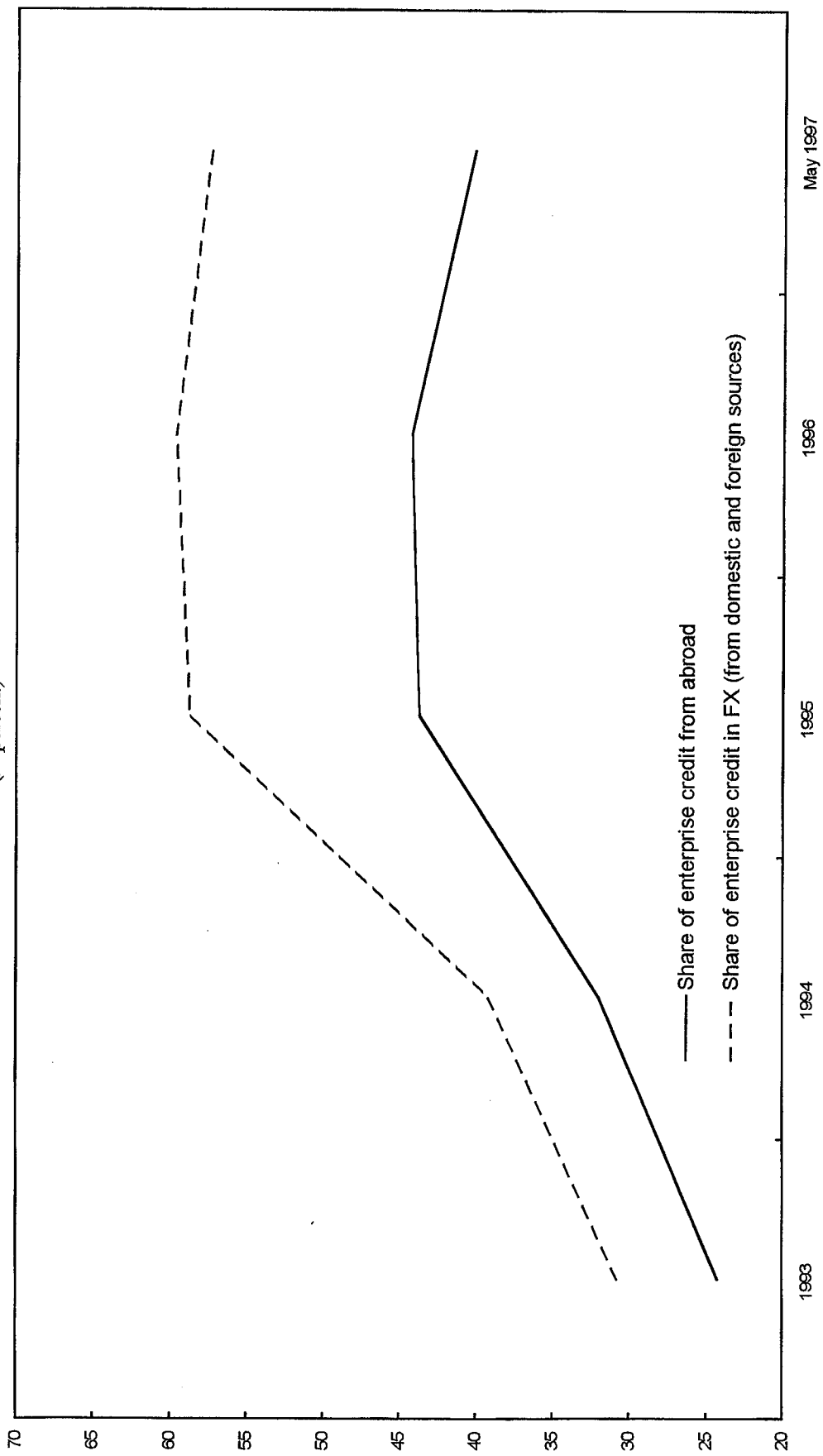
Figure 23. Hungary: Interest Differential on Forint Denominated Assets 1/



Source: Staff calculations.

1/ 12-month t-bill relative to German interbank rate, assuming a 1.0 percent monthly rate of crawl for the forint after August 15, 1997.

Figure 24. Hungary: Composition of Corporate Credit
(in percent)



Source: National Bank of Hungary.

Table 10. Hungary: Composition of Corporate Credit, 1993–97

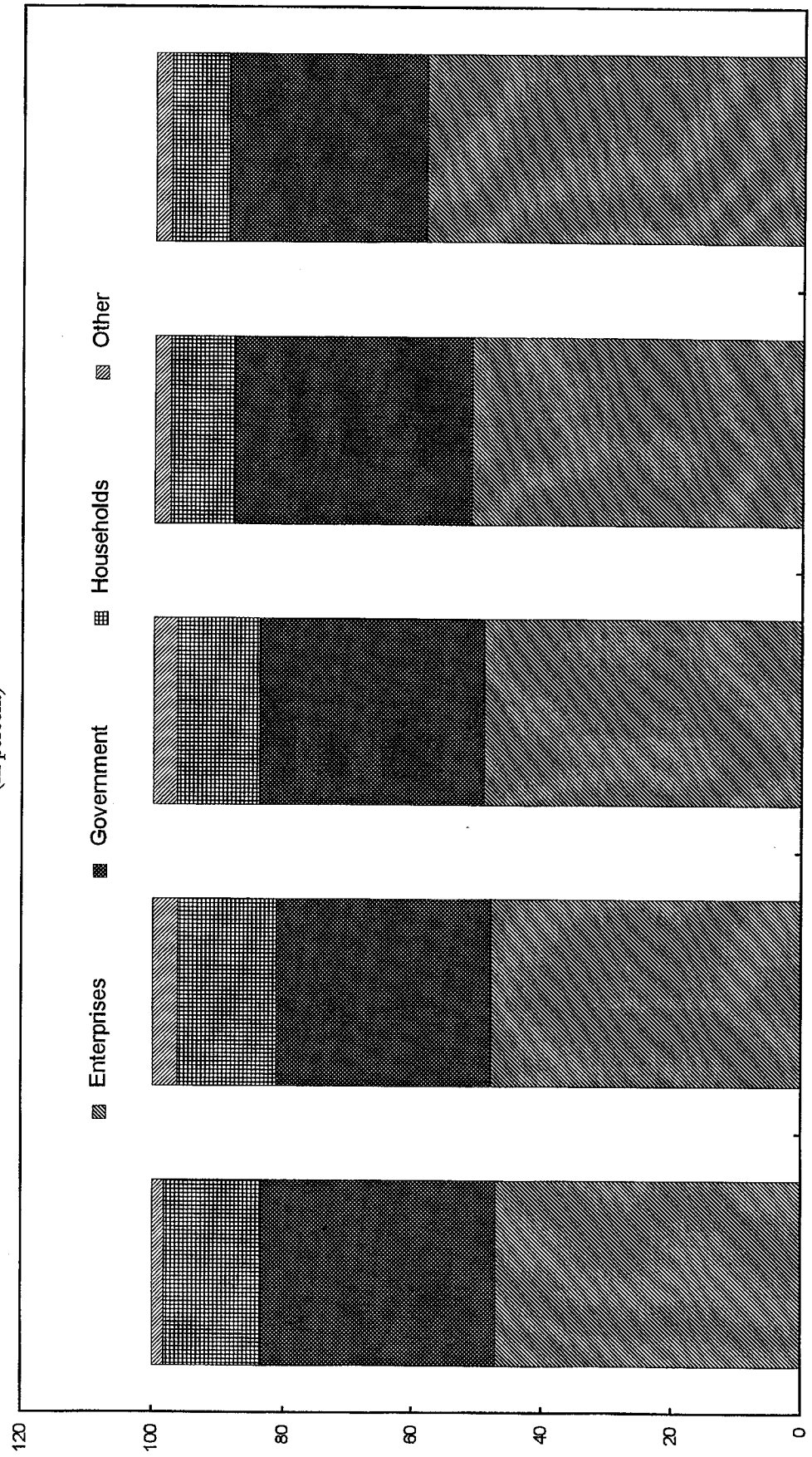
(In billions of forint, end of period)

	1993	1994	1995	1996	May 1997
Corporate credit from abroad 1/					
In millions of U.S. dollars	2,420.4	3,693.0	5,562.0	6,087.0	5,454.6
In billions of forint	243.7	408.8	775.7	1,003.9	994.8
Domestic bank credit to enterprises	761.9	869.7	999.4	1,265.2	1,481.0
Of which:					
In foreign exchange	65.6	92.6	266.7	350.8	426.9
			(In percent)		
Share of enterprise credit from abroad	24.2	32.0	43.7	44.2	40.2
Share of enterprise credit in foreign exchange (from domestic and foreign sources)	30.8	39.2	58.7	59.7	57.4
Share of domestic bank allocated credit in foreign exchange	8.6	10.6	26.7	27.7	28.8

Sources: *NBH Monthly Report*, various editions; and staff calculations.

1/ Including intercompany loans.

Figure 25. Hungary: Sectoral Allocation of Bank Credit
(in percent)



Source: National Bank of Hungary.

financing following the termination of the state-subsidized housing loan scheme in 1991. The establishment in 1997 of three mortgage lending institutions is expected to relieve the credit constraints facing the household sector. With respect to the liability side of banks' balance sheets, an increase in the range of nonbank savings instruments (including Treasury bills and government bonds) and improved marketing of these instruments contributed to a real decline in private sector bank deposits and bank-issued securities between 1993 and 1996. Reflecting the wider array of financial assets available to enterprises, corporate deposits fell by 20 percent in real terms.[82] In contrast, real household savings held in banks increased slightly during this period, as the domestic banking system maintained its position as the primary depository for household financial savings (Table 11). This was due in part to the regional monopolies held by the National Savings Bank and the 250 savings cooperatives, and to the relatively high per unit transaction cost associated with purchases of government paper.[83]

98. As to the currency composition of bank deposits, the share of household savings at banks denominated in foreign currency increased from 22 percent at end-1993 to 30 percent at end-1995, as households attempted to preserve the real value of their savings in the context of moderately-high inflation and foreign interest differentials that discouraged forint saving (Figure 26). The share of corporate deposits held in foreign exchange increased sharply in 1995 as enterprises were permitted (from April 1995) to retain their export proceeds in bank deposits, thereby avoiding the surrender requirement. This change was intended to encourage enterprises to repatriate foreign exchange earnings, rather than hold them offshore. The proportion of household and enterprise deposits in foreign exchange has since declined, reflecting the growing credibility of the crawling peg exchange system and (in the case of households) the relaxation of controls on the purchase of foreign exchange.

99. The willingness of banks to engage in maturity transformation declined over the past four years. Less than 29 percent of short-term enterprise and household deposits and bank securities were transformed into loans in excess of one year in 1996, down from 39 percent in 1993. This may reflect improvements in banks' lending practices, which have reduced the tendency for "automatic" long-term lending to unviable enterprises. In addition, banks' ability to assess the creditworthiness of potential clients, especially start-up firms, may not be fully developed yet, leading to greater caution in extending long-term credits. Finally, uncertainty about the pace of disinflation may have discouraged banks from locking-in long-term interest rates on loans when the majority of deposits are short term.

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[82]The decline in corporate deposits accelerated sharply in the first half of 1997, as firms drew down their savings to finance their investment needs.

[83]The role of banks as a depository for personal savings will be buoyed beginning in 1998 when wages of public sector employees will be transferred automatically to bank accounts.

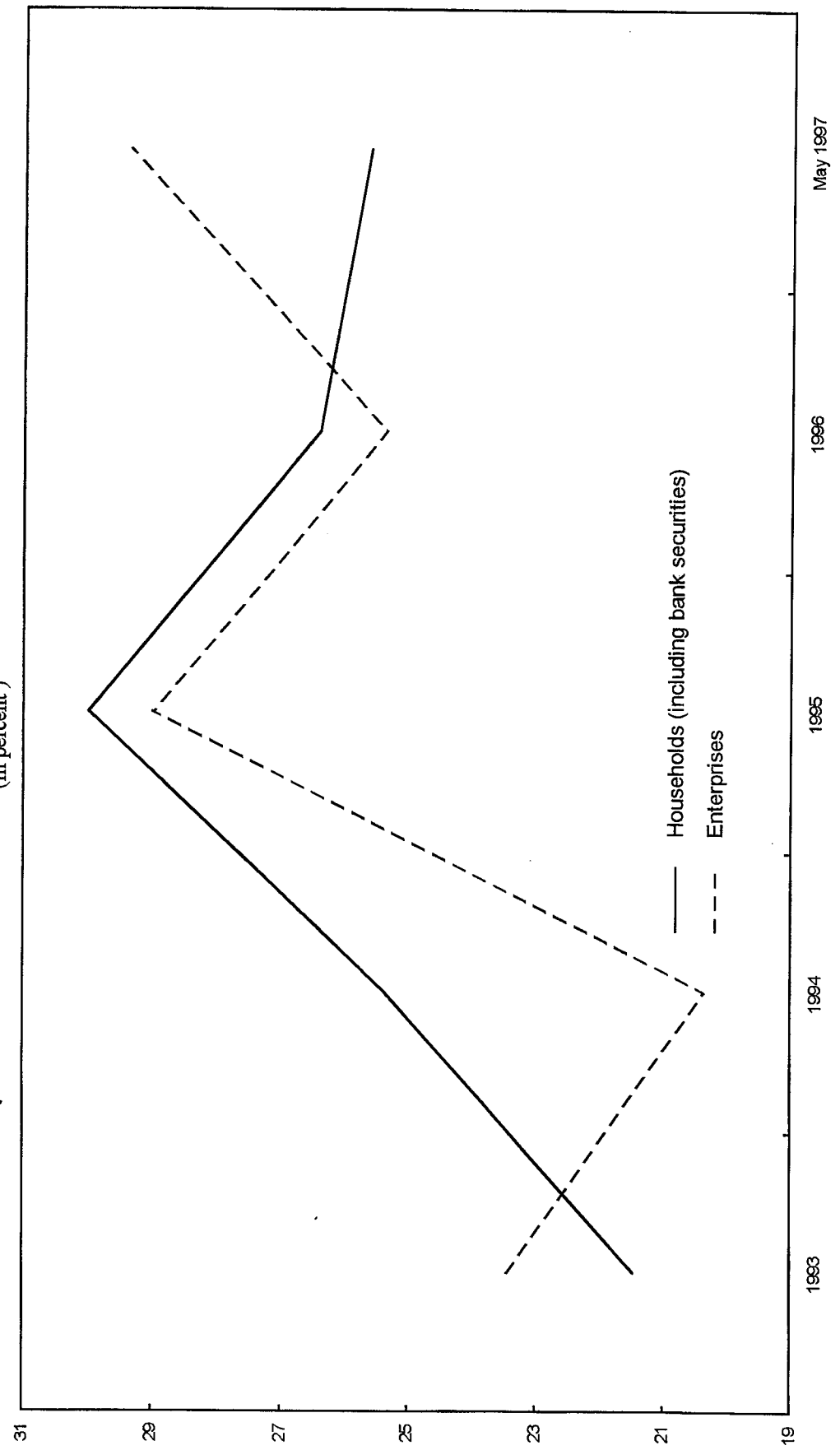
Table 11. Hungary: Household Financial Savings, 1993–97

(In percent; end of period)

	1993	1994	1995	1996	May 1997
Total savings (in billions of forint)	1,360.7	1,721.6	2,148.1	2,678.1	3,021.2
Share of total savings held in					
Cash	21.7	19.4	17.7	15.9	14.6
Bank deposits and bonds in forint	50.9	46.4	43.5	45.9	46.2
Bank deposits in foreign exchange	15.0	17.1	20.4	17.8	15.9
Nonbank securities	8.6	13.8	14.9	16.4	18.4
Insurance premiums and retirement savings acounts	3.8	3.4	3.5	4.0	4.9
Memorandum items:					
Share of household savings held in banks	65.9	63.4	63.9	63.6	62.1
Share of household savings in foreign exchange	15.0	17.1	20.4	17.8	15.9

Sources: *NBH Monthly Report*, various editions; and staff calculations.

Figure 26. Hungary: Currency Composition of Non-cash M3
(in percent)



Source: National Bank of Hungary.

B. Market Structure, Competition, and Specialization

100. Despite several mergers and license revocations, the number of banks operating in Hungary declined only slightly from 43 in 1993 to 42 at present (Table 12).[84] Seven of these banks have a market share (measured in terms of total assets) in excess of 4 percent, and 10 have a market share between 1 and 4 percent, little changed from several years ago. Five of the seven large banks are remnants of the monobanking system, which was disbanded in 1987.[85]

101. Market concentration in Hungary's banking system continued to decline over the past four years, with the market share of the seven large banks falling from nearly 80 percent in 1993 to 70 percent in 1996. The main beneficiaries were the medium-sized banks, which have seen their market share expand by 8 percentage points to more than 19 percent of total assets. The National Savings Bank (OTP) remains the largest bank, having maintained its share of total assets at around 30 percent, largely reflecting its continued branch monopoly in the regions of the country. In terms of nonbank deposits, the share of the five largest banks remained around 60 percent between 1992 and 1996, while that of the next five largest banks increased from less than 10 percent to 16 percent over the same period. Competition in retail banking remains limited, and the large retail banks (notably OTP

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[84]Reflecting Hungary's liberal licensing regulations and the initially under-banked nature of the economy, the number of banks in Hungary increased sharply from 20 in 1990 to 35 in 1993. Most of these new institutions were foreign or jointly-owned small or medium-sized banks. A new Banking Law, which came into effect on January 1, 1997, tightened regulations for bank licensing and imposed more stringent requirements on the qualifications of bank managers and members of the board. In particular, banks must hold at least Ft 2 billion in registered capital (double the previous minimum requirement which was set in 1991, and whose value has been substantially eroded), and the previous one-step automatic licensing process has been replaced with a two-step application for establishment and operation, which must be approved by the Banking and Capital Markets Supervision Agency.

[85]The National Savings Bank (OTP) and the Foreign Trade Bank (MKB) existed under the previous system to collect household savings and to provide foreign-exchange related services, respectively. The other three banks that are remnants of the monobank system were established to assume the commercial banking activities of the NBH. The loan portfolio of the NBH was allocated to these banks on a sectoral basis, with the loans of the Credit and Commercial Bank (K&H) concentrated in agriculture, those of the Hungarian Credit Bank (MHB) concentrated in the chemical and machine-building sectors, and those of Budapest Bank (BB) concentrated in the coal mining and construction sectors. At present, the other two large banks are the retail-based Postabank, established in 1988 with the post office and the Ministry of Finance having the largest stakes, and the NBH and foreign-owned Central-European International Bank (CIB), established in 1979. Until 1997, CIB operated as an offshore bank and therefore was not strictly part of the domestic banking system.

Table 12. Hungary: Number of Financial Institutions by Type, 1990–96

(End of period)

	1990	1991	1992	1993	1994	1995	1996
Commercial banks	20	31	32	35	36	35	33
Of which:							
Hungarian-owned	12	18	16	15	15	14	11
Foreign- or jointly-owned	8	13	16	20	21	21	22
Specialized financial institutions	9	5	8	8	8	8	9
Subtotal of banks	29	36	40	43	44	43	42
Insurance companies	6	11	13	13	13	13	...
Savings cooperatives	260	259	258	255	254	248	247

Source: National Bank of Hungary.

and Postabank) still account for more than 80 percent of household deposits. A factor behind the continued dominance of these banks is the relatively high cost of establishing a branch network.[86]

102. The activities of each of the large banks remain highly specialized in either retail, commercial, or foreign-trade related banking. While Postabank and the savings cooperatives are significant in the retail market, OTP remains dominant in deposit taking, reflecting the fact that it owns about 40 percent of the entire branch network. As a result of this liquidity segmentation, OTP retained its systemic position as the major source of funds for the interbank market, while the large commercial banks remain the main borrowers in the market. Nevertheless, improved access to foreign credit by Hungarian banks has tended to weaken commercial banks' reliance on the OTP.

103. The increase in foreign ownership of the banking system—especially of medium-sized banks (see next section)—has led to heightened competition in corporate banking. Large commercial banks (including the recently privatized banks) have seen their share of corporate loans decline by nearly 10 percentage points between 1993 and 1996, to 62 percent, whereas the proportion of corporate loans provided by medium-sized banks has risen by the same amount to 27 percent. Competition among banks for elite corporate clients (including multinationals and large Hungarian firms) has been very active, leading to a sharp drop in intermediation spreads from over 9 percent at end-1993 to about 4 percent at end-1996 (Figure 22).[87] Spreads at large commercial banks have consistently remained above those at other banks reflecting, inter alia, a less aggressive approach to attracting corporate clients and higher operating costs. More recently, however, the margin between spreads at large commercial banks and other banks has narrowed considerably, which could reflect a more forceful approach to competition by the banks' new foreign owners. Moreover, increased

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[86]While there are no legal restrictions on the establishment of branches by banks already operating in Hungary, the costliness of establishing such a network has so far acted as a constraint on competition. This said, the establishment by non-traditional retail banks of home banking facilities and automatic teller machines, which obviate the need for a costly retail network, are expected to undermine the existing regional retail banking monopolies. Competition in the banking sector will be further enhanced from 1998 when foreign-operated offshore banks will be permitted to open branches in Hungary without having to establish expensive local headquarters facilities.

[87]Also contributing to the drop in intermediation spreads is the improvement in the quality of loan portfolios (see Section 4), which reduced the need to generate provisions out of net interest income.

competition has contributed to a greater pass-through of changes in money market rates to lending rates in all banks.[88]

C. Ownership Structure and Privatization

104. Over the past four years, foreign ownership in Hungary's banking sector increased substantially. While the number of foreign or jointly-owned banks rose only from 28 in 1993 to 31 in 1996 (out of a total of 42 banks), the share of bank assets under foreign or joint ownership increased from less than a third to over three quarters, reflecting the privatization of several large state-owned banks. Moreover, the share of foreign registered capital reached 50 percent, up from 12 percent in 1993.[89]

105. The increase in foreign ownership is attributable to several factors: privatization of state-owned banks to foreign owners; exit of Hungarian-owned banks and establishment of new foreign-owned financial institutions in Hungary; and foreign banks raising their equity capital at a faster rate than Hungarian-owned banks. With respect to the first factor, privatization of majority stakes in the large and medium commercial banks was carried out through strategic foreign investors in order to raise banking efficiency and to meet internationally-based prudential regulations, and is the most important factor accounting for the increase in foreign ownership.[90] As a result, nearly two fifths of bank capital is currently held by foreign *banks* (as opposed to foreign institutional investors).[91] Foreign investors were attracted to Hungary's commercial banks in order to meet the demand for banking services

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[88]Cottarelli (1997) finds that in Hungary the impact effect on, and subsequent pass through to, bank lending rates from a change in Treasury bill yields is higher in the period since January 1994 than during January 1989 and May 1993. (See *Disinflation in Central and Eastern Europe*, IMF, mimeo, 1997).

[89]Owing to the 1993-94 state-financed bank recapitalization program, the share of bank capital owned by the state (defined as the Ministry of Finance, the privatization agency, and the social security funds) rose from 40 percent in 1992 to nearly 70 percent in the following year. With the privatization of the recapitalized banks, this share declined to 33 percent in 1996. (See SM/95/51 for details of the recapitalization program.)

[90]Prior to 1995, the state maintained effective control of the five large banks which formed the basis of the domestic financial system. Bank privatization accelerated in 1995, with the privatization of Budapest Bank and the partial sale of the National Savings Bank (OTP). In the following year, privatization of the Foreign Trade Bank was completed and Magyar Hitel Bank was sold. The privatization of a minority share of Kereskedelmi & Hitel (K&H) Bank was concluded in July 1997.

[91]In contrast, a minority holding in the National Savings Bank was privatized through public share offerings, primarily to foreign financial investors.

from foreign firms operating there, to establish a platform for operations in the region, and to tap the underdeveloped retail banking market. The relatively rapid increase in equity in foreign-owned banks is due in part to the requirement in several of the privatization agreements that foreign strategic owners inject new capital into the banks.[92]

D. Bank Soundness, Profitability, and Supervision

106. The quality of banks' portfolios improved substantially over the past four years. While in 1993, 28½ percent of loans were classified as problematic and more than 13 percent were classified as bad, at end-1996, these ratios had fallen to 11½ percent and 3 percent, respectively (Table 13).[93] Several factors contributed to this turnaround. Bank recapitalization and loan consolidation schemes carried out in 1993–94 replaced banks' non-performing loans with government paper and injected sufficient capital to enable banks to fully provision against, and subsequently write-off, a large part of their problem loans.[94] Second, foreign owners instituted more prudent lending practices, and state-owned banks were required to implement restructuring programs in order to participate in the recapitalization schemes.[95] Third, increased profitability in the enterprise sector tended to improve the outlook for corporate loans.

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[92]Plans are underway to eliminate the state's legally-mandated permanent shareholding in OTP from the current 25 percent plus 1 vote, following approval of an amendment to the Privatization Law. With the privatization and related equity injection in K&H, the state (as defined in footnote 10) will not hold a majority interest by the end of the year in any of the large banks inherited from the monobank system. However, due to a capital increase in Postabank in mid-1997, the state boosted its interest in the bank to over 50 percent.

[93]Among banks that participated in the recapitalization program, the share of loans classified as problematic fell from 40½ percent in 1995 to 30 percent in 1996, with a larger percentage decline in doubtful and bad loans.

[94]The amount of government bonds issued to banks by end-1994 for recapitalization or to replace their non-performing loans was equivalent to more than 100 percent of banks' bad, doubtful, and substandard loans.

[95]The effectiveness of these commitments was, however, weakened by the absence of quantitative performance targets, and sanctions for noncompliance. These so-called "consolidation agreements" were replaced in 1995 with pre-privatization plans that corrected the earlier deficiencies.

Table 13. Hungary: Banks' Loan Portfolios, 1991–96 1/

	December 1991	December 2/ 1992	December 3/ 1992	September 1993	December 4/ 1993	December 5/ 1993	December 1994	December 1995	December 1996
					(In billions of forint)				
Stock of loans classified as problematic	152	276	193	262	352	549	549	457	452
Of which:									
Under observation	0.0	0.0	0.0	0.0	0.0	126	191	197	234
Substandard	30	37	40	31	82	54	54	45	42
Doubtful	82	60	66	89	84	115	88	70	50
Bad	40	179	87	142	186	254	216	145	126
					(In percent)				
Share of bad loans in the total stock of loans	2.5	12.1	5.0	7.6	9.2	13.2	8.7	5.5	3.2
Share of problem loans in the total stock of loans	9.4	16.9	11.1	14.0	17.5	28.5	22.2	17.3	11.6

Source: National Bank of Hungary; and staff calculations.

1/ From December 1993, includes savings cooperatives.
2/ Prior to loan consolidation.
3/ After loan consolidation.
4/ According to 1991 classification rules.
5/ According to 1993 classification rules.

107. Reflecting the improvement in loan quality, banks at present are required to hold fewer specific risk provisions.[96] As a result, at end-1996 the level of banks' specific provisions declined to 3½ percent of total loans (one third of classified loans), from 15 percent of total loans (half of classified loans) at end-1993. However, while the current level of risk provisions satisfies minimum prudential requirements, it falls short of the upper bound of existing provisioning requirements (see footnote 18) by about 14 percent of classified loans (Ft 64 billion).[97]

108. In contrast to their management of specific risk, Hungarian banks have tended to adopt a more cautious approach to systemic risk, holding general reserves well in excess of the level required to achieve the minimum mandated 8 percent risk-weighted capital adequacy ratio (CAR) (Table 14). Moreover, the average CAR has continued to increase steadily, rising from 11½ percent in 1993 to nearly 19 percent in 1996. Reflecting the impact of bank recapitalization, the CARs of large banks almost doubled in 1994 from below the minimum required level. Small and medium-sized banks have tended to maintain higher-than-average CARs.

109. Several factors explain the tendency to maintain CARs in excess of the minimum required level. First, the 8 percent "Basle Capital Accord" rule may not be sufficient in transition and developing countries (including Hungary), which have less stable macroeconomic environments. Second, according to the Bank of International Settlement's (BIS) accounting rules, government paper is accorded a zero-risk weighting. Large commercial banks, in particular, hold a large stock of long-term, fairly illiquid government paper which they acquired during the bank recapitalization program. Owing to the relative illiquidity of these assets, a higher risk weighting could be applied, thereby lowering the effective CAR. Moreover, with the decline in yields on government paper, in the near future banks may choose to switch their assets to corporate loans (this trend is already apparent in the first five months of 1997), which carry a 100 percent risk weighting, again tending to lower CARs. Third, banks require a large amount of capital to finance their risky expansion into the retail sector.

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[96]Current regulations require banks to provision against classified loans as follows: 0–10 percent, 11–30 percent, 31–70 percent, and 71–100 percent against their to be watched, substandard, doubtful, and bad loans, respectively.

[97]In addition, banks are required to provision against their off-balance sheet items. Due to the rapid growth in contingent and future liabilities, the size of off-balance sheet items increased from less than 10 percent of the balance sheet total in 1993 to over a quarter in 1996.

Table 14. Hungary: Banks' Risk Weighted Capital Adequacy Ratios, 1993–96

(End of period; in percent)

	1993	1994	1995	1996
Total banks 1/	11.53	15.811	8.72	18.67
Large banks	7.30	13.12	14.85	15.04
Medium-sized banks	12.64	14.80	24.10	23.06
Small banks	33.97	32.02	29.49	28.16
Memorandum item:				
Mandated minimum capital adequacy ratio	8.0	8.0	8.0	8.0

Source: National Bank of Hungary.

1/ Market share (measured in terms of balance sheet total) exceeds 4 percent for large banks, is between 1 percent and 4 percent for medium-sized banks, and is less than l percent for small banks.

110. The profitability of the banking system improved markedly during 1993–96, when after tax profits increased to Ft 67 billion from a loss of Ft 154 billion, [98] and return on assets increased monotonically by nearly 8 percentage points (Table 15). The turnaround in profitability was due primarily to improvements in loan quality: The cost of accumulating specific provisions *within a given year* declined by more than 7 percent of total assets, while net revenues from reducing *previously* accumulated provisions rose by 1 percent of total assets. In contrast, the contribution from net interest income was quite modest overall. Prior to 1996, however, growth in interest income outpaced that of the income base, (also a reflection of improvements in loan quality). More recently, increased competition contributed to an erosion in intermediation spreads, and a decline in the net interest earnings ratio.

111. Despite the increase in private sector ownership and anticipated productivity improvements, the costs of banking operations have shown little improvement. The ratio of operating costs to net interest income and revenues from fees and commissions remained around 50 percent in 1993–95, and increased to 56 percent in 1996, while as a share of total assets, operating costs have risen continuously.[99] The persistence of high cost ratios comes despite a 7 percent reduction in financial services employment between 1994 and 1996, and reflects the tendency for relatively high wage increases in the financial sector (relative to the rest of the economy). In addition, however, cost increases also reflect the improvement in the quality and the increase in the range of services offered by banks. Large upfront expenditures on much-needed technology upgrading and the installation of a network of automatic teller machines also reduced profitability, but these costs should be recoverable through future productivity improvements. A major factor in banks' costs in 1996 was the extension of branch networks. However, it is unclear whether future profitability in the sector as a whole will increase sufficiently to compensate for these added expenditures since customers may only be diverted from other banks, with no increase in total banking services provided.

112. Against a background of improved portfolio quality and greater bank profitability, supervision of the banking system was nonetheless inadequate prior to the adoption of a new Banking Law on January 1, 1997. The deficiencies of the previous system were due primarily to the fractured nature of supervision and to a severe shortage of resources. Under the previous system, responsibility for bank supervision was divided somewhat arbitrarily between the State Banking Supervision (SBS) Agency and the NBH. Moreover, the securities operations of banks' subsidiaries were supervised by a separate agency, thereby precluding a consolidated approach to the supervision of financial institutions. These problems have been remedied under the new Banking Law by merging the two supervisory bodies to form a unified agency capable of supervising a universal-type banking system. In addition, the supervisory responsibilities of the NBH have been restricted to those areas related to the operation of monetary policy and the foreign exchange system.

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[98]Four banks suffered losses in 1996, amounting to a total of Ft 1.7 billion.

[99]This increase was observed in both state-owned and private banks.

Table 15. Hungary: Banks' Profit Accounts, 1993–96

(As percentage of average total assets)

	1993	1994	1995	1996
Net interest income	4.4	5.1	5.3	4.5
Fees, commisions and other revenues, net	1.7	1.8	1.5	1.9
Operating expenses	3.0	3.3	3.6	3.6
Operating profit	3.0	3.5	3.2	2.8
Other revenues (including from sales of loans and reductions in provisions)	1.1	5.7	5.2	3.3
Other expenditure (including loan write-offs)	1.5	3.5	5.3	2.8
Net operating profit	2.6	5.7	3.2	3.3
Specific provisions generated	8.5	3.7	1.8	1.2
Extraordinary profit	-0.1	-1.2	0.0	-0.1
Pretax profit	-6.0	0.7	1.4	2.0
Tax liability	0.1	0.3	0.3	0.4
After tax profit	-6.1	0.4	1.1	1.6
Memorandum items:				
Average total assets	2,535	2,898	3,429	4,161
After tax profit (in billions of forint)	-154	12	37	67

Source: *NBH Annual Report*, various editions; and staff calculations.

113. Banking supervision also suffered from a serious shortage of qualified technical staff, due to insufficient revenues from fees collected from banks and the fact that employees were covered by the civil service pay scale. As a result, staff turnover was extremely high as employees of SBS left for better-paying jobs in private financial institutions. In addition, owing to inadequate funding, SBS was unable to contract sufficiently with external auditors to fully compensate for its own staff shortage.[100] As a result, bank audits were carried out infrequently, and on an ad hoc basis, with many banks never having undergone a comprehensive audit. The new banking law addresses these problems by exempting staff of the supervision agency from the civil service pay scale—thereby enabling the agency to match private sector salaries—and raises the fees the agency levies on banks.[101] Concurrent with the improvement in funding, the new Law requires the supervision agency to perform continuous off-site inspections and to undertake on-site examinations of each bank and savings cooperative at least once every other year. However, a note of caution is warranted: These changes are quite recent, and thus their effectiveness has yet to be fully tested in the field.

E. Conclusions

114. Over the past four years the Hungarian banking sector has undergone a dramatic transformation. The heavy burden of nonperforming loans has largely been eliminated, the majority of the sector has been privatized, largely through strategic foreign investors, and competition in corporate banking activities has strengthened. While profitability has improved on average, the banking sector will face a new set of challenges in the future brought on by greater competition. These challenges will arise from the greater inroads into household banking by the nontraditional retail banks, the increase in banks' exposure to the more risky segments of the economy in response to the saturation of the market for elite corporate clients, and the greater capital and financial market liberalization agreed in the context of OECD membership. These changes may well portend a further round of consolidation in the banking sector within the next few years.

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[100]Although faced with a staff ceiling of 120, the average number of staff at SBS in 1994 was only 101.

[101]In addition, the staff ceiling was raised to 260.

VI. Trade Liberalization in Hungary[102]

A. Introduction

115. The fact that Hungary was more market-oriented than other centrally-planned economies at the time of the breakup of the Soviet Union perhaps explains why the country pursued a gradual approach to trade reform in the post-Soviet era that did not include a drastic devaluation of the forint. The greater openness of Hungary compared to other Eastern European countries was the result of a process of moving toward a market economy that began on the trade liberalization front as early as the late 1960s. While some momentum for trade reform was lost in the 1970s as a result of external economic conditions and internal political resistance, Hungary did become a signatory to the GATT in 1973 and some reforms were attempted in the decade. There were continuing attempts at introducing market mechanisms in the early 1980s, but the deteriorating economic situation made further progress difficult.

116. Since 1989, however, as a result of the changes in the political and economic environment, Hungary has entered into several important trade agreements and has expanded its trade with market-based economies. In addition to being a charter member of the WTO and committing to tariff bindings under the Uruguay Round, Hungary concluded an association agreement with the European Union. Along with unilateral trade liberalization measures, the commitments resulting from these agreements have quickened the trade liberalization process in recent years.

117. The next section of this chapter provides a general overview of the evolution of the trade regime and particularly changes that have been implemented since 1989. In this context, an attempt is made to measure the sectoral effects of the trade liberalization between 1990 and 1994. Section three presents the methodology employed and the results obtained in calculating sectoral effective rates of protection. The general conclusion that emerges from the calculations in the third section is that there has been a slight reduction in nominal implicit[103] and effective rates of protection for the economy as whole between 1990 and 1994. While data are not available to extend the sectoral study beyond 1994, aggregate tariff revenue data for 1995 through 1998[104] show a significant decline in the average nominal implicit tariff

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[102]Prepared by Perry Perone.

[103]For the purposes of the calculations in this chapter, implicit, rather than stated, tariff rates were used. The implicit rates were obtained by dividing actual tariff and duty collections by the value of customs-based imports. This method, to some extent, takes into account various exemptions to the published tariff rates for various entities or sectors.

[104]The tariff revenue data and customs-based import data for 1997 and 1998 were projections made by the Ministry of Finance.

between 1990 and 1998, from 7.8 percent to 2.8 percent. The sectoral study also shows that there were some increases in nominal and effective rates of protection in 1992 and 1993 and there were significant differences in sectoral levels of nominal and effective protection that were maintained throughout the 1990–94 period.

B. Overview of the Trade Regime, 1960–97[105]

118. Hungary is a small economy and as such trade potentially plays an important role in economic activity. The economy was relatively open even in the central planning period, although the patterns of trade were disproportionately weighted toward COMECON countries. Throughout the 1960s the limits to the strategy of economic growth though extensive industrialization and centralized economic management became increasingly obvious to the authorities. As a result, Hungary embarked on liberalization strategies earlier than other centrally-planned economies. Thus at the time of the collapse of the Soviet Union the Hungarian economy already had made some initial adjustments to market-based economy and perhaps the authorities had latitude to choose a more gradual adjustment strategy than other Eastern European countries.

119. As early as 1968, the authorities launched an economic program that aimed to introduce certain elements of a market economy. In the area of trade there was some attempt to create a link between the national economy and international markets but the reforms were primarily limited to certain areas of economic management. The idea was that planned import quotas would be abolished so that companies requiring imports could apply for and receive, automatically, import licenses. In addition they were to be allowed to buy the requisite foreign exchange. To the extent that this attempt was successful, however, it was reversed in the next few years, and the system of control and management of trade remained essentially unchanged in practice.

120. During the 1970s some of the momentum for reform and liberalization that derived from the experiments in the late 1960s was lost as a result of external economic conditions (primarily the increase in oil prices) and internal political pressures.[106] The system of protection that was developed in the 1970s relied on complex and "informal" methods of rationing rather than on tariffs or explicit quotas. The level of licensed imports was determined

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[105]For more details on the evolution of trade policy and trade agreements entered into by Hungary see the following documents: 1. Examination of Trade Policy Aspects Concerning Countries Requesting OECD Membership: Hungary, OECD 1996; 2.Trade Policy Review Mechanism: The Republic of Hungary–Report by the Secretariat, GATT 1991.

[106]It was in the 1970s that the large external debt burden began to be accumulated. This was the result of a dramatic deterioration in the terms of trade related to increases in energy prices, weak export performance, and the authorities' policy choices in response to the external shocks. By the end of the 1970s Hungary's external debt stood at some US$10 billion.

by the previous year's imports. To increase imports, difficult bargaining was required, such as showing what losses would be incurred in the absence of more imports.[107]

121. Some progress, however, was made during the decade. In 1972 Hungary introduced a scheme of tariff preferences in favor of developing countries, excluding such products as meat, fish, dairy products, and aluminum products. In 1973 Hungary acceded to the GATT on the basis of tariff concessions. Its Protocol of Accession, however, contained a number of specific provisions that reflected the fact that the country was not a market economy at the time. It also became a signatory to the Multi Fiber Agreement and concluded a free trade area agreement with Finland in 1974. Beginning in 1978 Hungary extended duty free treatment to imports originating in the least developed countries. Hungary signed all the Tokyo Round Codes, except for the Agreements on Subsidies, Government Procurement and Civil Aircraft.

122. Despite ongoing economic reform efforts in the 1980s that introduced market mechanisms and institutions, the economic situation of the country deteriorated. The Polish military coup in 1982 created a serious balance of payments crisis for Hungary that was a turning point (for the worse) in the import licensing system. As a result, import licenses were issued by the vice premier on an item by item basis and even when licenses were granted, the foreign exchange was not always made available immediately. The latter problem was related to the unwillingness to allow the forint to devalue. Hungary's industrial products were not competitive in world markets, overall economic performance fell well behind that of developed market economies, and, in the face of weak export performance and energy-price related terms of trade losses, gross foreign debt increased to some US$21 billion by the end of 1987.

123. After 1988, economic policies were focused on preventing a further increase in external debt, as well as macroeconomic stabilization. Trade liberalization was accelerated and deepened, especially beginning in 1989, since it was seen as a critical element for initiating systemic changes in the context of still emerging market structures. The plan had been to liberalize convertible currency imports gradually over a four-year period between 1989 and 1992 in 20–25 percent increments. In the event, the process was completed in only three years. Imports of investment goods were liberalized in 1989, intermediate goods in 1990 and a significant proportion of consumer goods sectors were open to international competition in 1990. By 1990, some 70 percent of production had to face import competition.

124. From January 1, 1991, the two-tier nature of Hungary's trade policy regime in which a distinction was made between so-called convertible and nonconvertible currency trade was largely replaced with a unified system. Since then, Hungary's trade with all countries (including the centrally-planned economies of China, the Democratic Republic of Korea and Vietnam) is now also conducted in convertible currencies on the basis of world market prices,

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[107]See "Import Liberalization in Hungary," by A. Nagy in Acta Oeconomia, Vol. 46 (1–2), 1994 for a detailed discussion of this period.

and general rules, including the Most Favored Nation (MFN) clause[108], also apply to trade with these countries. There was also a swift phasing out of import licensing requirements and quotas, which covered only 10 percent of imports in 1991 as against 60 percent in 1989.

125. Interestingly, the reform was not linked to a drastic devaluation or to a significant increase in tariff rates (as a result of replacing quotas with tariff equivalents). This was largely the result of the fact that the economy was already more open than other Eastern European countries and thus there was a less drastic redistribution of resources required. In addition, the reform coincided with the collapse of the Soviet Union and the CMEA so that the recession helped dampen import demand.

126. During this initial rapid opening of the trade regime the trade balance deteriorated, but only slightly. In 1992, however, the trade balance did deteriorate sharply; from a surplus of some US$190 million in 1991 a small trade deficit of US$50 million emerged in 1992 and by 1994 the trade deficit had increased alarmingly to some US$3.6 billion.

127. Throughout the gradual process of trade liberalization, while generally moving toward an open trade regime, the authorities have employed various measures to restrict imports in response to balance of payments deterioration. As part of the economic stabilization package introduced in 1995, which included fiscal and monetary adjustment and featured an all-important incomes policy, an import surcharge of 8 percent was imposed. The surcharge applied to imports from all sources and covered all goods, except primary energy products and was reimbursable in the case of imports of machinery for investment purposes. The surcharge was eliminated at the end of June, 1997 after having begun to be reduced in late 1996.

128. The global quota on imports of selected consumer goods (which has been in force since Hungary's accession to the GATT) amounted in 1989 to US$200 million and was increased to US$750 million in both 1993 and 1994. In 1994, the global consumer quota included clothing, footwear, jewelry, household detergents and fishery products. In 1995 several categories of products were withdrawn from the global quota, which implied a reduction in the quota in U.S. dollar terms. In 1996 and 1997 the product coverage stayed the same as in 1995 but the overall value of the quota was increase in 1996 to some $US560 million and again in 1997 to some US$640 million (Table 16).

129. Hungary has also applied, since 1973, three different kinds of foreign trade-related fees (viz., a one percent licensing fee, a two percent customs fee, and a three percent statistical fee). These fees have been progressively reduced and were eliminated early in 1997.

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[108]The Most Favored Nation clause states that the contracting parties are bound to grant each other treatment as favorable as they extend to any other country regarding the application of import and export duties and other trade regulations.

Table 16. Hungary: Global Quota on Consumer Goods, 1995-1997

	1995	1996	1997 Jan-Jun	1997 Proj. year
Household Detergents	25	35	23	45
Footwear	65	70	39	77
Overwear	94	104	57	114
Second-hand Clothing	27	29	16	32
Other Clothing	65	71	39	78
Haberdashery Products	17	17	11	23
Textile goods, carpets	43	47	26	52
Jewellery, percious metals	33	34	19	38
Fish, tinned fish	23	23	17	33
Other manufactured products	126	133	73	146
Used cars and vans	53	55	29	59
New cars and vans	81	84	45	90
Total	518	563	319	638

Sources: Ministry of Industry and Trade; and staff estimates.

130. In addition to unilateral trade measures related to economic stabilization packages, much impetus to trade reform has resulted from regional agreements, in particular the Europe Agreement (EA) signed with the EU in December 1991 (with the Interim Agreement regulating trade aspects having been applied since March 1992), the Free Trade Agreement with the EFTA countries (in force since October 1993) and the Central European Free Trade Agreement (CEFTA) concluded with the Czech Republic, Poland, and Slovakia, which has been in force since March 1993 (and with Solvenia since January 1996). The Uruguay Round Agreements consolidated different trade liberalization results by widening the geographical coverage and expanding liberalization principles to some new areas of trade relations.

131. As a founding member of the WTO in January 1995, Hungary started to implement its Uruguay Round commitments since this date. These include in particular further tariff bindings[109]: from 89 percent of tariff lines bound before the Uruguay Round (90 percent of industrial and 25 percent of agricultural products) the number was increased to 93 percent of total tariff lines. Duty-free imports will increase from 19 percent to 21 percent of total imports. The MFN average tariff level will decrease for industrial products from 9.6 percent in 1996 to 6.9 percent by 2001, while due to tariffication, tariffs on agricultural products will increase on average to 45 percent (from 22 percent pre Uruguay Round). Among industrial products, tariff reductions of more than 30 percent affect chemicals, textiles and clothing, footwear, nonelectric machinery and metals. After the agreed reductions, the following categories will have a tariff level above the 6.9 percent average: transport equipment (16.9 percent), electric machinery, textiles and clothing, and fishery products.

132. More recently, the authorities implemented a new tariff agreement, aligned with the Common Customs Tariff of the European Union effective on January 1, 1996. The third, out of five, step reductions on industrial tariffs was also implemented in 1997 consistent with WTO commitments. Average industrial tariffs are scheduled to decline to 6.9 percent in 2000 from 9.6 percent in 1995. Customs duties on industrial imports from the EU and EFTA into Hungary have been gradually lowered and will be abolished by December 31, 2000, at the latest.[110] Under the Agreement with the CEFTA countries, duties for more than 80 percent of industrial products were abolished as of January 1, 1996. All trade in industrial goods, with a few exceptions, between CEFTA members will be free by January 1, 2000 and trade in agricultural goods will be liberalized substantially.

133. In 1997, in addition to the removal of the import surcharge and statistical fees mentioned above, all export licensing (other than for industrial products required to Hungary's

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[109]A tariff line is bound when the authorities commit not to raise the tariff on the particular good above the level set in the Tokyo or Uruguay Round. In many cases, the bound level is set well above the actual level of the tariff.

[110]Trade in agricultural products with the EU and individual EFTA states is subject to special arrangements.

international obligations) was terminated as of January 1. Further liberalization of import quotas will be completed for some products in accordance with the EU Association Agreement by the end of 1997.

C. Sectoral Effects of Trade Liberalization

Effective rate of protection—concept and formula for calculations

134. This section presents the methodology and results of a sectoral analysis of the nominal and effective rates of protection. Effective protection is defined as the increment in value added at market prices made possible by the structure of protection as a proportion of the free trade value added. The formula can be derived as follows [111]:

P_v^{ft} = Value added per unit of j in activity j in the absence of tariffs (i.e., at the free trade effective prices)

P_v^d = Value added per unit of j, in activity j made possible by the tariff structure (i.e., the effective price after tariffs have been imposed)

g_j = Effective protection rate for activity j

P_j = Nominal price of a unit of j in free trade

a_{ij} = Share of I in the cost of j at free trade prices

a_{ij}^d = Share of I in the cost of j after tariffs have been imposed

t_j = Nominal tariff rate on j

t_i = Nominal tariff rate on I

The following definitions hold:

(1) $P_v^{ft}=P_j(1-a_{ij})$

(2) $P_v^d=P_j[(1+t_j)-a_{ij}(1+t_i)]$

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[111]This derivation follows the presentation in The Theory of Protection, by Max Cordon, 1971. Oxford University Press. pp. 35–37.

$$(3)\ g_i=\frac{P_v^d-P_v^{ft}}{P_v^{ft}}$$

Combining the first three equations gives:

$$(4)\ g_i=\frac{t_j-a_{ij}t_i}{1-a_{ij}}$$

Since the coefficients obtained from the input/output tables are those that arise in the presence of tariffs, a relationship between the so-called free trade technical coefficient and the so-called distorted one must be made. The following expression establishes this connection:

$$(5)\ a_{ij}^d=a_{ij}\left(\frac{1+t_i}{1+t_j}\right)$$

The formula used in this chapter can then be derived by substituting (5) into (4):

$$(6)\ g_i=\frac{t_j-a_{ij}^d\left(\frac{1+t_j}{1+t_i}\right)}{1-a_{ij}^d\left(\frac{1+t_j}{1+t_i}\right)}$$

Data and methods

135. Input/Output tables for 1990–1993 were obtained from the NBH, while tariff and duty collections for 1990–1994 were provided by the Ministry of Finance. It should be noted that the tariff rates used in these calculations are the implicit tariff rates, which are obtained by dividing the tariff and duty revenues by the value of imports. Thus, while implicit tariffs might show increases in some years, this could be the result of the desirable elimination of loopholes

or exemptions. Import data was provided by the Ministry of Industry and Trade and is based on customs data rather than balance of payments data.[112] In the case of 1994, the input/output coefficients used were from the 1993 matrix since there is no Input/Output table available for 1994. This implicitly assumes that the structure of production did not change between 1993 and 1994 (a necessary simplification given the lack of availability of the 1994 input/output matrix).

136. The calculations were performed for six broad economic sectors dictated by the availability of data: Agriculture, Food processing, Chemicals, Light Industry, Metallurgy, Machinery. The remaining observations were put into a residual "other" category.

Results

137. Both nominal and effective rates of protection by sector are presented for 1990–1994 in Table 17. Overall, the simple average nominal tariff declined by about one percentage point from 9 percent to 8 percent between 1990 and 1994. Based on a trade-weighted average, however, the overall nominal rate stayed more or less constant at around 8 percent. Similarly, the average effective protection declined over the period by around one percentage point and followed the same pattern as the nominal (Figure 27). Based on aggregate data, which is available for a longer period, tariff levels will drop sharply between 1990 and 1998. Relying on Ministry of Finance projections, the average trade-weighted nominal tariff will have dropped from 8 percent to 3 percent between 1990 and 1998 (Table 17). It can also be noted that the similarity in the path of both nominal and effective rates between 1990 and 1994 could indicate that changes in nominal tariff policy were applied relatively evenly between the sectors. Since, however, the structure of production did change over the period, the above observation might not necessarily hold.

138. It is interesting to note that the share of imports in total production at basic prices (i.e., without taxes or import tariffs, etc.) increased over the 1990–94 for every category in this study (Table 18). This is an indication that even though the levels of protection did not fall significantly in this period the economy was becoming more open in the sense that imports were playing a more important role in the structure of production. This is partly the result of a reduction in nontariff barriers over the period.

139. While changes in tariff policy might have been applied evenly over the 1990–94 period, the sectoral structure of protection was, and remained, skewed toward the agricultural and food sectors. These two sectors show consistently higher nominal and effective protection rates over the entire period, and it is particularly noteworthy that the nominal tariffs in these

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[112]In Hungary there is a significant difference between imports and exports reported on a customs basis and those reported in the balance of payments. The discrepancy has not been entirely accounted for by the authorities, but arises in part from the exclusion in the customs statistics of imports of goods for re-export and the subsequent exports.

Table 17. Hungary: Nominal and Effective Rates of Protection 1990-98

(in percent)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
I. Effective Rate of Protection									
Agriculture	12.12	3.61	18.42	8.10	9.57	. . .	. . .	. . .	. . .
Food Processing	10.56	14.16	28.68	16.90	9.44	. . .	. . .	. . .	. . .
Chemical industry	2.57	4.61	4.84	6.10	3.71	. . .	. . .	. . .	. . .
Light industry	11.78	3.66	5.95	5.78	4.69	. . .	. . .	. . .	. . .
Metallurgy	4.38	4.59	5.41	6.79	3.70	. . .	. . .	. . .	. . .
Machinery	5.92	6.84	9.46	4.44	5.20	. . .	. . .	. . .	. . .
Other	5.04	3.72	5.34	5.60	6.85	. . .	. . .	. . .	. . .
Simple Average	7.48	5.88	11.16	7.67	6.16	. . .	. . .	. . .	. . .
Trade-Weighted Average	6.16	5.46	8.07	5.92	5.26	. . .	. . .	. . .	. . .
Minimum	2.57	3.61	4.84	4.44	3.70	. . .	. . .	. . .	. . .
Maximum	12.12	14.16	28.68	16.90	9.57	. . .	. . .	. . .	. . .
Standard Deviation	3.91	3.82	9.10	4.22	2.52	. . .	. . .	. . .	. . .
II. Implicit Nominal Tariffs 1/									
Agriculture	12.77	4.34	19.57	9.22	10.51	. . .	. . .	. . .	. . .
Food Processing	11.38	14.75	30.09	18.26	10.52	. . .	. . .	. . .	. . .
Chemical industry	4.65	7.10	8.59	10.55	7.91	. . .	. . .	. . .	. . .
Light industry	14.97	5.24	8.44	8.45	7.01	. . .	. . .	. . .	. . .
Metallurgy	5.64	5.91	7.28	9.52	5.76	. . .	. . .	. . .	. . .
Machinery	7.44	8.77	12.70	7.40	8.07	. . .	. . .	. . .	. . .
Other	5.98	4.65	6.55	7.00	8.25	. . .	. . .	. . .	. . .
Simple Average	8.98	7.25	13.32	10.06	8.29	. . .	. . .	. . .	. . .
Trade-Weighted Average 2/ 3/	7.81	7.13	10.69	8.75	7.91	9.25	6.00	4.98	2.81
without import surcharge	7.81	7.13	10.69	8.75	7.91	6.77	4.70	4.98	2.81
Minimum	4.65	4.34	6.55	7.00	5.76	. . .	. . .	. . .	. . .
Maximum	14.97	14.75	30.09	18.26	10.52	. . .	. . .	. . .	. . .
Standard Deviation	4.03	3.64	8.65	3.82	1.74	. . .	. . .	. . .	. . .

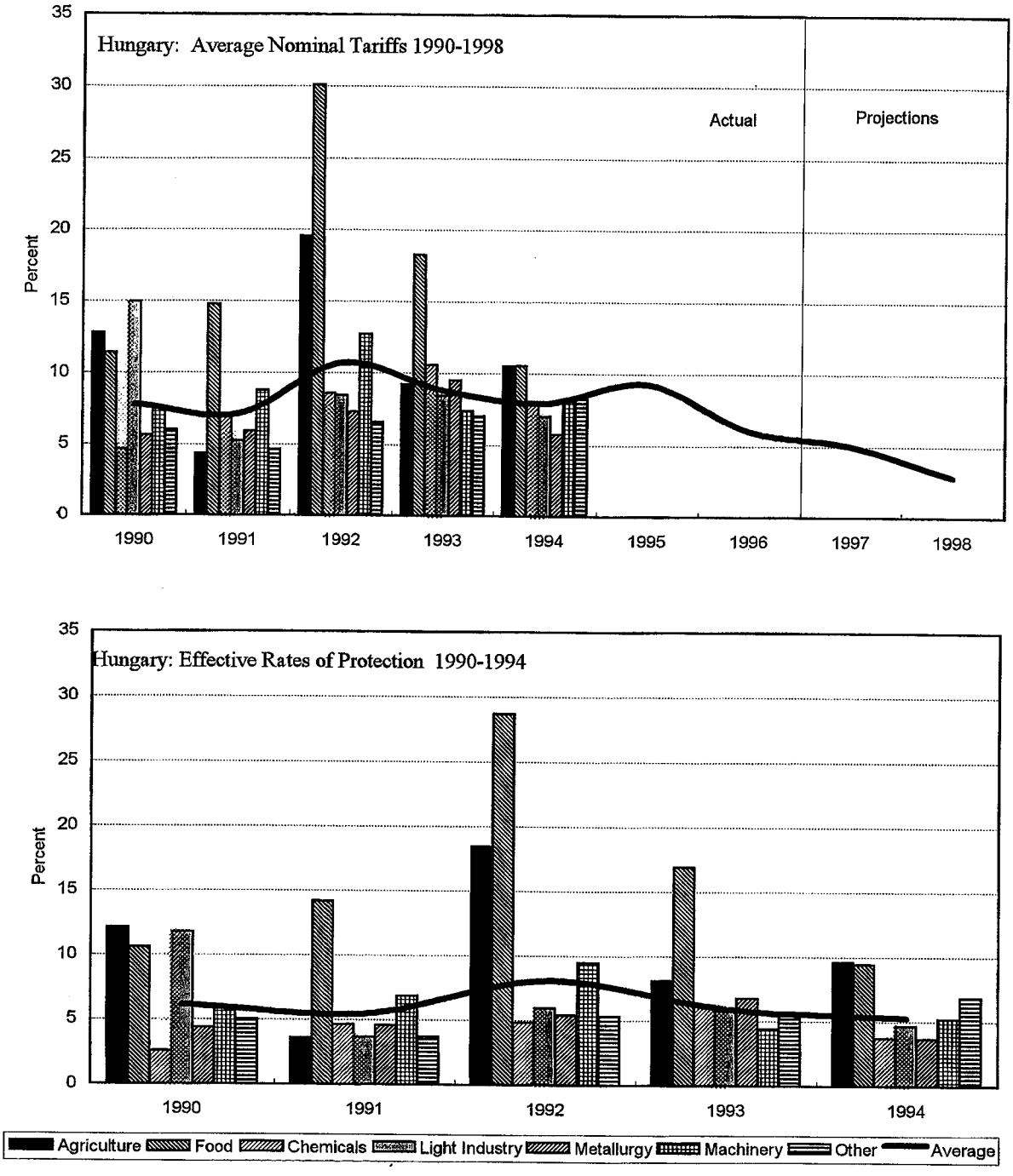
Sources: National Bank of Hungary; Ministry of Finance; Ministry of Industry and Trade; and Staff estimates

1/ The implicit nominal rate was derived by dividing actual tariff and duty revenues by (customs-based) imports.

2/ Includes import surchage for 1995-1997.

3/ The figures for 1997 and 1998 were derived from Ministry of Finance customs import projections in $US and budgetary projections of revenues from tariffs and duties.

Figure 27. Hungary: Various Measures of Protection



Sources: National Bank of Hungary; Ministry of Finance; Ministry of Industry and Trade; staff estimates

Table 18. Hungary: Import Coefficient Matricies 1/

	Agriculture	Food	Chemicals	Light Ind.	Metallurgy	Machines	Other
1990							
Agriculture	0.014	0.022	0.000	0.008	0.000	0.000	0.001
Food Industry	0.012	0.030	0.010	0.007	0.000	0.000	0.000
Chemical Industry	0.025	0.012	0.198	0.054	0.027	0.018	0.013
Light industry	0.006	0.005	0.005	0.187	0.000	0.002	0.009
Metallurgy	0.001	0.003	0.006	0.001	0.106	0.026	0.003
Machinery	0.021	0.011	0.021	0.025	0.029	0.154	0.057
Other	0.015	0.013	0.273	0.037	0.046	0.047	0.078
Total	0.085	0.093	0.383	0.304	0.225	0.234	0.142
1991							
Agriculture	0.023	0.021	0.001	0.027	0.000	0.000	0.001
Food Industry	0.012	0.021	0.001	0.004	0.000	0.000	0.000
Chemical Industry	0.037	0.016	0.173	0.062	0.020	0.033	0.020
Light industry	0.016	0.005	0.004	0.165	0.003	0.005	0.012
Metallurgy	0.002	0.007	0.006	0.003	0.132	0.044	0.006
Machinery	0.015	0.006	0.006	0.012	0.017	0.165	0.034
Other	0.015	0.013	0.273	0.037	0.046	0.047	0.078
Total	0.110	0.082	0.455	0.285	0.235	0.266	0.166
1992							
Agriculture	0.008	0.014	0.002	0.018	0.000	0.000	0.001
Food Industry	0.015	0.037	0.001	0.004	0.000	0.000	0.000
Chemical Industry	0.039	0.021	0.209	0.050	0.034	0.034	0.023
Light industry	0.010	0.011	0.010	0.154	0.003	0.010	0.014
Metallurgy	0.003	0.008	0.008	0.007	0.165	0.049	0.010
Machinery	0.016	0.005	0.015	0.016	0.012	0.190	0.025
Other	0.015	0.013	0.273	0.037	0.046	0.047	0.078
Total	0.108	0.108	0.510	0.286	0.262	0.339	0.161
1993							
Agriculture	0.009	0.019	0.002	0.018	0.000	0.000	0.001
Food Industry	0.017	0.042	0.001	0.004	0.000	0.000	0.001
Chemical Industry	0.042	0.023	0.224	0.068	0.054	0.037	0.025
Light industry	0.008	0.013	0.010	0.164	0.004	0.011	0.014
Metallurgy	0.005	0.009	0.012	0.008	0.184	0.054	0.011
Machinery	0.027	0.012	0.022	0.024	0.033	0.243	0.060
Other	0.015	0.013	0.273	0.037	0.046	0.047	0.078
Total	0.121	0.132	0.544	0.323	0.321	0.391	0.189

Sources: National Bank of Hungary; and staff estimates.

1/ The share in total cost of imports (i.e., value of imports divided by total output in each category at basic prices)

sectors increased significantly in 1992. This might have been partly the result of replacing nontariff barriers with tariffs. The chemical, machinery and "other" categories show an increase in nominal tariffs between 1990 and 1994.

140. It is also interesting to note that the dispersion of both nominal and effective protection, as measured by the standard deviation of the samples, diminished over the 1990–1994 period. In the case of nominal protection, the decline was over 2 percentage points, while in the case of effective protection it was less (some 1.5 percentage points) but still noteworthy.

D. Conclusions

141. Hungary has made significant progress in liberalizing its foreign trade regime as a result of unilateral measures implemented in the context of various stabilization measures (particularly the 1995 economic package) and the impetus created by commitments to multi-lateral trade agreements, including the Uruguay Round and the European Association Agreement. While the authorities have, at times, resorted to measures to restrict imports, these measures have been gradually removed (in the case of the import quota and the various statistical fees) or made progressively less restrictive (in the case of the global consumer quotas).

142. The disaggregated calculations in this chapter show that both nominal and effective protection diminished only slightly between 1990 and 1994 but aggregate data show a substantial reduction of 5 percentage points in the average tariff between 1990 and 1998. The data also could be interpreted to imply that tariff policy was applied in a relatively even-handed manner between sectors in the 1990–94 period. The agricultural and food sectors, however, continued to receive significantly higher nominal and effective protection than other sectors.

VII. Exchange Arrangements and Capital Account Liberalization[113]

143. A detailed description of Hungary's exchange arrangements can be found in SM/95/51 (3/15/95). Since then, Hungary accepted the obligations of Article VIII of the Fund's Articles of Agreement on January 1, 1996. The main measure implemented regarding current transactions is that the limit on the purchases of foreign exchange for tourism was abolished as of January 1, 1997.

144. Since the last report on capital account liberalization (SM/96/207, 8/7/96) trading on the Budapest stock exchange in futures contracts of 3 to 12 months was allowed for foreign investors as of the last quarter of 1996. The first trading in such derivatives actually began in February 1997. This type of operation is not allowed under the general foreign exchange law and thus has been allowed on an experimental basis. The minimum maturity requirement for foreign investments of one year has been removed for banks trading in investment grade securities issued in OECD countries.

145. New legislation regarding foreign subsidiaries in Hungary that will be implemented in January 1998 and will liberalize certain aspects of capital transactions. While the details of the laws are not yet available, it is anticipated that two separate laws will be formulated relating to non-financial and financial institutions.

146. There are other aspects of capital account liberalization that are being contemplated such as allowing Hungarian companies to purchase securities issued in OECD countries regardless of their rating. Participation of non-residents in Hungarian open-ended investment funds and of Hungarian residents in investment funds in OECD countries is also under consideration. The authorities are also considering allowing Hungarian residents to purchase real estate abroad without any license or governmental permission.

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[113]Prepared by Perry Perone.